

DOING RESEARCH IN INDONESIA

Country Report

Centre for Innovation Policy and Governance &
The Global Development Network

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THE DOING RESEARCH PROGRAM

Bridging the research gap and improving development policies

Today, governments and donors alike have little systematic information about the state of social science research, except for in a few developed countries. Yet, the implementation of the global agenda for sustainable development requires local research capacities to ensure that the scientific community is equipped to critically analyze development and policy challenges, and to accompany actions and reforms with contextualized knowledge of the local environment.

An in-depth analysis of research systems is key to understanding how to bridge this gap and raise the profile of research generated in developing countries. Research systems analysis can help policymakers, donors and academics answer the question: What can be done to further generate and mainstream local research as a key input to public debate and sustainable human development policies?

Assessing and benchmarking social science research systems

Doing Research (launched in 2014) is an initiative of the Global Development Network (GDN) that aims to systematically assess how the features of a national research system¹ impact the capacity to produce, diffuse and use quality social science research to the benefit of social and economic development. A pilot phase (2014-2017) in 13 countries was supported by the Agence Française de

Développement, the Bill & Melinda Gates Foundation, the French Ministry of Foreign Affairs and International Development, and the Swiss Agency for Development and Cooperation. In 2017, GDN conducted a synthesis of the pilot studies² and developed a standard methodology for studying social science research systems in developing countries,³ the 'Doing Research Assessment'. Since 2018, GDN has been implementing Doing Research Assessments in partnership with competitively selected national research institutions, with the aim of generating evidence on research systems. The program also aims to support the emergence of a network of research institutions in the Global South dedicated to informing national research policies, using new research-based, comparative evidence.

Doing Research National Focal Points – A Southern network of local 'research on research' expertise

Through the collaboration between GDN and these local institutions, the program aims to inspire research policies, map research strengths, support research capacity-building efforts and enhance the quality of research that can be used for policy decisions and local democratic debate in developing countries. Social science research provides a critical analysis of societies and human behavior and contributes to a better understanding of development challenges – which is fundamental to realizing national and global development agendas. Country reports, comparative global reports and data will inform actors from research, development and policy communities about

1 In this document, the terms 'research system' and 'social science research system' are used interchangeably.

2 www.gdn.int/sites/default/files/GDN-2017-DR-pilot-synthesis.pdf

3 www.gdn.int/sites/default/files/GDN%20-%20Theoretical%20Framework.pdf

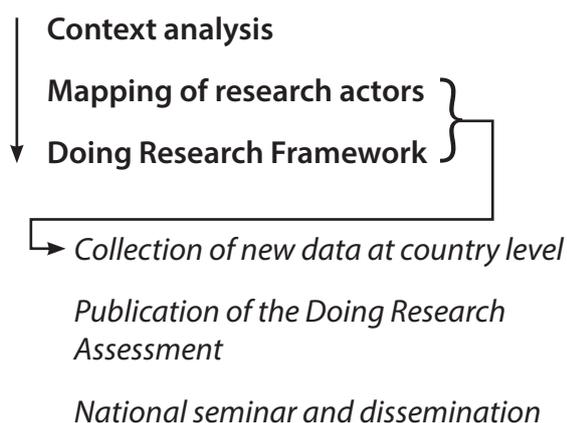
their policy-oriented research environment and how it can be improved.

Doing Research Assessment: to understand, map and assess research systems⁴

A unique feature of the Doing Research Assessment⁴ is the equal importance the methodology gives to production, diffusion and uptake factors and actors in the analysis of systemic barriers and opportunities for social science development.

It involves three steps for analyzing the factors that impact the social science research system in a given country or region,

Steps and activities for implementing a Doing Research Assessment



which will lead to several knowledge outputs and awareness-raising efforts.

Doing Research Framework: the core of the assessment

The Doing Research Framework is a mixed-method research module that allows a contextualized comparative enquiry into a national research system, looking at key factors that determine the production, diffusion and uptake of social science. It would typically serve as a magnifying glass to identify aspects that need the attention of the regulator, or to provide a baseline for strategizing investments in capacity-building for research production, its diffusion or its use.

The Framework acts as the basis for comparing and benchmarking research systems in different countries and includes 54 indicators. These indicators are populated according to the national context framed by the National Focal Points (NFP); these follow the project guidelines while adapting them to their national environment. Therefore, each country follows the same framework and general guidelines, allowing for comparisons between different reports of the indicators that define the Doing Research Assessments (DRA). The same is true for the Country Reports, which follow a similar structure.

	1. Production	2. Diffusion	3. Policy uptake
Inputs	1.1 Research inputs	2.1 Actors & networks	3.1 Policy-friendly research
Activities	1.2 Research culture and support services	2.2 Research communication practices	3.2 Research-based policymaking
Outputs	1.3 Research output & training	2.3 Research communication products	3.3 Research-based policy tools
Outcomes	1.4 Opportunities & sustainability	2.4 Popularization of science	3.4 Research for better policies

⁴ www.gdn.int/doing-research-assessment

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List of Abbreviations and Acronyms

APII	Indonesian Academy of Sciences (Akademi Ilmu Pengetahuan Indonesia)
ALMI	Indonesian Young Academy of Sciences (Akademi Ilmuwan Muda Indonesia)
ASEAN	Association of Southeast Asian Nations
AUN	ASEAN University Network
BAPPENAS	National Development Planning Agency
BRN	National Research Body (Bidan Riset Nasional)
CIPG	Centre for Innovation Policy and Governance
CSO	Civil Society Organization
DOAJ	Directory of Open Accessed Journals
DRA	Doing Research Assessments
DRN	National Research Council (Dewan Riset Nasional)
FTA	Free Trade Agreement
FTE	Full Time Equivalent
GCI	Global Competitiveness Index
GDN	Global Development Network
GII	Global Innovation Index
Gol	Government of Indonesia
HEI	Higher Education Institutions
HTI	Hizbut Tahrir Indonesia
ICT	Information and Communication Technology
IPB	Institute of Agriculture, Bogor (Institut Pertanian Bogor)
KSI	Knowledge Sector Initiative
LGBT	Lesbian, Gay, Bisexual and Trans
LIPI	Indonesian Institute of Sciences (Lembaga Ilmu Pengetahuan Indonesia)
MRTHE	Ministry of Research, Technology and Higher Education
NFP	National Focal Point
PPDIKT	Pangkalan Data Pendidikan Tinggi
SSCI	Social Science Citation Index

Executive Summary

Recent research on the organization of research production in Asia shows the effect of marketization on the quality of academic work. The Indonesian case provides a complex picture of these effects in a post-authoritarian context. Market-driven research production is not independent or of high quality because it is donor driven and instrumental. Against this backdrop, the Indonesian based Centre for Innovation Policy and Governance (CIPG) undertook this study to investigate the state of Indonesia's social science research system, looking at the production, diffusion and uptake of research into public policy development and implementation.

The purpose of this exercise is to collect and report original data on social science research systems, to guide research policy and capacity-building programs at the national level. Most importantly, it aims to highlight aspects that require the attention of regulators, policymakers, the scientific community and potential donors, and to ensure that actions and reforms are informed by contextualized knowledge of the local environment.

This study employs the Doing Research Assessment methodology. First, the research team carried out a review of relevant literature to assess the economic, political, historical and international context for doing research in Indonesia. Second, they mapped stakeholders within the social science research system to identify research producers and users in the Indonesian context. Third, they conducted a review of the documents, interviews and surveys to analyze Indonesia's social science research performance in terms of production, diffusion and uptake.

Main findings

Indonesia has a limited research culture as demonstrated by the performance of Indonesian social scientists – indicated by the low rates of academic publication compared to countries with lower GDPs such as Bangladesh, Kenya and Nigeria. The survey reveals that researchers feel that they do not have enough time to carry out research and have limited access to research mentoring. The poor performance of the research system is due to an overly burdensome audit culture for research grants, rigid monodisciplinarity (which hinders interaction between disciplines) and the pre-existing, state-driven promotion culture (which does not foster academic professionalization).

Academic insularity hinders performance.

A significant number of researchers do not open-source their research products and do not publish their articles in international journals. The majority of researchers are not members of professional research networks, which could provide an avenue for capacity-building and for improving research input through collaborations with international peers.

Indonesia's investment in R&D is one of the lowest in the region, with a gross expenditure on R&D (GERD) of 0.25 percent of GDP in 2017. Despite the increase from 0.09 percent in 2013, it is still well below that of Singapore (2.2 percent of GDP), Malaysia (1.3 percent of GDP), Thailand (0.6 percent of GDP) and even Vietnam (0.4 percent of GDP).

Social science research receives less funding. While the data suggests that there is a high demand from the government for more social science research, it also shows a serious underfunding of social science research. In the period 2011 to 2015, the

Ministry of Research, Technology and Higher Education provided USD 285.5 million of research funding, of which the social sciences and humanities received only USD 73.4 million. Social science and humanities research proposals received the lowest amount of funding due to the assumption that they do not require hard infrastructure and materials, as compared to the natural sciences.

Regional and gender inequalities create disparities in research activities. Regional inequalities, particularly between the more industrialized, urbanized island of Java and the islands of Sumatra, Kalimantan, Sulawesi and Papua, exacerbate the disparities in levels of reform among higher education institutions. Research organizations based in Java have more direct access to revenue (driven by the marketization of social science research). Gender inequalities are also evident. Although there is some gender balance among researchers, this is not the case higher up the career ladder, with fewer women occupying strategic positions.

Structural problems impinge on the quality of social science research performance in Indonesia, specifically in higher education institutions, which are subject to the policies and regulations of the Ministry of Research, Technology and Higher Education. This has created a disconnect between public and private researchers – the latter are much more able to provide professional consultancy services for both government and private sector clients. In addition, organizations and researchers that provide market research services to private sector companies are unable to publicize their findings because of the dictates of market competition. This disconnect means that some professional research organizations, be they public or private, do not see themselves as part of the social science research ecosystem despite the fact

that they conduct social science research. As a result, there is very little connectivity and exchange between the different types of actors and organizations.

The dissemination of research-based products is driven by the commodification of social science research. While the dissemination of research through multi-sector collaborations between actors and networks could be seen as evidence of a strong research-to-policy nexus, in practice, these interactions relate more to the ‘marketization’ of social science research and the use of research to influence government policy for the benefit of particular clientele – not unlike the ways in which market research serves the interests of corporations.

The capacity to communicate quality research to academia and the public is limited. A significant number of researchers in Indonesia feel that they do not receive adequate training on communicating their research. While Indonesian researchers have been quite effective in communicating through multiple media platforms, the lack of a strong academic research tradition could result in the communication of poor-quality academic work – the same is true for the research-to-policy nexus and the more general popularization of science.

While social science research in Indonesia is considered ‘friendly’ to policymakers, **policymaking is predominantly informed by research with limited theoretical grounding that lacks a strong tradition of peer review.** This is due to the fact that government-commissioned research is the main income source for research organizations. The risk is that policies – despite them being ‘evidence-based’ – are based on cherry-picked data and findings to suit the needs of policymakers. Government-commissioned research also exacerbates regional capacity inequalities as most of the

research is taken up by Jakarta- and Java-based universities.

Levers of Change

Academic promotion is assessed using administrative targets and performance appraisals that are not directly related to research productivity or quality. In addition, there is a prevailing culture of 'academic insularity' among Indonesian researchers – they lack academic mobility and interaction with international peers, which has isolated/insulated Indonesia from the global conversation on knowledge production.

Introduce career advancement policies and incentives in higher education that encourage merit-based promotion, research productivity, multi-disciplinarity and the transfer of ideas and debates across academic and non-academic departments and organizations. Incentives should also promote interaction between local researchers and their international peers.

The Indonesia Science Fund (*Dana Ilmu Pengetahuan Indonesia*) has shown a partiality for the hard sciences, as indicated by the limited allocation of research funding for social sciences. **Introduce a national research policy and funding mechanisms that foster a balance between research for addressing national priorities and an independent research agenda for the social sciences.**

The central government's disbursement of research funding follows the centralized, annual budget cycle for government spending. This means all government-funded research activities must be finalized by the end of the year. This limits the actual time for carrying out the research to roughly three to six months, at times with a mandatory requirement for academic publication. **Introduce greater flexibility in the central**

government's disbursement of research funding to allow researchers to extend government-funded research activities beyond the one-year cycle – to promote the production of quality research and academic output rather than compliance with administrative/auditing processes.

The Ministry of Research, Technology and Higher Education (MRTHE) has developed an **institutional clustering method** for categorizing institutions according to their research capacity. A university's research performance is measured by the number of international (mostly journal) publications, citations in recognized publications and research grants. **If a similar clustering method could be used with (local) journals, the country would have a benchmark and a mechanism for strengthening research quality.**

Indonesian Internet users frequently use their smartphones for social media (3.3 hours/day) and browsing (3.9 hours/day), which is significantly higher than Singaporeans (2.3 hours/day for browsing; 2.1 hours/day for social media). **These numbers suggest that Internet users in Indonesia would be able to access social research via social media in specific and socially relevant ways, should researchers disseminate their findings in an appropriate manner.**

Researchers in Indonesia do not receive adequate training on improving their capacity to communicate their research. Given the significant number of Internet users on social media platforms and the untapped potential of online research communication, **MRTHE, in collaboration with universities, should conduct research communication training for researchers.** This would enhance the capacity of researchers to promote and communicate their research to both academic and public/non-expert audiences.

INTRODUCTION

Highlights

- The Doing Research Assessment (DRA) in Indonesia was implemented by the Centre for Innovation Policy and Governance (CIPG) in Jakarta.
- The DRA combines desk research, surveys and interviews (a mixed-method research design) to collect and analyze qualitative and quantitative data.
- The DRA report provides a snapshot of the system for the production, diffusion and uptake of social science research in Indonesia. It aims to be accountable to peers and stimulate critical policy debate based on original data and analysis.
- The DRA exercise aims to support evidence-based policies for social research.

The Global Development Network (GDN) and the Centre for Innovation Policy and Governance (CIPG) work in partnership as the National Focal Point (NFP) for the Doing Research program in Indonesia. This partnership was established with the aim of understanding, mapping and assessing the social science research system in Indonesia. Within this partnership, CIPG recruited a research team to conduct the implementation of the Doing Research Assessments (DRA). The DRA is a method developed by GDN to inform research policy and capacity-building by drawing on a detailed analysis of the national research system.

The DRA report provides a window for assessing Indonesia's social science research system. It generates original data on the production, diffusion and uptake of social science research to highlight pathways for more effective and targeted capacity-building. It aims to enable the production of high-quality academic social science

research that is accountable to peers and with stronger links to policymaking. In line with this, CIPG is organizing discussions and outreach around strengthening the research system to enhance public debate and policy discourse on research and evidence for policy in Indonesia through innovative research and data collection. The basis of this engagement is one that is both theoretically informed and grounded in strong evidence.

As such, this report is structured according to the three phases of the DRA framework. The first is the context analysis. The context analysis section assesses the economic, political, historical and international context for doing research in Indonesia. The second section describes how the research team mapped stakeholders within the social science research system. This was done through identifying research producers and users in the Indonesian context. The third section, through a combination of secondary data, surveys and interviews, analyzes Indonesia's research performance.

It is worth noting here that this research was conducted during Indonesia's general election (April 2019). The political climate had an impact on our survey and interviews, especially with the policy community, whose focus was on the election. Adding to the complexities of investigating Indonesia's research system is the perception that research participants from non-state agencies do not see themselves as part of the social science research ecosystem despite evidence to the contrary. This is mainly because their organizations do not directly carry out research and are therefore not considered part of the research ecosystem.

Together with other GDN-funded DRA projects, this program offers opportunities for global engagement through GDN networks and partners, and allows the research team a more comparative view of social science research systems around the world.

CONTEXT ANALYSIS

Highlights

- Only 12 percent of published articles in social science and humanities are written by Indonesia-based authors, which is half the share of neighboring countries, Malaysia and Thailand.
- The bureaucratic model of university management, in combination with the pre-existing, narrow, technocratic structure that developed during the authoritarian regime, still impinge on the quality and depth of social science research today.
- The technocratic management of government research funding supports an 'audit culture' in the research sector, whereby far greater effort goes into monitoring and reporting mechanisms for a grant than into conducting analytical work.
- 'Insularity' remains a key feature of academic culture in Indonesia, with limited academic mobility and a lack of interaction with international peers, despite attempts to link Indonesia to the global conversation on knowledge production and promote academic engagement.
- Academic freedom is hindered by political clientelism that affects the distribution of research projects and by the marketization of research that results in proprietary knowledge.
- Policymakers predominantly consider the commissioning of studies as an administrative requirement, and do not use them to inform policy discussions or decision-making.

The context analysis examines the repercussions of the macro, national context on social science research production and use in Indonesia. According to the GDN implementation guide:

The purpose of a context analysis is to identify relevant factors that affect the performance of the research system in terms of the three functions [production, diffusion, uptake]... The context analysis involves collecting available documentation related to the research environment in a given country. (GDN 2018, 4).

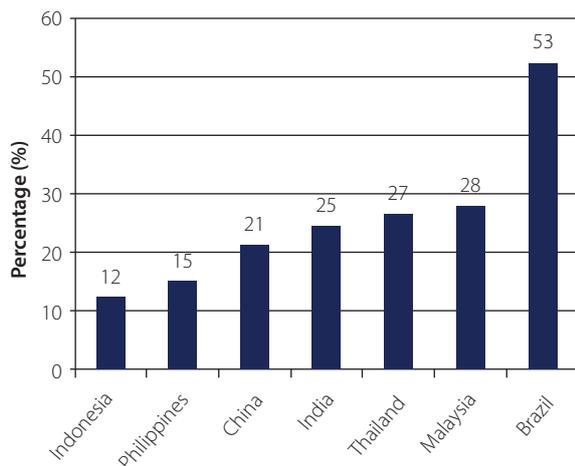
This analysis is based on the collection of all "available documentation on the research environment from credible sources" (GDN 2018, 5) and involves reviewing reputable, publicly available policy documents, research reports and links to references on Indonesia's research system. This is done by undertaking an overall assessment of the economic, political, historical and international context for doing research in Indonesia.

Indonesia's Development in Context

Indonesia's research performance and research funding lags behind most neighboring Association of Southeast Asian Nations (ASEAN) and middle-income countries (Rakhmani and Siregar 2016). As measured by the number of publications in international peer-reviewed journals, indexed by the Social Science Citation Index (SSCI), Indonesia ranked the lowest among developing countries in the Asia region (Suryadarma, Pomeroy and Tanuwidjaja, 2011). Only 12 percent of published articles in social science and humanities are written by authors based in the country. This is half the share of neighboring countries, Malaysia and Thailand.

The Government of Indonesia's (GoI) research budget allocation is considerably lower than that of neighboring countries. Generally, strong emerging countries spend around 1–3 percent of the national budget on research and development. GoI spent about 0.25 percent of its GDP on research in 2016,

Figure 1. Share of domestic research (percentage)



Source: Suryadarma, Pomeroy and Tanuwidjaja (2011, 3), based on SSCI database, Thomson Reuters Web of Knowledge, 1956–2011

up from 0.09 percent in 2013 (Y. Nugroho, Prasetyamartati and Ruhanawati, 2016), which is ten times lower than other countries in the region (Pellini, Prasetyamartati, Nugroho, Jackson and Carden, 2018). As a comparison, Singapore allocates 2.2 percent, Malaysia about 1.25 percent, South Korea 4 percent and Japan 3.6 percent (Pellini et al., 2018). Funding on research, here, refers to gross expenditure (GDP) allocated for research and development in a country. The lack of budgetary allocations by Gol limits the production of high-quality, impactful research.

The poor quality and limited productivity of social science research is rooted in the uneven post-authoritarian reform efforts. Most organizations producing research are state institutions, formerly part of massive developmentalist projects that sustained a crony-capitalist, authoritarian regime (Hadiz and Dhakidae, 2005). As such, it is important to acknowledge from the outset the historical development of organizations producing science in Indonesia in order to better identify the relevant factors that affect the performance of Indonesia's contemporary research system.

Historical development

The New Order Government (1962-1998) pursued a highly centralist, technocratic approach to manage its main research producers, higher education institutions (HEIs) (Guggenheim, 2012; H. Nugroho, 2005; Rakhmani and Siregar, 2016; Rosser, 2016). Universities, which were predominantly state owned, were expected to serve the regime's state developmentalist projects.

Box 1. Developmentalism

Developmentalism was the state ideology and 'development' (pembangunan) was a key concept during the New Order administration (Heryanto, 1988, 1995; Langenberg, 1987). The regime claimed not only to be the New Order, but also the Development Order (Rezim Pembangunan). The President, who ruled for 32 years, held the honorary title, 'Father of Development', and was supported by his 'Development Cabinet'. During this period, the term 'development' not only referred to an economic agenda, but a state ideology that "binds and legitimises certain modes of thought, as well as negating other forms of consciousness, [which] is probably unique among the various developing nations" (Heryanto, 1995, p. 8).

State universities were positioned as a means of socializing and internalizing developmentalist ideology among lecturers and students (Farid, 2005; H. Nugroho, 2005; Widjojo and Noorsalim, 2004). The task of universities was to legitimize state policies, which meant all academic activities had to comply with and support the development agenda. There was little space for contestation of ideas and critical thinking that challenged government policies (Heryanto, 2005), let alone for scientifically

rigorous work. Universities largely functioned as teaching organizations and less as research-oriented institutes; social science research, in particular, was used to justify state policies (Guggenheim, 2012; Hadiz & Dhakidae, 2005).

The collapse of the New Order regime in 1998 marked a shift in the use of social science, specifically by the state (Achwan, 2017). “The production of the social sciences ‘boomed’ as international donors, the state bureaucracy, private businesses, and political parties invited social scientists working in and outside universities to provide advisory and consultancy services” (Achwan, 2017, p. 473). Achwan (2017) argues that this rise in demand for social science consultancies has not been able to enhance the quality of social science in academia and its influence in policymaking, despite the increase in productivity among a few local think tanks and research groups. Later, in the 2010s, the discourse around ‘evidence-based policymaking’ emerged as a consequence of external pressure and funding – such as the Knowledge Sector Initiative and the Australia-Indonesia Partnership for Decentralization – which pushed for a research–policy nexus agenda. This trend has contributed to shaping the way research developed over the last two decades. The production of social science as a result of this instrumental demand is, arguably, a form of profound marketization of higher education (Rakhmani, 2019).

In the 2000s, university governance was developed to monetize the higher education student market and academics were pressurized into taking on a greater teaching load (Achwan, 2017; Rakhmani, 2019). Only after the 2010s was funding channeled through universities to finance research, but without the infrastructure to develop a basic level of academic competence – which had been virtually non-existent – let alone quality

academic work for informing policymaking. The bureaucratic model of university management, in combination with the pre-existing, narrow, technocratic structure that developed during the authoritarian regime, still impinge on the quality and depth of social science research today.

Importantly, Indonesia’s social science research system was not designed to professionalize social science researchers (Achwan, 2017; Rakhmani, 2019; Rakhmani & Siregar, 2016) and as a consequence it does not produce highly qualified and internationally mobile social science researchers. Up until the late 1990s, the social sciences were under state-control, limiting the theoretical imagination of researchers as well as the quality of their work. In the 2000s, the lack of academic culture merged with the demands of the market (Sakhiyya & Rata, 2019). This continues to be the case and is exacerbated by the profound marketization of HEIs (Rakhmani, 2019). The dominant types of higher education reforms are characterized by privatization, marketization and internationalization (Sakhiyya & Rata, 2019; Susanti, 2011). In other words, the opening up of the country, along with the prevailing neoliberal hegemonic discourse on the instrumental role of research, has transformed research primarily into a marketable commodity. This can be seen in contemporary trends in governance and market research: research which does not generate revenue is marginalized and not funded. This issue is discussed in the next section.

Issues in organizational culture

There are three issues regarding the organizational culture of research organizations that we argue affect the performance of Indonesian social scientists, as well as its linkage to policymaking: the onerous audit culture for research grants; the

lack of interdisciplinarity; and the state-driven promotion culture.

The central government's disbursement of research funding follows the centralized, annual budget cycle for government spending. This means all government-funded research activities must be finalized by the end of the year. Similarly, they must meet the requirements set out in the audit process, which focuses on administrative compliance rather than the quality of academic output. This limits the actual time for carrying out the research to roughly three to six months, at times with a mandatory requirement for academic publication. This could actually be leveraged as an opportunity, but it must be treated with caution as we have learned from the 'cobra effect'⁵ of publication targets. In addition, government research funding schemes need to learn from and adopt models of peer-review used in countries with better university management systems. Such a scheme could be piloted for recipients with international peers.

As a result of these time constraints, far greater effort goes into monitoring, governance and reporting mechanisms than into conducting the actual research. This has resulted in the development of the so-called 'audit culture', which aims to enhance transparency and accountability (Gaus & Hall, 2016; Shore, 2008), but at the expense of academic performance.

The audit culture increases administrative compliance much more effectively than it improves academic performance. The focus is less on carrying out quality research and more on how to write an auditable financial report, complete with all of the required

supporting documents for each expenditure from the research fund (Rakhmani, 2019; Rakhmani & Siregar, 2016). This audit culture applies to both public and private institutions, and is primarily led by the National Audit Board and the Ministry of Finance.

Second, research problems tend to be interdisciplinary in nature, while the way universities are structured is not. While many countries have adopted a cross-disciplinary approach, faculties in state universities rigidly organize their departments based on disciplines and are, more often than not, organized by specialism rather than thematically. This is reflected in the current policies regarding the promotion of lecturers in Indonesia, which is based on the principal of 'linearity': narrowing one's own educational experiences to increase specialization (Y. Nugroho et al., 2016). Such policies, which are applied in both state and private universities, are contradictory to the demands of the growing global academic as well as professional job market, which requires interdisciplinary experience (Oey-Gardiner et al., 2017; Schwab, 2016). As a consequence, scholars tend to stay within their own disciplines and advance through the ranks in their own institutions (Karetji, 2010). This structure constrains the transfer of ideas and debates across academic departments. This reinforces insularity, both within and among institutions. This lack of interaction between organizations and the tendency toward insularity is confirmed in our survey: the majority of our respondents (61.5 percent) have never organized a public debate, while only 17.9 percent of institutions (located in Jakarta) have organized more than seven events.

Globally, interdisciplinary research offers greater potential for developing and producing new knowledge through research

⁵ The 'cobra effect' refers to the unintended consequences of an action that worsen the situation. See the item 'peer reviewing' (Page 39) for more detail on this.

that combines and integrates insights and perspectives from multiple disciplines (Barry, Born & Weszkalnys, 2008; Wernli & Darbellay, 2016). The lack of interdisciplinarity among research producing organizations in Indonesia therefore hinders efforts to improve the performance of social science researchers.

The third problem lies in the bureaucratization of promotion. Most academics in prominent Indonesian universities – which are predominantly, if not all, state universities – are civil servants whose promotion is controlled by the Ministry of Research, Technology and Higher Education (MRTHE). In addition, their promotion is assessed using administrative targets and performance appraisals that are not directly related to research productivity or quality (Rakhmani, 2019). Promotion relies more on the approval of bureaucratic superiors than academic merit. This mechanism is a legacy of the New Order's control system that remains at work today. As Guggenheim (2012) notes: "The genius of the New Order's control system lay not in the instances of outright oppression of critical scholars, analysts and researchers, but in the use of bureaucratic incentives to undermine the production of knowledge from within the very institutions that created and used it" (p. 142). It is impossible to encourage academics to produce quality work under the state-centralistic structure and governance of universities. Quality, according to Achwan (2017), is not a priority.

These three key aspects of organizational culture have contributed to the academic insularity of Indonesian scholars. It is a culture in which "most Indonesian researchers lack academic mobility and international peer interaction, and opt to stay within their own institution" (Rakhmani & Siregar, 2016, p. ii). This culture has insulated Indonesia from the global conversation on knowledge production and academic engagement.

Evidence-based policymaking: are we there yet?

Under the conditions that we have described, claims of evidence-based policymaking must be scrutinized. Evidence that is not produced through academically rigorous methods is vulnerable to cherry picking, which means that policies – despite them being 'evidence-based' – may be ineffective. In post-authoritarian Indonesia, at least 50 percent of ministers in the cabinet are appointed largely based on political considerations, which means that policies become political instruments in the elite competition over voters and constituents (Mietzner, 2018; Muhtadi, 2019). The politics of Indonesia's policymaking is rife with short-term solutions in preparation for the next elections. This has resulted in short-term policymaking that ignores long-term planning needs. A great deal of social science research is – through social conditioning – applied and used in the interest of its clients.

Other policy researchers have argued the same. Yanuar Nugroho et al., (2016, p. 20) stated that "either the government does not see the importance and value of research in informing policy, or the research communities fail to engage with the government". Karetji (2010) argues that creating a culture of evidence-based research and enhancing knowledge capacity is primarily a political decision. Even though regulations are introduced to stipulate the use of evidence, "policymakers frequently consider the commissioning of studies as a 'tick-the-box' exercise and do not assess or use the studies" (Guggenheim, 2012, p. 154). When new leaders are in place, they increasingly turn to their own sources of advice rather than taking on research findings provided by consultants.

There have been signs of reform, but not without contradictions. On October 2014,

President Joko Widodo (known as 'Jokowi') merged higher education (formerly within the Ministry of Education and Culture) with the Ministry of Research and Technology. Merging them together shows that serious attention is being given to higher education as an economic driver, with hopes that "it will contribute to economic development" (MRTHE, 2015, p. 10). It was also expected that the performance of university research would improve, as indicated by increasing the number of international publications, patents, copyrights and other forms of monetizing research innovations. However, the new ministerial structure, established in October 2019, restored control of higher education to the Ministry of Education and Culture,⁶ while the National Research and Innovation Agency is now managed under the Ministry of Research and Technology. This confirms Karetji's argument that focusing on improving knowledge capacity is fundamentally a political decision (2010).

Likewise, HEIs are now under pressure to generate income; research is carried out to generate revenue for the university rather than as an exercise in institutional engagement between state universities and policymaking. Post-authoritarian state universities now have the legal right to seek non-state research funding. Research grant schemes also shifted in the 2010s, from centralized distribution to competitive-based funding. Although this has improved the management of funding, it has not improved the general quality of social science research. This shift and the increase in research funding

has enabled universities located on the heavily industrialized and urbanized island of Java to take on more research, while universities elsewhere lag behind (Rakhmani & Siregar, 2016). Java-based universities are generally better-off in terms of research capacity, resources and infrastructure. In addition, state universities in Java tend to have better access to international donor and private sector funding than those on other islands, widening existing regional inequalities in access. The continuing disparities in competitiveness and access to research funding, especially for social science research, needs to be addressed in any assessment of the Indonesian research ecosystem.

In response to these problems, the President announced his plan, in 2018, to establish a National Research and Innovation Agency. The research agency was established as a single institutional framework to circumvent the inefficiencies of the many sub-research bodies that exist in almost every ministry and department (Y. Nugroho, 2019). However, the National Research and Innovation Agency is a centralized body, under the central government in Jakarta. The characteristics of its design (Jakarta-based) could exacerbate the pre-existing regional inequalities and feed into the insular nature of social science research – if these structural issues are not addressed in fundamental ways.

The General Structure of the Research System

This section lays out the general architecture of the social science research system. Following the DRA framework, we use the concept of a National Innovation System (NIS; Lundvall, 2016) as guidance for a more adaptive research ecosystem. Using this framework, the research system can be

⁶ This DRA research was carried out when the Higher Education sector was managed under MRTHE. By the time the report was finalized, structural reforms in the cabinet had brought Higher Education back under the control of the Ministry of Education (as it used to be before 2014). Therefore, this report uses MRTHE as its reference, not the current Ministry of Education and Culture.

understood as a system of innovation that is “constituted by elements and relationships which interact in the production, diffusion and use of new and economically useful knowledge” (Lundvall, 1992, p. 2). Complementary to a structural analysis, this framework maps alternative ways of looking at the way state and non-state organizations shape the culture of social science research.

The Indonesian research system, as it is in other parts of the world, is comprised of government and funding agencies, HEIs, civil society and the private sector. Each of these institutions plays country-specific roles in a nation’s research ecosystem according to their research function: producing, diffusing/disseminating and using research. These categories are central in mapping stakeholders in the Indonesian research system.

These four categories have sub-groups based on the authors’ reading of policy documents and research reports. Government and funding agencies consist of the research and development divisions of all national ministries and non-ministerial bodies, government research councils as well as public and private international donor organizations. In Indonesia, the main state actors in this category include MRTHE, the Ministry of Finance, the Ministry of Religious Affairs (that governs and funds religious-based universities) and the National Development Planning Agency (BAPPENAS). Non-state actors that have a significant influence on reform processes include Australia’s Department of Foreign Affairs and Trade’s Knowledge Sector Initiative (KSI) and the World Bank; although many other international organizations have also contributed. These organizations actively fund social science research in Indonesia and promote their research as a basis for policymaking.

Furthermore, HEIs can be divided into state and private universities, which can be for-profit or non-profit organizations. There are only 74 state universities from a total of 4,482 HEIs in Indonesia (1.6 percent); these come under MRTHE (PDDIKTI, 2018). Most of these are more teaching-oriented and follow conventional disciplinary boundaries. Funding for state universities predominantly comes from the government (Purwadi, 2001).

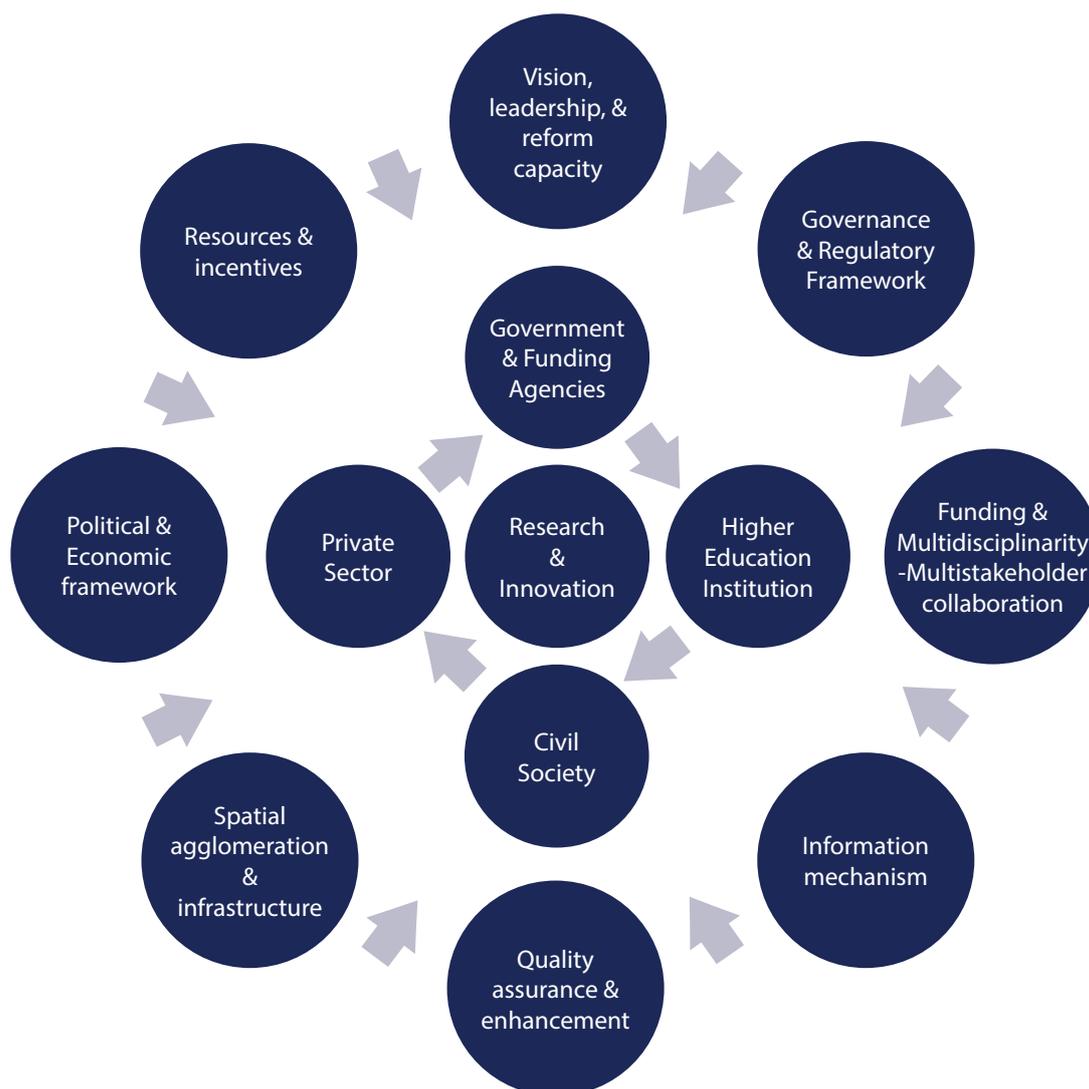
Sources of funding have become more diversified since the state university autonomy law was launched in the 2000s. This permitted state universities to seek alternative sources of funding such as central government funds, recurrent budgets, infrastructure budget allocations, student fees and other self-generating initiatives. Most private universities are profit-oriented, although a few institutions are run to fulfill educational missions rather than generate profit.

Civil Society Organizations (CSOs) include NGOs, opinion leaders, non-profit think tanks and the media. The private sector or industries include for-profit think tanks and consultancies, as well as foundations formed under established corporations.

Figure 2 is based on the DRA guidelines and adapted from Salmi (2011). The figure depicts a country’s research system as an ecosystem. We have adapted this to suit the Indonesian context for social science research, based on the context analysis for this research. Central to the process of research and innovation are the key stakeholders identified and listed in our stakeholder mapping: government and funding agencies, HEIs, civil society and the private sector.

The performance of these stakeholders relies on their surrounding support systems – i.e., political and economic frameworks, funding mechanisms and the nature of collaboration

Figure 2. Indonesian social science research system and its ecosystem



Source: Modified from the DRA guidelines (2018) and Salmi (2011)

(multidisciplinary and multi-stakeholder), reform capacity, governance, information mechanisms, quality assurance, resources and incentives, as well as infrastructure. This framework is used to compile the indicators for the DRA framework, which is further explained in the stakeholder mapping section of this report.

Indonesian research leadership is currently under the authority of MRTHE. Up until 2014, HEIs had been managed under the Ministry of Education as a Directorate parallel to the Primary and Secondary Education Directorate. Since 2014, President Joko

Widodo has merged HEIs with research and technology to improve access to and the quality of research and higher education for market or research users (Rakhmani & Siregar, 2016). The Ministry is responsible for funding state universities and regulating matters related to higher education provision and research.

Dewan Riset Nasional (DRN) or the National Research Council of Indonesia is a national independent research institute that generates knowledge, ideas and perspectives for those interested in research and technology in Indonesia. Although Presidential Regulation

No. 16 (2005) states that the duty of the council is to “assist the Minister in formulating direction and priorities in the development of research and technology” (Gol, 2005), interviews show that the DRN has contributed little to research leadership. Though a real plan for improving the performance of has DRN has not yet been revealed, in 2019, re-elected President Joko Widodo formed a Badan Riset dan Inovasi Nasional or National Research and Innovation Body to ensure more effective and efficient use of research funding – specifically for supporting national research policies (MRTHE, 2017). Indonesians have yet to see the impact of a new structure for solving problems in research production and uptake (Juliandi, 2019).

International donor organizations, such as the International Monetary Fund and the World Bank, have also had a significant influence in reforming the higher education sector (Rosser, 2016). Since 1998, the World Bank has been publishing reports on Indonesia’s higher education system and pushing the government toward opening up the sector to foreign investment (World Bank, 1998). The World Bank has started to engage with individual selected universities, granting ‘soft loans’ through the so-called IMHERE (Indonesia – Managing Higher Education for Relevance and Efficiency) project to more than 40 universities in Indonesia. This was done by providing various forms of technical assistance to the universities. This includes providing consultancy services to envision the future of universities, administrative and managerial capacity development (financial and physical asset management), making strategic and business plans for institutions, designing revenue-generating activities, and investing in equity scholarships (Sakhiyya, 2018).

However, these attempts at managerial reform have not been matched with serious efforts to improve the academic autonomy of research organizations and fail to take

into account Indonesia’s post-authoritarian context (Irianto, 2012; H. Nugroho, 2005; Y. Nugroho et al., 2016; Rosser, 2016). During the New Order administration, research organizations and HEIs were subservient to state power and lacked institutional, academic and managerial autonomy (Guggenheim, 2012; H. Nugroho, 2005). These historical antecedents created structural barriers to producing anything close to progressive social science research. That is why policies that aim to increase institutional autonomy – i.e. the State-Owned Legal Institution Law (or BHMN Law, 1999), which was then amended under Regulation Number 23/2005 on Financial Management of Public Service Agency (BLU) – have had little effect in increasing academic performance.

However, the drive towards internationalization, by both MRTHE and state universities, has had an effect on professionalization. These ambitions can be realized not only through monetary resources and incentives, but also through peer-review mechanisms. There are incentives to publish both from MRTHE and HEIs. The range of incentives varies according to the level of impact and the standard of journals. The latest MRTHE regulation (No. 20, 2017) stipulates international journal publication as a requirement for promotion and career advancement for professors and senior lecturers. Journal publication has also become a prerequisite for submitting research proposals funded by MRTHE. These strategies are expected to improve Indonesia’s global ranking and contribute to the research–policy nexus. According to the Scopus Database (2018), Indonesia is ranked well behind Singapore and Malaysia in terms of journal publication. This drive for journal publication (Zein, 2018) started in 2012, with the issuance of Official Letter Number 152/E/T/2012 of the Directorate General of Higher Education.

Indexing is the central criterion used to categorize international and local journals. Beside Scopus, other international indexes are also used. The Directory of Open Accessed Journals (DOAJ) uses relatively clear and transparent assessment criteria. From 2009 to 2016, DOAJ indexed around 400 journals of all disciplines from Indonesia; from 2016, Indonesia was ranked second after Brazil. DIKTI, the Directorate of Higher Education at the Ministry of Education and Culture, has also developed SINTA,⁷ an Indonesian web-based research and publication system that lists and categorizes local journals. In 2018, there were 2,251 journals or academic publications with 52 journals ranked as SINTA 1, 579 SINTA 2, 469 SINTA 3 and so on (Database Sintadikti, 2018). These attempts show that the legacies of New Order bureaucratization are being reformed, with corporatist regulations that aim to increase academic professionalism by means of re-regulation. This, however, is not without its problems.

Scholars have noted how this rapid growth in publication and citation has led to an over-obsession with journal indexing and measurement/ranking technology, at the expense of academic quality (Abraham, Irawan & Dalimunthe, 2019; Fiantis & Minasny, 2019; Zein, 2018). More specifically, it has contributed to 'the cobra effect' (Zein, 2018) on Scopus: devious and predatorial publication practices by academics to raise their citations (h-index on Scopus).

Our review of previous research shows that increasing monetary rewards for internationally published scholars is seen

as an incentive, but is not the main driver (Rakhmani & Siregar, 2016). What is more important is establishing an ecosystem that nurtures a vibrant academic culture, one that enables a cross-organization and multidisciplinary peer-review system among and within HEIs and research actors – which is why this research is so important.

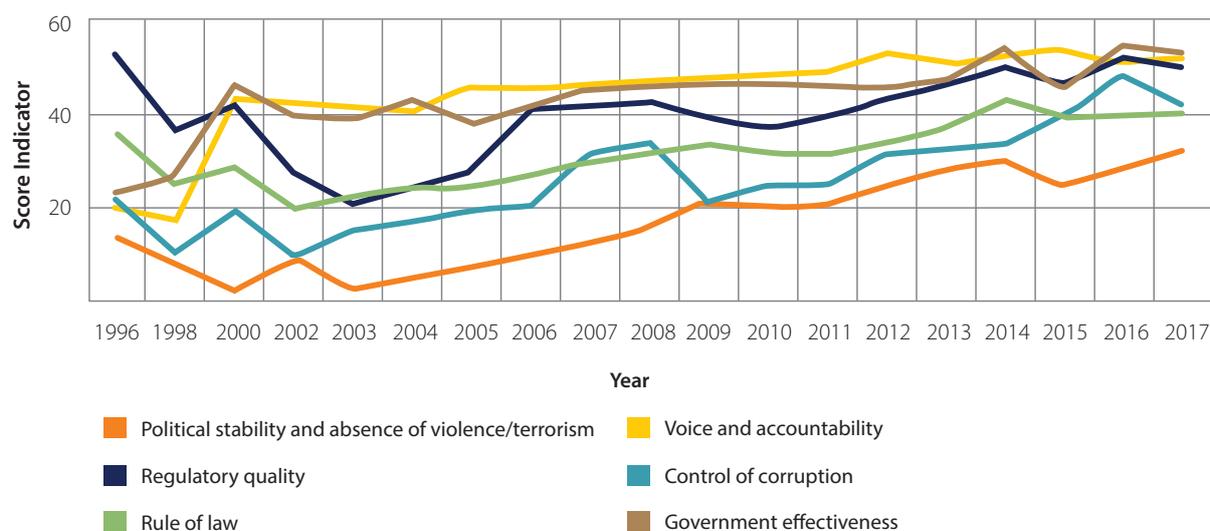
Sociopolitical Context

Historical and contemporary, and national and local political dynamics have significantly influenced Indonesia's capacity to generate autonomous and independent social science research (Achwan, 2017; Hadiz & Dhakidae, 2005; Rakhmani, 2019). The extent to which research can be projected into the public arena free of government vetting is an important indicator of this. According to the World Bank's Worldwide Governance Indicators, Indonesia's score increased steadily from 1996 to 2017 (see Figure 3 below). This means that public perception of government performance is improving. Of the six indicators (political stability, regulatory quality, rule of law, voice and accountability, control of corruption, and government effectiveness) the most drastic changes are in voice and accountability, and rule of law. This confirms our previous analysis: that the collapse of the New Order regime in 1998 marks a shift toward democracy.

Although there is steady progress in accountability, government effectiveness and the rule of law, the reforms have not had a significant impact on the level of academic freedom in Indonesia's social research practices. As a result of Indonesia's democratic development, the academic freedom of researchers is no longer hindered by a strong state, but by – among other factors – political clientelism in the

⁷ SINTA, the Science and Technology Index, is a web-based research information system for Indonesian academics, which includes a citation index and information on research areas. It serves as a reference for research performance.

Figure 3. Worldwide Governance Indicator



Source: The World Bank (2017)

distribution of research projects (H. Nugroho, 2005) and the marketization of research (Rakhmani, 2019). The former refers to the control of research funding by a patronage system within state universities, while the latter refers to the market-driven tendencies of research production.

The centralized nature of the state bureaucracy impinges on the newly formed structures and policies put in place by national and local governments that aim to increase research productivity – such as research councils, national funding agencies or national research policies. Research funding is organized thematically, in collaboration with renowned scientists in particular fields and in universities that excel in particular areas. At the same time, academic organizations supported by international development organizations seek to push for a climate of academic freedom – as the basis for scientific excellence. However, this only applies in specific contexts. Government-to-government funding tends to focus on particular areas rather than influence the research system more generally. For example, research on biodiversity (as evident

in our interview with a member of ALMI [Indonesian Young Academy of Science]) is conducted with scientists from particular universities (in our example, IPB [Institute of Agriculture, Bogor]) and takes advantage of ALMI to increase public impact (examples of videos and media reports are available on request).

These organizations, such as ALMI and IPB, illustrate the way bureaucratic administrations systematically impede quality research. Innovative research is the result of the work of individual researchers and not as a consequence of institutional design, which means that its influence is limited to the professional networks of individual researchers. We posit that the political context of social science research in Indonesia today demonstrates the tensions between bureaucratic elements that make up the state apparatus and those of academic and international development organizations.

Research agenda and policies

Some policies, such as the National Research Masterplan and the Law on the National

System for Knowledge and Technology (UU SISNAS IPTEK), are designed and put in place to support the production of knowledge within universities and research bodies and/or organizations. However, these policies are not designed to encourage the systematic use of research among government institutions. Policymakers predominantly consider the commissioning of studies as an administrative requirement, and do not use them to inform decision-making. Even if social science research is used, it does not serve as a basis for policymaking, but only to make it appear scientific (Hadiz & Dhakidae, 2005). This is not a situation unique to Indonesia (Jarvis, 2014).

The current development of research funding also reflects the subordination of social science research in Indonesia. The Indonesian Endowment Fund for Education (Lembaga Pengelola Dana Penelitian – LPDP) has cut the budget for social science research since 2017 (www.lpdp.kemenkeu.go.id). This is despite the MRTHE Strategic Plan (2015 to 2019), which emphasizes that “the direction of the policies is to conduct social and humanities research covering all the Indonesian archipelago and people” (Menristekdikti, 2015, p. 26). The Strategic Plan is the framework upon which other related policies and rules are based. While it supports the production of research, it makes no mention of the use and diffusion of research.

The same is true of other policies, such as the newly formulated regulation to replace Law No. 18, 2002 on the National System for Science and Technology (Abdullah, 2015). The draft law, composed by MRTHE, mentions the instrumentality of research as an important principle but does not specify the use of research as a means to support evidence-based policymaking – let alone the production of basic research. This lack of awareness on research uptake

is surprising given the fact that universities – including individual lecturers and think tank research centers – remain a significant provider of research and consultancy services for the government, international donors and corporations. University-based researchers take on technocratic research consultancies, which provide scientific or technological solutions to social problems, both through individual consultancies and/or institutional–university partnerships. This kind of research is not independent and of high quality because it is donor-driven and instrumental. The marketization of social science research that caters to the needs of government bureaucracy – not to be confused with research uptake as it does not always influence policymaking – is a far cry from independent research. This is confirmed in our survey: the majority of researchers and research administrators undertook commissioned research in the last three years.

The Indonesia Science Fund (Dana Ilmu Pengetahuan Indonesia – DIPI), an independent funding agency initiated by the Indonesian Academy of Sciences (Akademi Ilmu Pengetahuan Indonesia – AIPI), promised a greater degree of academic freedom (Putra, 2016). However, DIPI has shown a partiality for the hard sciences, as indicated by the limited allocation of research funding for social science (Oxford Business Group, 2017) (Rakhmani & Siregar, 2016). Therefore, without an established set of policies and funding mechanisms, there is a lack of balance between research for addressing national priorities and an independent research agenda for the social sciences.

Academic freedom

The main issue that emerges from our scoping interviews with academics and scholars in the field is academic freedom. Academic freedom is central in enabling

research actors to push the boundaries of knowledge and generate alternative understandings of the social world in ways that are, ideally, impactful. While academic freedom is not a self-contained right, the freedom to pursue social science research and scholarship unfettered by censorship and persecution cannot be separated from the freedom to exercise basic civil and political rights (Saunders, 1998). This linkage is important for the production, dissemination and uptake of social science research, as institutional efforts that discourage critical thinking could potentially impact on knowledge and the research system.

According to our scoping interviews, Indonesia's academic freedom post-Soeharto is "not much better" (legal scholar and human rights activist, personal interview, 2019) despite the collapse of the authoritarian regime. There are merely new modes, actors and trends of suppression. There are at least four areas that are deemed controversial and sensitive: Marxism/communism, criticism of corporations, religion and LGBT issues. According to a study on academic freedom carried out by Wiratraman (2018), of 49 cases of the disbanding of academic discussions investigated in 2018, 37 percent related to communism, 31 percent were a result of corporate pressure, 18 percent were related to religious topics, 10 percent concerned LGBT issues and 4 percent were due to other issues.

Communism remains a very sensitive issue today and is a legacy of the New Order regime. The forms of repression vary from the banning of academic discussion, book seizures and the banishment of left-leaning intellectuals (Farid, 2005;

Hadiz & Dhakidae, 2005; Heryanto, 2005; Sangadji, 2017). For example, screenings of Joshua Oppenheimer's film, *The Look of Silence* (Senyap),⁸ were canceled, disrupted or banned at several universities in Yogyakarta, Malang and Surabaya. Reported seizures of various genres of communist and Marxist books also reflect similar attempts at suppression. Our scoping interview with the Editor of *Indoprogess* (a platform for left-leaning researchers), confirmed this. He argues that there has been tight surveillance of the use of Marxism as a theoretical lens in social science research in Indonesia through screening and filtering by state agencies. In addition, the lack of literature and experts (who are fluent in Marxism), as well as other structural barriers (institutional controls, research permits, etc.) demonstrates the assault on academic freedom.

Communism is the only topic that has been legally and systematically curtailed. During the New Order regime, the study of Marxism and communism at universities was forbidden. This was regulated by a government policy, namely TAP MPRS Number XXV/MPRS/1966. The authoritarian regime maintained that the study of Marxism was a threat to political stability, and was seen as a form of analytical and critical thinking that could lead to the overthrow of the regime (Farid, 2005; Heryanto, 2005). Even though this policy was lifted by President Abdurrahman Wahid in 2000 – amongst much criticism (Bourchier, 2001) – Marxism and communism are seen as a representation of the former Indonesian Communist Party. Marxism/communism still remains a controversial issue in Indonesia today (Kasenda, 2014). Many academic discussions, both spoken and written, on Marxism/communism have been disbanded through military force (Saunders, 1998). This has had the effect of discouraging alternative academic discourses for analyzing the

8 *Senyap* or *The Look of Silence* is a documentary film about the Indonesian mass killings of 1965-1966, directed by Joshua Oppenheimer in 2014. Although it received much international acclaim and won 70 international awards, the film was banned in Indonesia.

contradictory effects of neoliberal policies in Indonesia (Farid, 2005), which include, among others, social inequality, the concentration of wealth among the elite and the affluent middle classes, and their effect on the quality of democracy.

The second issue relates to corporate pressure. Due to the shrinking national budget, academia has increasingly come under the influence of corporations and corporate interests. Corporate control over university policies can be seen from several cases of the banning of documentary screenings that criticize corporations (Wiratraman, 2018). For example, the screening of *Samin vs Semen* – a film about the local rejection of the cement industry – by Brawijaya University in Malang, East Java was banned. The same happened for the screening of *Prahara Tanah Bongkoran* – a film about land disputes – at Universitas 17 Agustus 1945, Banyuwangi, East Java. An academic discussion initially planned at Gajah Mada University in 2015 on a lawsuit related to Rembang residents and PT Semen Indonesia was also banned. This has limited critiques of corporations that could inform policies on environmental sustainability.

On the issue of religious and social minority rights, our interviews reveal that there are no significant barriers to studies of minority religions. However, cases of limitations on certain religious minority rights in several universities signal a wider threat to academic freedom in the higher education sector (Suhadi, 2017). One of the many cases involved the banning of academic discussions on Hizbut Tahrir Indonesia (HTI) and the surveillance of university academics allegedly associated with the organization. This is in line with the government's decision to disband HTI.

LGBT issues are also another sensitive area that sparks debate and controversy in

higher education. This has had the effect of impoverishing academic pluralism by limiting the types of ideologies and marginal social practices that can be studied on campus. This restricts the diversity of studies that could inform policymaking regarding social inclusivity.

These efforts to discourage critical thinking are the main barriers to academic freedom. Critical thinking, the main element of social science, is believed to challenge and destabilize 'national/institutional stability'. According to Wiratraman (2018), neo-feudalism in universities is the root of authoritarianism and suppression exercised in universities. It considers a campus as a miniature kingdom and influences the relations within the institution. Promoting academic freedom is the first important step in nurturing a robust social science research system that enables the production, diffusion, and uptake of social science research. On 6 September 2017, the Surabaya Principles on Academic Freedom were established by the Human Rights Law Studies group; they have been circulated worldwide, especially through the Southeast Asian Human Rights and Peace Studies Network. It has become an important reference and has been endorsed by the Network. The principles are as follows:

1. Academic freedom is a fundamental freedom required to develop the autonomy of academic institutions
2. The academic community and those who are engaged in academic communities, have full freedom in developing community service, education, research and publishing academic results in accordance with scientific principles
3. Members of the academic community who work as educators have the freedom in the classroom to teach by using

scientific methods and respecting values of humanity

4. The academic community should possess scientific integrity for humanity in developing responsible academic culture and should be free from any restrictions and disciplinary actions
5. Public authorities have an obligation to respect, protect and ensure measures to guarantee academic freedom

Although the rule of law does not fully protect political and academic freedom, the use of digital platforms by a collegial circle of progressive young intellectuals, *IndoProgress*, the print publication, *Marjin Kiri*, and the national journal, *Prisma*, have regularly produced and disseminated critical social research. Likewise, intellectual communities that research and advocate for sexual reproductive health and LGBT rights also exist, but their research is still unpublished and their impact on policymaking is minimal.

Governance of research

Modes of governance, specifically through the Indonesia Public Information Disclosure Act (UU KIP No. 14, 2008), allow more transparent use of funding as well as publicize policies and regulations online. In addition, there have been significant changes to procurement. Under procurement regulations prior to the Presidential Regulation No. 16, 2018 on public procurement, Indonesian NGOs (including research institutions) initially prohibited the participation of universities in government-sponsored research. With the new regulation, these organizations can now access government funds for providing services to communities. This includes conducting research to support policymaking processes. Nevertheless, research projects face massive bureaucratic hurdles and audit practices (Moeliodihardjo, Soemardi, Brodjonegoro,

& Hatakenaka, 2012). This bureaucratic red tape limits the time for carrying out the actual research.

Despite the increase in transparency and accountability, the literature shows that clientelism continues to regulate social and cultural processes. A study by Siahaan and Trimurni (2014) shows how e-procurement in north Sumatra is manipulated to accommodate preferred tenders. Furthermore, there is resistance among staff to implement the new regulations as it threatens their interests (Siahaan & Trimurni, 2014). In the case of procurement, it is the networked modes of individual relationships that have hindered the structural legal change in procuring research services.

Economic Context

Key economic indicators

Indonesia's economy is the largest in the ASEAN region. Indonesia's GDP in 2016 grew by 5.03 percent and stood at USD 932.4 billion (World Economic Forum, 2017). This growth was higher than the previous year (4.88 percent in 2015) and higher than for other ASEAN countries such as Malaysia (4.22 percent) and Singapore (2.4 percent) (World Bank, 2018). It is also the country with the highest GDP in the ASEAN region, ranked 16th in the world. This reflects Indonesia's standing as one of the members of G20. However, Indonesia's GDP per capita remains low at USD 3,604.3 in 2016 and way behind neighboring countries like Singapore (USD 52,960.7), Malaysia (USD 9,360.5) and Thailand (USD 5,899.4). Indonesia was only slightly better than the Philippines (USD 2,924.3) and Vietnam (USD 2,173.3) (World Economic Forum, 2017). Although there is a positive trend in terms of poverty levels (in 2016 only 6.5 percent of population had a daily income below

Table 1. GDP and GDP per capita for Indonesia compared to several ASEAN countries

Country	GDP 2016 (USD billions)	Country	GDP per capita 2016 (USD)
Indonesia	932.4	Singapore	52,960.7
Thailand	406.9	Malaysia	9,360.5
Philippines	304.7	Thailand	5,899.4
Singapore	297	Indonesia	3,604.3
Malaysia	296.4	Philippines	2,924.3
Vietnam	201.3	Vietnam	2,173.3

Source: World Economic Forum (2017)

USD 1.9 at 2011 PPP) and unemployment levels (4.12 percent of total labor force in 2016) (World Bank, 2018), inequality is on the increase (The World Bank, 2016). In 2014, the richest 10 percent of Indonesians consumed as much as the poorest 54 percent (World Bank, 2016). Between 2002 and 2014, real per capita consumption of the poorest 10 percent grew by just 12 percent, while it grew by 74 percent for the richest 10 percent (World Bank, 2016).

Global indicators, such as the Global Competitiveness Index (GCI) and the Global Innovation Index (GII) can be used to measure the capacity of a nation, particularly in terms of research and innovation. Indonesia ranked 36th (out of 137 countries) for GCI in 2017-2018, up five places from 2016-2017. However, in the ASEAN region

Indonesia still lags behind Singapore (3rd), Malaysia (23rd) and Thailand (32nd), although it was ahead of Vietnam (55th) and the Philippines (56th). Indonesia's position was even worse in terms of GII in 2018 compared to its other regional competitors. Despite an improvement from a ranking of 87th in 2017 to 85th in 2018 (out of 126 countries), Indonesia trailed behind Singapore (5th), Malaysia (35th) and Thailand (44th), and even Vietnam (45th) and the Philippines (73rd).

A closer look at GCI 2017-2018 revealed Indonesia's strength in four pillars: market size (10th pillar, ranked 9th), macroeconomic environment (3rd pillar, ranked 26th), innovation (12th pillar, ranked 31st) and business sophistication (11th pillar, ranked 32nd). However, a similar analysis of GII 2018 shows that Indonesia performed well in only

Table 2. Ranking for Indonesia and several ASEAN countries in GCI 2017-2018 and GII 2018

Country	Rank in GCI 2017-2018	Country	Rank in GII 2018
Singapore	3	Singapore	5
Malaysia	23	Malaysia	35
Thailand	32	Thailand	44
Indonesia	36	Vietnam	45
Vietnam	55	Philippines	73
Philippines	56	Indonesia	85

Source: Cornell University, INSEAD and WIPO (2018); World Economic Forum (2017)

one sub-pillar: trade, competition and market scale (4.3). In all these indicators, Indonesia belongs to the world's top 25 percent.

This economic growth is achieved through its major industries, the highest being for mining and quarrying. However, its largest labor force by occupation is in agriculture. Indonesia's exports are largely manufactured goods, namely oil and gas, plywood, textiles, rubber and cement. Likewise, GCI 2017-2018 indicates that the country still lags behind in technological readiness (9th pillar, ranked 80th) and labor market efficiency (7th pillar, ranked 96th). Meanwhile, GII 2018 indicates Indonesia's three main weaknesses in terms of innovation capacity: regulatory environment (sub-pillar 1.2, ranked 125th), knowledge workers (sub-pillar 5.1, ranked 121st) and knowledge creation (sub-pillar 3.2, ranked 115th). These numbers show that the growth Indonesia has experienced is not paralleled by an increase in the capacity of high-skilled labor. This, combined with a lack of basic social science research, could worsen the already rising levels of inequality between the richest and the poorest in Indonesia. On

a more positive note, this growth can also be seen as an opportunity for improving research and research capacity more urgently than in neighboring countries.

Level of human development

Indonesia has the highest population in the ASEAN region (around 264 million). Indonesia ranked 116th (out of 189 countries; equal to Vietnam) and had a score of 0.689 (scale 0-1) in the Human Development Index (HDI) 2017. This places the country, together with Vietnam and the Philippines (ranked 113th), in the medium human development category. Indonesia lags behind Singapore (ranked 9th) and Malaysia (ranked 57th), which are both in the high human development group (United Nations Development Programme, 2018).

Looking at the specific human development indicators, the adult literacy rate in Indonesia was 95.4 percent, which was higher than in other countries in the region such as Vietnam (93.5 percent), Malaysia (93.1 percent) and Thailand (92.9 percent). However, the rate was still lower than Singapore (97 percent)

Table 3. Key indicators in Human Development Index, 2017

Country	Rank in HDI 2017	Literacy rate (Adult, % ages 15 and older)	Tertiary level gross enrolment ratio (%)
Singapore	9 (Very High Human Development)	97	n.a.
Malaysia	57 (Very High Human Development)	93.1	44.11
Thailand	83 (High Human Development)	92.9	45.88
Philippines	113 (Medium Human Development)	96.4	35.64
Indonesia	116 (Medium Human Development)	95.4	27.93
Vietnam	116 (Medium Human Development)	93.5	28.26

Source: United Nations Development Programme (2018)

and the Philippines (96.4 percent). At the same time, Indonesia had the lowest gross enrolment ratio at tertiary level, with only 27.93 percent of the tertiary school-age population enrolled in tertiary education. This ratio is way behind Thailand (45.88 percent), Malaysia (44.11 percent) and the Philippines (35.64 percent), and slightly below Vietnam (28.26 percent) (United Nations Development Programme, 2018).

Meanwhile, the digital transformation in the country's industrial sector has affected the types of skills required from its labor force (Mari Pangestu, 2017) – often dubbed by government policymakers, particularly the Ministry of Industry (Kementerian Perindustrian RI, 2017) as the 'fourth industrial revolution' (Schwab, 2016). Ministries note that this revolution is currently underway and will cause a major shift, not only in terms of the technological implications, but also in human resource needs. These changes in capacity needs are expected in both the demand side (e.g., users of social science research) and the supply side (e.g., producers of social science research).

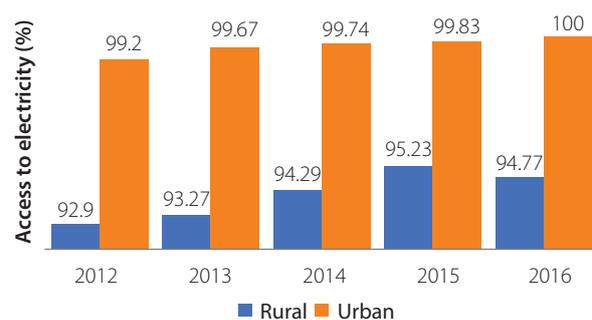
In terms of the demand side, the disruptive nature of the fourth industrial revolution (4IR) requires government to significantly upgrade skills and capacities for using research effectively to manage the national development agenda (Schwab, 2016). Research capacity is needed to ensure that 4IR will sustain national economic growth and social development. 4IR requires human resource capacity in social research that is dynamic, flexible, casual, collaborative and network-based – a significant shift from the hierarchical, institutionalist model that government bureaucracies have employed for decades. In addition, 4IR requires a strong basic research foundation. The unintended consequence of this technology-driven approach is that it places primacy on physical sciences, which serve as the foundation for

development and innovation in this area, and marginalizes social science, especially basic research.

Access to modern technology

In terms of access to modern technology, although there is sufficient technological infrastructure in place, it is not properly used for producing knowledge but rather for consuming information. Economic growth has not had significant impacts on the performance of the research system. The level of access to modern technology depends on access to basic infrastructure and technology, such as electricity and ICT. In Indonesia, however, many people are still unable to access the basic infrastructure. In 2016, only 97.62 percent of the population had access to electricity, while the electrification ratio in Malaysia, Singapore, Thailand and Vietnam stood at 100 percent (World Bank, 2018). In particular, around 5.2 percent of the population in rural areas still have no access to electricity. This inequality is the backdrop against which we approach the question of technological support for social research.

Figure 4. Electricity access in rural and urban areas in Indonesia (2012-2016)



Source: World Bank (2018)

Indonesia's Internet penetration is 51 percent of the population, which is lower than Singapore (83 percent), Malaysia (71 percent), Thailand (67 percent), the Philippines (58 percent) and Vietnam (53 percent) (We Are Social & Hootsuite, 2017). Low average speed

(3.9 mbps), bandwidth (6.2 kbps/user) and mobile broadband penetration (65 percent of population) indicate that Indonesia is struggling with its ICT infrastructure (Agahari, Auliya, & Putri, 2018).

At the same time, Indonesia is experiencing rapid digital development. Mobile penetration is high due to the low price of mobile broadband (USD 3.4/500 MB) compared to Malaysia (USD 26/500 MB) and Singapore (USD 11.8/500 MB). As a result, Indonesia has the fourth-highest number of Facebook users globally (130 million monthly active users) and has the highest rates of Instagram use in the Asia-Pacific region (53 million monthly active users) (Hootsuite & We Are Social, 2018). Furthermore, Indonesian Internet users frequently use their smartphones for social media (3.3 hours/day) and browsing (3.9 hours/day), which is significantly higher than Singaporeans (2.3 hours/day for browsing, 2.1 hours/day for social media) (Agahari, Auliya, & Putri, 2018). These numbers suggest that Internet users in Indonesia would be able to access social research via social media in specific and socially relevant ways, should researchers disseminate their findings in an appropriate manner.

Despite Indonesia's rapid digital development, narrowing the digital

divide between the eastern and western part of Indonesia remains a challenge. The development of ICT infrastructure is largely focused on the more economically developed and urbanized islands of Java and Sumatra. As a result, more than 80 percent of Internet users in Indonesia are located on these two islands. Internet users in the western part of the country have better access to ICT, meaning they are more able to use technology in their daily lives compared to those living in the eastern provinces (Agahari, Auliya, & Putri, 2018).

Indonesia's ICT Development Index in 2017 shows that Indonesia ranked 111th, up three places from 2016 (International Telecommunication Union, 2017). Despite this slight improvement, Indonesia ranked lower than Singapore (18th), Malaysia (63rd), Thailand (78th), the Philippines (101st) and Vietnam (108th). At the national level, the four highest ranked provinces in Indonesia's ICT Development Index are on the island of Java. The bottom five are consistently in the eastern part of Indonesia (Agahari, 2018). Narrowing this digital divide is, the authors argue, an important prerequisite for ensuring the availability of sufficient basic infrastructure to produce, disseminate and uptake social research.

Table 4. ICT indicators for Indonesia compared to several ASEAN countries, January 2017

Countries	Penetration rate (%)			
	Internet	Mobile phone	Social media	Mobile broadband
Singapore	82%	147%	77%	146%
Malaysia	71%	139%	71%	104%
Thailand	67%	133%	67%	131%
Philippines	58%	126%	58%	65%
Vietnam	53%	131%	48%	40%
Indonesia	51%	142%	40%	65%

Source: We Are Social & Hootsuite (2017)

Physical infrastructure for research

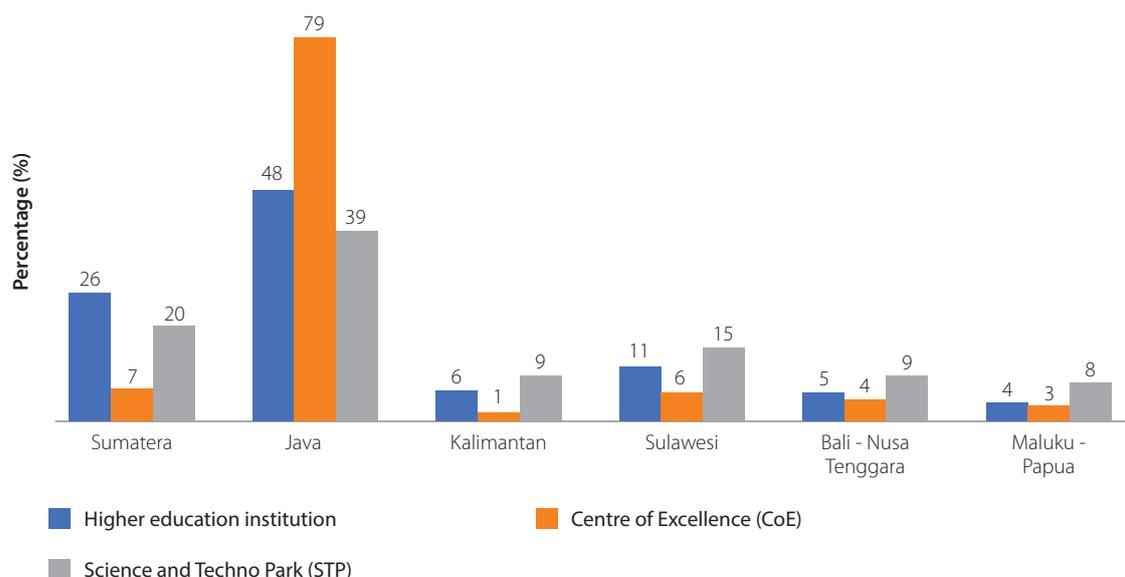
Aside from the digital divide, there is also a gap in terms of specific infrastructure for conducting research. In 2015, there were 4,482 HEIs in Indonesia. However, 74 percent of these institutions are found on Java and Sumatra. In contrast, only 9 percent of HEIs are located in the eastern part of the country (e.g. Bali, Nusa Tenggara, Maluku and Papua) (Kementerian Ristekdikti RI, 2016). The empirical evidence suggests that most research activities are centered on the more industrialized islands of Indonesia.

MRTHE has several programs for developing research infrastructure across the country, primarily to increase national competitiveness. These include Centers of Excellence or CoEs (*Pusat Unggulan Iptek* – PUI) and Science and Techno Parks (STPs). CoEs are institutions that carry out international standard research activities (as measured by the Ministry), much of which are thematically specific and multidisciplinary. These centers are expected to generate high-quality products that are relevant to the needs of science

and technology users or that are marketable (Kementerian Ristekdikti RI, 2018). Meanwhile, STPs are areas managed by professionals to encourage sustainable economic growth through the mastery, development and implementation of science and technology (International Association of Science Parks and Areas of Innovation, 2018). In a nutshell, both programs aim to ensure that Indonesia has the necessary infrastructure to support research activities so that it can increase economic growth by monetizing knowledge.

In total, 72 research institutions were selected by the Ministry to receive coaching and capacity-building to upgrade them to CoEs. These institutions are located in eight provinces in Indonesia, with 55 percent of them based in West Java; in fact, only 15 institutions were based outside of Java (Direktorat Kawasan Sains dan Teknologi dan Lembaga Penunjang Lainnya, 2017). Not only are there regional inequalities, but also a clear preference for hard sciences: only two CoEs focus on social sciences as they are seen as less marketable. As a result, the development of CoEs and STPs have not had any significant impact on social science.

Figure 5. Distribution of research infrastructure in Indonesia (2015)



Source: Kementerian Ristekdikti RI (2016); Direktorat Kawasan Sains dan Teknologi dan Penunjang Lainnya (2017)

The regional inequality evident in ICT infrastructure is also evident in the development of CoEs. Of the 66 STPs that are currently under development, 39 percent of them are located in Java and only 11 STPs will be developed in the eastern part of Indonesia (Direktorat Kawasan Sains dan Teknologi dan Lembaga Penunjang Lainnya, 2017).

This unequal distribution demonstrates the disparity between the physical and technological infrastructure for hard sciences and social science research, which is ingrained in policymaking and funding disbursement. Consequently, this will only exacerbate existing regional, scientific and digital inequalities. Without addressing this disparity, attempts to reform social science will fail to address the uneven distribution and create internal inconsistencies in the production, dissemination and uptake of high-quality social science research, undermining sustainability.

Social science researchers in the private sector

Information on whether there are opportunities for social science researchers in Indonesia to work in the private sector is limited – justifying the need for scoping interviews. Firstly, the authors interviewed corporate members of the Indonesian Philanthropy Association. The authors selected philanthropy because of the findings related to issues of academic freedom and the influence of corporations over the types of research that can be carried out. Philanthropic funding creates a level of protection from corporate interest, which might minimize influence over research content.

Secondly, the authors also interviewed private international consulting firms that operate in Indonesia, such as Boston Consulting Group and McKinsey & Company).

These two firms actively work and engage with the Indonesian Government to conduct research and provide strategic advisory (or consultancy) services for national development programs and policies. Both firms also regularly produce a wide range of reports, white papers, policy briefs and other relevant documents to inform and raise the awareness of policymakers, business actors, academia and more general audiences in Indonesia on specific issues for which they have been hired. Both firms are among the few private consulting firms operating in Indonesia that have a strong policy orientation (Suryadarma, Pomeroy, & Tanuwidjaja, 2011). Their impact is noticeable, steering government policies in the direction of regional market competition rather the redistribution of wealth among regions in Indonesia.

Lastly, consistent with the findings regarding the Gol's ambition for the fourth industrial revolution, start-ups and tech companies have now begun opening up opportunities for social science researchers in the private sector. Go-Jek, Indonesia's first official unicorn start-up company, has its own research division, which has a multidisciplinary team that focuses on data-driven research. Using the research, Go-Jek can continuously improve their product and measure their social impact. Go-Jek have collaborated with the University of Indonesia in assessing the economic impact of their product (Wisana, Rakhmani, Primaldhi, Walandouw, & Nugroho, 2018). In addition, a collaboration between the Indonesia Fintech Association and the Institute for Development Economics and Finance is examining the role of peer-to-peer lending in Indonesia's economy (Institute for Development Economics and Finance, 2018). These collaborations mark a direct link between public universities and digital tech companies; universities receiving government funding are now commissioning

research that directly or indirectly increases the revenue of private companies. Therefore, establishing a clear firewall between social science research and private funding – via philanthropy – is crucial to ensuring that academic freedom is safeguarded.

International Context

Global participation in politics and trade

The current international context presents opportunities for Indonesia to participate in global politics and trade. Indonesia is open to the international community, although there are signs of trade protectionism (Patunru & Rahardja, 2015). The country is an active member of the G20, APEC and ASEAN. Indonesia supported the establishment of the ASEAN Economic Community as well as the free trade agreement (FTA) between ASEAN countries and China in 2002 – a clear indication that Indonesia is open to trade. In 2008, Indonesia also negotiated and signed an FTA with Japan, the first bilateral FTA between Indonesia and its most important trading partner. This agreement was signed despite domestic resistance following its implementation in 2010.

Globally, higher education has been identified as the prime engine for the development of a knowledge-based economy (Robertson & Keeling, 2008). The higher education market in Asia stimulates regional political networks and new strategies have been adopted to advance this emerging market. Regionalization is a strategic step toward internationalization. The ASEAN University Network (AUN) is one example of efforts to speed up the drive toward regional coordination and advance the regional market in Asia (Yang, 2002). Indonesia played a role in establishing AUN,

as part of attempts to internationalization higher education in the region (Sakhiyya, 2018). AUN's key programs, which include quality assurance and student mobility, aim to enhance the global competitiveness of its members – there are huge variations in quality assurance capacity and relatively low mobility among its member states (Rumbley, Altbach & Reisberg, 2015). Although the Network facilitates student mobility and many Indonesian universities are now flocking to gain AUN-QA certificate, the regional collaboration does not contribute significantly to the production, diffusion and uptake of research in Indonesia. This is not least because knowledge production is not yet a priority for the Network.

Knowledge and research networks

The discussion on the importance of 'knowledge/research' as the basis for policymaking and the public policy debate is one of the many signs of the country's transition to democracy (Guggenheim, 2012). The new attitude toward the use of research is fundamentally different to the way research was used during the New Order regime (Guggenheim, 2012; Hadiz & Dhakidae, 2005) – this new approach sees knowledge as an open resource rather than an instrument to legitimize power.

Gol's involvement in knowledge networks began in around 2009. Since then, the Indonesian and Australian Governments have formed a joint initiative to improve the use of evidence in public policymaking. The 15-year Knowledge Sector Initiative aims to "support policymaking through high-quality research, analysis and evidence". The first phase of KSI (2010-2016) provided the building blocks for the project, identifying the ways that knowledge feeds into policy in Indonesia (Australian Aid, 2012; Guggenheim, 2012; Karetji, 2010). The current second phase

(2017–2021) aims to foster a broader political will for the use of evidence in policymaking and provides organizational assistance for national knowledge agencies. No reports have been made available yet regarding the successes or limitations of the two phases. KSI, however, is primarily focused on Indonesia, with limited international engagement.

AIPI, one of KSI's partners, is involved in international networks – notably, with the National Academies in the US, but also with other more global networks. However, it appears that the main challenge for networking is that many of these global links are predominantly a collection of individual networks, which are connected to their respective institutions. To investigate the validity of this concern, the authors carried out interviews with AIPI board members, as well as those from the Indonesian Young Academy of Sciences (Akademi Ilmuwan Muda Indonesia – ALMI).⁹ The existing alliance between AIPI, DIPI and ALMI has proven instrumental in advocating for science-based policymaking, communicating science to the public and pushing the boundaries of scientific discovery. Some ALMI members are part of the Global Young Academy, which works collectively to reform academic institutions, as well as carry out collaborative academic research using international grants. However, the impacts of these international networks are ad hoc and limited because they are individual-based networks.

Professional networks, scholarship programs and exchange programs

Professional networks are commonly established independently by think tank

⁹ The lead researcher would like to give a disclaimer that she is a member and secretariat member of ALMI. The author declares no conflict of interest.

institutions (universities, research institutions, ministries, departments) without bringing these networks together into a wider consortium. Some of the larger think tank institutions in Indonesia have established professional networks with overseas institutions. KSI, in partnership with the National Development Planning Agency and Australian Aid, has expanded networks to other institutions, namely research centers under the University of Indonesia and the SMERU Research Institute.

Gol, through MRTHE and the Ministry of Finance, has allocated scholarship funding for studying abroad. For example, from 2013 to 2017, at least 18,446 Indonesian students were supported by the Indonesian Government scholarship program, the LPDP (LPDP, 2017), to study in developed countries such as the UK, the US, Australia and New Zealand as well in the European Union. Other countries also provide scholarships for Indonesia's brightest scholars to support their postgraduate studies – such as Australia through the Australia Awards Scholarship, the US through the Fulbright scheme, the Netherlands through StuNed, Japan through Monbukagakusho, Germany through DAAD, and New Zealand through the NZ ASEAN Scholars Awards. However, there is no data on the proportion of social science studies funded by these scholarship programs.

Indonesia's close neighbor, Australia, provided an estimated AUD \$316.2 million in Official Development Aid in 2018-19; AUD \$166 million of this is allocated for scholarships for the period 2014-2022. Australia Awards claims to be the largest and longest-running international scholarship program for Indonesian citizens. These scholarships enable people-to-people linkages and provide intellectual and social networks, especially for those interested in knowledge production and diffusion. One of the criticisms of these scholarship providers

is that they reinforce personal connections without developing institutional linkages. Some of the scholarship returnees contribute to the country's production of research by pursuing a research and academic career, but with varying degrees of success. Studies have revealed that they still face structural problems that deter them from careers in academia as well as in the production of public policy (Australian Aid, 2012). These structural problems include inadequate research infrastructure, a lack of a clear career path for researchers, and the absence of a clear merit-based remuneration system for researchers – all of which leads to a hostile research ecosystem (Guggenheim, 2012; Y. Nugroho et al., 2016). This all contributes to the 'brain drain', with around eight million Indonesian diaspora taking up lucrative jobs abroad (Tempo, 2017).

Some recent exchange programs are designed to boost research productivity and publications in all disciplines. Examples of these include the World Class Professors (which invites world renowned overseas professors to mentor academics in journal writing for publication in local universities) and postdoctoral fellowships (sending local academics abroad to undertake research). Despite progress, these programs remain ad hoc and some of them are yet to be institutionalized. These efforts have not been successful in systematically improving scholarship and scientific outcomes, as indicated by the low rates of international publication in the social sciences and humanities.

Level of English

As elsewhere, English is the international language that provides access to global markets, scientific knowledge and international networking in Indonesia (Hamied, 2011; Lamb & Coleman, 2008). Despite the fact that English has no historical

roots in Indonesia (Sakhiyya et al., 2018), it is one of the most visible foreign languages, widely used and displayed in public spaces (Martin-Anatias, 2018). This is despite its position as a foreign language – the language is only used in international offices and taught only during English lessons (as a subject, not as a medium of instruction). The main medium of instruction in schools is Bahasa Indonesia.

There are no exact figures to measure the level of English usage in the population. However, Dardjowidjojo (2000) claims that even if it is used by as little as 5 percent of the population, this amounts to more than 10 million people (Indonesia's current population stands at 240 million). These English-speaking individuals tend to be from the wealthier sections of the population. In addition, English is more commonly used in the more cosmopolitan cities like Jakarta (Martin-Anatias, 2018) or in the tourism sector. Because of the association between English and its users, the language has become a form of prestige cultural capital (Sakhiyya, 2011; Tanu, 2014).

The status of English as a foreign language in Indonesia has important implications for the dissemination and publication of research since English is the dominant language used in peer-reviewed international journals. The lack of Indonesian scholars on the global academic stage, especially in the field of social science, might be related to the low levels of English in the population as well as the lack of support for social science scholars. This is complicated by the development of different western rhetorical discourses and the standard of academic language required for publication (Arsyad, 2013). This stops locally-produced research from reaching a global audience, and thus insulates Indonesian scholars from the global conversation on knowledge production and diffusion (Rakhmani, 2019; Rakhmani & Siregar, 2016).

Peer reviewing

Peer reviewing has also been a real challenge in the Indonesian publication system. This has been exacerbated by the government's obsession with measuring and ranking universities and scholars. As mentioned before, in 2017, MRTHE created a ranking technology, SINTA (Science and Technology Index), intended as a reference for research performance. It is a web-based research information system for Indonesian journals and academics, and includes a citation index and categories of research area (see sinta2.ristekdikti.go.id). The bibliometric, Scopus, is used as the main reference for the publication index used by SINTA. Zein (2018) argues that this obsession has led to the so-called 'cobra effect' – a condition where researchers do whatever it takes to boost their reputation – particularly in terms of publication and citation. As a consequence, ranking has become an end in itself, rather than a means of developing capacity for knowledge building and exchange (Sakhiyya, 2018). To improve impact and local influence – and for these to become the main purpose

of research – would require the development of prestigious Bahasa Indonesia publications as well as the ability of the research community to articulate its findings in ways that policymakers can understand and use.

Limitations

The context analysis presented above is useful for identifying the structural features and the national context of the research system. However, during the data collection Indonesia held a general election. Not only did the political activity pose practical challenges in undertaking surveys and interviews, especially within the policy community, but there have also been important structural reforms as a result of changes in the cabinet. This includes the introduction of the Law on the National System for Knowledge and Technology, the merging of higher education with the Ministry of Education and Culture, and the establishment of the National Research and Innovation Agency. All of those changes in the context and dynamics cannot be fully captured within the context analysis due to time constraints.

STAKEHOLDER MAPPING

Highlights

- The centralized, bureaucratic nature of Indonesia's social science research system reflects the paramount importance of government and funding agencies as the main drivers and influencers.
- Indonesia has 89.2 Full Time Equivalent (FTE) researchers (in both the social and natural sciences) for every million people, which is significantly lower than Singapore (6,729.7 FTE per million) and Malaysia (2,274 FTE per million).
- Most of the active researchers are based on the industrial, heavily urbanized island of Java, with implications for the equity of the system in terms of the distribution of research capacity across the country.
- A total of 102 respondents were involved in the research: 28 policy community members, 40 research administrators and 34 researchers were surveyed.

In this section, we explain the methods for mapping and identifying research actors in Indonesia, both producers and users. Before moving on to the stakeholder mapping, it is important to note the archipelagic nature of Indonesia; this section will look at the disparity between islands, particularly the dominance of (West) Java as the center of research and knowledge production, dissemination and uptake.

First, we present and discuss the overall environment and detail our methodological choices. We present our chosen sampling criteria (further explained in the next section), as well as the main characteristics of each category and sub-category of actors. This section identifies and maps research actors,

both producers and users of research. The purpose of this stakeholder mapping is as follows.

"The mapping is conducted to better identify the research actors—producers and users—that make up the research system, and eventually to allow those undertaking the DRA to focus on particular categories of actors, depending on their focus of attention" (GDN, 2018, p. 16)

As such, we "identify and characterize the importance of the different groups of actors and the nature of the relations between them, and identify the main players within each group" (GDN, 2018, p. 16). As previously explained, and following the DRA guidelines, we categorize research actors into four sub-categories: Higher Education Institutions (HEIs), Civil Society Organizations (CSOs), the private sector, and government and funding organizations (GDN, 2018).

Introduction

In the following sections we explain how we conducted the stakeholder mapping, identifying active social science research actors, their coverage and the challenges faced during this process. This is a large-scale analysis that looks at the general characteristics of each category of Indonesian research actors. The purpose of this stakeholder mapping is not to assess the performance of individual institutions.

We map the four categories of research actors in the following subsections. Due to the centralized, bureaucratic nature of Indonesia's social science research ecosystem, government and funding agencies are identified as the main drivers and influencers. Two state institutions dominate the architecture of this ecosystem, MRTHE and BAPPENAS, with dozens of research and development units under ministerial and non-ministerial bodies

carrying out research funded by the state budget. International donor organizations, with both short- and long-term partnerships with MRTHE and BAPPENAS, are also included in this category.

We developed a sampling frame for HEIs (under the remit of MRTHE) operating in all 34 provinces in Indonesia. These are sourced from the higher education database, PDDIKTI. We did not use a fully randomized sampling frame because most of the active researchers are based on the industrial, heavily urbanized island of Java – 60 percent of the population live in Java, 22 percent in Sumatra and the rest spread out across other islands. This disparity in population density is reflected in the gaps in research and digital infrastructure (see Figure 5).

Figure 5 shows that 79 percent of the Centers of Excellence (57 institutions), 48 percent of HEIs (34 institutions) and 39 percent of science and techno park (28 institutions) are in Java. This means that capacity-building programs and funding by MRTHE focuses heavily on these institutions. To account for this gap between Java and other islands, we undertook a random sampling based on a representative coverage to capture all relevant segments of the population. This includes larger and smaller organizations as well as active and less active researchers. We generated a list of relevant stakeholders in 34 provinces throughout the archipelago.

The challenges encountered during the mapping included the lack of a complete list of CSOs and private sector organizations that engage in the research sector. This is mainly because CSOs are registered under various ministries and departments, and they perform multiple tasks. Identifying them and generating a reliable list would be a herculean task. The authors are currently developing a

viable sampling frame based on the list of CSOs issued by BAPPENAS, which is then filtered based on their active legal status and then randomized. A viable sampling frame for private sector organizations was developed using information provided by the Indonesian Philanthropy Association and digital companies listed under the Ministry of Communication, Information and Technology – to take into account the importance of the digital revolution, detailed in the context analysis.

In addition, there is no statistical data available on the exact number of social science researchers in Indonesia. Obtaining the data would require a manual census in each sector and among individual organizations. To overcome this challenge, we identified the number of lecturers who are also researchers in the higher education sector. First, however, we need to define what we mean by a ‘researcher’. The definition in the DRA guidelines, adopted from the OECD, defines social science researchers as “professionals engaged in the conception and creation of knowledge through research, improving and developing concepts, theories, models, techniques, instrumentation, software or operational methods (OECD, 2015)”. This definition is consistent with our sampling method because social science researchers can be employed either in universities, research institutes or research centers (independent from universities), non-governmental research organizations and research consultancy firms. Indonesia has 89.2 Full Time Equivalent (FTE) researchers (in both the social and natural sciences) for every million people, which is significantly lower than Singapore (6,729.7 FTE per million) and Malaysia (2,274 FTE per million) (Cornell University, INSEAD, and WIPO, 2018). There are approximately 2,959 million FTE researchers working within and outside HEIs.

These considerations are based on the context analysis presented earlier.

Key stakeholders in social science research in Indonesia

Government and funding organizations are the key stakeholders, playing a central role in the development of social science research. These organizations are state-centric in nature. Some international donor agencies and most of the private sector organizations declined to participate in the survey as they do not see themselves as influencing and/or part of the social science ecosystem – despite the results of the literature review, which reveal otherwise. Furthermore, a reliable sampling frame for CSOs and private sector organizations practicing social science research does not exist. Producing this sampling frame was a research project in itself. Populating the social science research ecosystem is, therefore, inevitably state-centric, and in fact consistent with the context analysis provided in the previous sections. MRTHE and BAPPENAS are heavily influential in the architecture of Indonesia's social science research ecosystem, with HEIs acting as operators; CSOs and private sector organizations populate a fairly distinct research environment, answering to their own clientele. As such, results from the survey must be processed in order to confirm the numbers.

The sampling frame is organized according to institutional categories (HEI, CSO, private sector, and government and funding organization) and individual categories (researcher, research administrator and policy community). The mapping of research actors is useful in categorizing the types of institutions present in the system and their relative importance in terms of role and influence in the production, diffusion and uptake of research. However, as it predominantly identifies the different levels

within research production, the mapping excludes networked organizations with non-hierarchical structures in which researchers can also be research administrators while influencing policymaking.

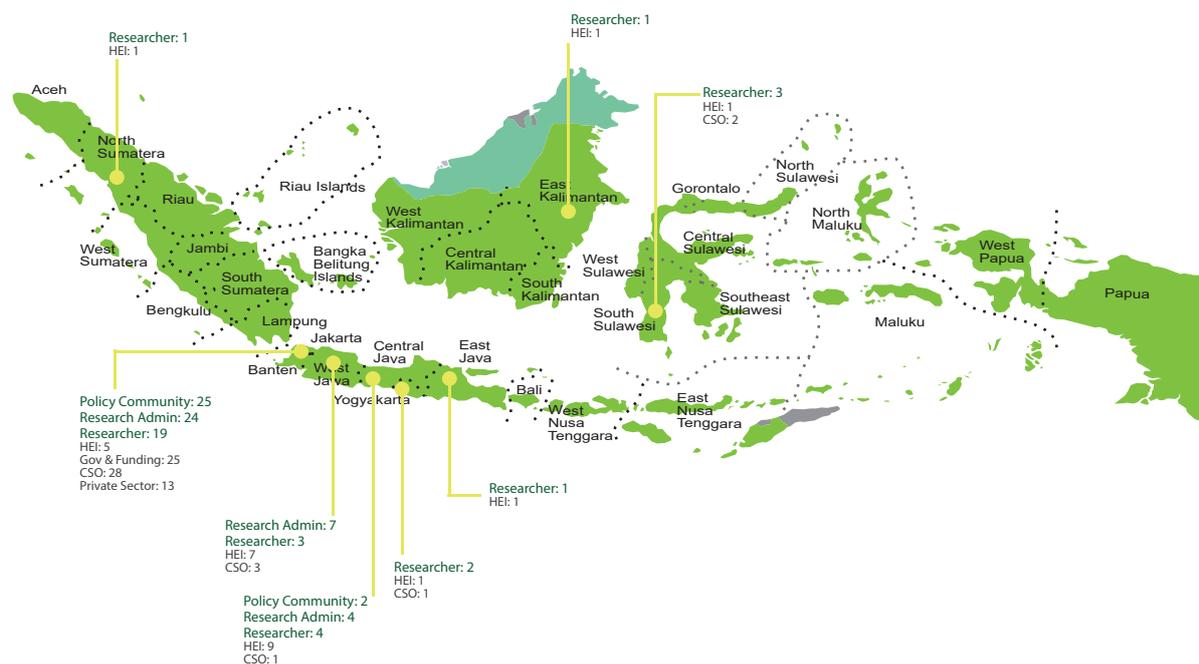
Methodology choices & sampling

Building on the context analysis, the authors applied two sampling methods: first, non-probability sampling aimed at gathering in-depth insights from active social science research actors (50 percent); and second, a randomized probability sampling frame (50 percent). A total of 102 policy community members, research administrators and researchers were surveyed. The respondents that we surveyed comprised of 28 representatives from the policy community; 40 research administrators and 34 researchers.

However, there were changes to the allocated distribution (percentages) due to the lack of response from some of the organizations we contacted. Responses to random sampling were very low (below 5 percent); therefore, the researchers suggested purposive sampling as the best method – particularly given the post-authoritarian context in which organizations and actors do not see themselves as part of a social science research system. Purposive sampling of organizations, followed by snowball sampling of actors most willing to respond helped to increase awareness during the initial stage and map out the ecosystem more accurately. In the end, there were a total of 102 respondents. Of these, 26 were from HEIs, 27 from government and funding agencies, 36 from CSOs and 13 from the private sector.

Indonesia is an archipelago that consists of more than 17,000 islands (with eight main islands). We developed our sampling criteria

Figure 6. Number and geographical distribution of respondents



Source: Authors

with this in mind. Figure 6 describes the response rate from different parts of the country. We carried out random sampling by developing a sampling frame for HEIs operating in all 34 provinces, for each category of actor and institution.

The selected research actors have an interest in social science research in Indonesia, although they differ in terms of research function (producer, disseminator and user) and scale (large, medium, small). These actors come from HEIs, the private sector, CSOs, government and funding agencies – each with their own specific professional arrangements with their respective organizations. As such, this method of sampling provides a more representative snapshot of Indonesia's social science ecosystem. Furthermore, to increase the response rate, we used a snowball sampling approach for research administrators and researchers from each organization. This makes the sampling method, although

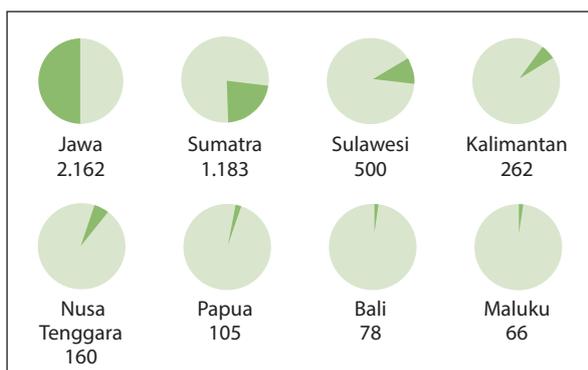
not generalizable, more reliable than conventional sampling (by handpicking the organizations). This sampling method also helps to ensure more targeted engagement strategies and dissemination.

Higher Education Institutions

The Indonesian higher education sector is broadly governed by two ministries: MRTHE and the Ministry of Religious Affairs. There are two categories of Higher Education Institutions (HEIs) under MRTHE: public and private institutions. According to Pangkalan Data Pendidikan Tinggi (PPDIKT) (2019), there are 122 public HEIs, comprising of 63 public universities, 12 institutes, 4 academies and 43 polytechnics. There are 3,171 private institutions, comprising of 500 private universities, 79 institutes, 1,449 private schools for higher learning, 973 academies, 14 community colleges and 156 polytechnics. 'Private' here means that the institutions were established by

a private foundation and not funded by the government. These institutions need to be registered under either MRTHE or the Ministry of Religious Affairs. Most private institutions are profit-oriented, but in Indonesia there are a few non-profit institutions that aim to fulfill an educational mission rather than generate a profit from providing educational services. These include Jentera, Moestopo and Sahid Universities, which offer full scholarships for selected students. As mentioned in the context analysis, at least 50 percent of HEIs are in Java and 20 percent in Sumatra, while the rest are spread out across other islands. More detailed statistics are given in Figure 7 below.

Figure 7. Distribution of HEIs across the eight main islands



Source: PDDIKTI

All HEIs (4,516 registered in PDDIKTI), both public and private, must be accredited by the National Accreditation Body (BAN-PT) to ensure quality and standards. BAN-PT provides accreditation for each individual institution as well as individual study programs. The assessment criteria cover the institution's vision, management, human resources, curriculum, infrastructure and research capacity. Of the 4,551 institutions (as of 2017), only 1,012 HEIs (22.24 percent) have been accredited by BAN-PT. Some unaccredited institutions still operate due to market demand, while others are struggling to find students. The process of accreditation is highly bureaucratic, and the National Accreditation Body has a long waiting list.

The core activities of universities – the focus of the DRA – are stipulated in the Three Pillars of Higher Education (Tri Dharma Perguruan Tinggi, as written in Government Regulation No. 12, 2012, article 1, verse 9): education, research and community service. The scale and scope of research activities differs across institutions. MRTHE has developed an institutional clustering method for categorizing institutions according to their research capacity. The assessment for the institutional clustering is conducted

Figure 8. Private higher education institution coordination



Source: PDDIKTI (2019)

regularly, but the results remain the same: the top-tier universities are historically the oldest and longest serving universities (Sakhiyya, 2018). The first cluster contains the top ten Indonesian universities, which have a greater research capacity than those in the lower clusters. A university's research performance is measured by the number of international (mostly journal) publications, citations in recognized publications and research grants.

Government and public funding agencies

There are two categories of public funding agencies in Indonesia: state and non-state agencies. The state funding agencies are mainly led by BAPPENAS and relevant ministries such as MRTHE, the Ministry of Religious Affairs and the Ministry of Finance. There are 105 institutions recorded in the BAPPENAS partners database, including ministerial and non-ministerial bodies, and international partners. Non-state agencies include international donor organizations that may or may not be partnering with state organizations. There are several partnerships – the most recent and relevant one being KSI (BAPPENAS and Australian Aid) – that focus on the research–policy nexus and which are pushing for evidence-based policymaking. Other funding sources include soft loan schemes, such as the World Bank's Indonesia–Managing Higher Education for Relevance and Efficiency Project, and infrastructure and superstructure projects for Indonesian HEIs funded by the Islamic Development Bank.

There is a notable difference between each category. State agencies are highly bureaucratic. It took, on average, one week for participants to respond to our letters of request to participate in this research. The letters were frequently assigned to staff working under the target respondent –

although this did guarantee that research participants from state agencies fell within the category of respondents the DRA aims to involve. The hierarchical bureaucracies they work in give them a greater insight into the bureaucratic hindrances rather than academic performance. The following is an excerpt of an in-depth interview with a researcher from LIPI (Indonesian Institute of Sciences) to illustrate the increasing administrative and bureaucratic pressures they are under:

The other day there was a demonstration voicing concerns over LIPI's institutional reforms. For us [researchers], the reforms hold us back... it's a 'public institution' but feels like a corporation... maybe [the dismissal of administrative staff] aims to focus our attention on the research, not administrative matters. But it's the other way round. We are used to being supported by administrative staff, now we have to manage by ourselves. (LIPI researcher, personal interview, 2019).

State agencies participating in our research clearly see themselves as part of the social science research ecosystem – it is clearly stated in the objectives of their organizations. Research participants from non-state agencies, on the other hand, are less bureaucratic and heavily programmatic, and do not see themselves as part of the social science research ecosystem despite the evidence of their professional practice.

One respondent, who was a senior manager of a funding organization with decades of experience in directing, conducting and mentoring researchers in the civil society sector, withdrew in the middle of the survey. His reasons were twofold. Firstly, the participant argued that, despite their organization being one of the most reputable non-state agencies funding research on the country's decentralization and democratic transition projects, they are not tasked with carrying out research and are therefore not

part of the research ecosystem. The following is an excerpt from his written objection:¹⁰

The main mandate of [our organization] is not research; we only occasionally carry out research. This is the main challenge for us in participating in the survey...

Secondly, the participant raised concerns about the objective of our research, particularly in terms of generalizing social issues, and assessing nationally specific processes and comparing them with other countries with different contexts.

Further investigation revealed that the programmatic work of funding organizations in Indonesia focuses on enabling local and national actors to take charge of reform projects. Being positioned as a national funding organization goes against this principle. This is because the main funding organizations in the research ecosystem are national agencies. Despite this finding, the research team continued to purposively select organizations and snowball recommendations from non-state agencies declining to participate in the survey.

Private sector

As specified in the context analysis, private sector research participants were selected based on the role they play in the production, dissemination and diffusion of research in Indonesia. This category comprises of several sub-categories: for-profit research institutions and private sector organizations (such as corporate members of the Indonesian Philanthropy Association, the media, digital companies, etc.). Research commissioned by philanthropic organizations aims to build the reputation of these organizations or improve the sustainability of development

initiatives. One of our respondents, who is a board member of the Indonesian Philanthropy Association, explains that “the main objective of *Filantropi Indonesia* is to develop our current and existing programs, to be more strategically organized, supporting our strategic programs more sustainably and over the longer-term”. He also adds that in order to meet the organization’s objectives, “we have capacity-building programs for our members and philanthropy skill share initiatives. We also support collaborations between our members, and initiatives among members are the result of this collaboration” (Board member of the Indonesian Philanthropy Association, personal interview, 2019).

For-profit research organizations commission and/or conduct research as part of their consultancy services and utilize research to increase revenue. They provide competitive, professional services for government and public funding agencies. Corporations that commission and conduct in-house research declined to participate in our research because of market competition – although, in practice, their activities intermingle with those of the research ecosystem.

There are two main reasons why private sector organizations declined to take part in the survey. Firstly, they highlighted the discretionary nature of private entities, and argued that revealing data has consequences for their competitive advantage and their revenue (personal communication, 2019). Secondly, our survey requests were dealt with by the public relations divisions of private organizations. One particular company that declined our request has received criticism from communities regarding the technological disruptions they have brought to the labor market. These political tensions have strained their relationship with the government; the disconnect between private organizations

¹⁰ The participant has consented to the written objection being reported to improve the research.

and state institutions is therefore a significant area of investigation for this research. However, such data is difficult to obtain through survey methods.

Gathering data from private sector research participants was particularly challenging. There is a distinction between market research, which could fall under social science research, and public knowledge. The former aims to serve the interests of private companies, which see the public as consumers (Lundvall, 1992). Social science research carried out within these organizations is not made available to the public.¹¹

Civil society (non-profit private sector and research institutions)

According to the latest data from the Ministry of Home Affairs and the Directorate of Politics and Communication of the National Planning Agency, there are currently 6,567 registered CSOs (Ministry of Home Affairs, 2010). Registered CSOs refer to any non-profit and non-governmental organization officially recorded and recognized by the Ministry of Law and Human Rights. There are two forms of legal status for CSOs, a foundation (Yayasan) or an association (Perkumpulan). Not all registered CSOs are relevant to the study and some may be inactive.

Currently, a database of organizations producing research is being developed by the MRTHE's Centre for Data and Information (Pusat Data dan Informasi – PUSDATIN) (Presidential Staff Unit official, personal interview, 2019). This database will be the most reliable for sampling CSOs conducting research in Indonesia for future research relevant to this field.

CSOs' activities include producing and disseminating research for either advocacy purposes or to inform policymaking, or both.

The research they produce is typically donor-driven research, government-commissioned research or industry-commissioned research. The nature of the research undertaken tends to be programmatic, where research has a specific purpose or follows a particular approach. Such commissioned research is a major source of income generation for CSOs.

Some CSOs focus on dissemination, which involves communicating research findings in ways that are more accessible to a wider audience in order to generate greater social impact. According to our scoping interview with The Conversation Indonesia, their aim is:

To serve as a platform – as a means of communication for the research/knowledge sector. In other words, we want to raise the issue of research in Indonesia and disseminate analyses and opinion articles written by experts in the field on social issues. And it is important that they are written in language that is accessible to a wider audience... so that the research can be read and used widely. It can also provide inspiration or solutions for policymakers and the wider public. (The Conversation editor, personal interview, 2019).

According to our scoping interview with the progressive civil society organization, IndoProgress, their aim is to work on both advocacy and to influence policymaking. This is explained in our scoping interview with the IndoProgress chief editor below:

11 In the private sector, actors do not see themselves as part of a larger knowledge production process, hence they do not see any benefit in linking with peers outside of their own direct interest.

There is also a gap between the overall framework of research ecosystems and the structure of the questionnaire survey. The questionnaire is categorical – policy community, research administrator and researcher – whereas the research ecosystem is a social map of actors and organizations active in the production, dissemination and uptake of research. An actor can be a researcher and a research administrator simultaneously.

Some of our active members are also active in the Ministry of National Education and Culture [...] the new Directorate General, Hilmar Farid, is one of our editors. He has recruited some of our team members to work as his assistants. They began conducting research, and they said that it was the best regulation on cultural matters ever produced ... Our articles are research-based and are used as a reference for policymaking processes (IndoProgress chief editor, personal interview, 2019).

Despite the structural barriers in bureaucracies and HEIs, strong research

leadership in pockets of civil society enables the production of quality research. The authors explored this issue further by interviewing research actors that actively produce progressive social science research. The capacity to diffuse research has increased because of organizations' Internet access and literacy. They have clearly benefited from the massive digital transformation the world and Indonesia has experienced since the 2000s. The centrality of Internet literacy for research diffusion is further discussed in our interviews with these actors. This too could be a potential area of future study.

DRA FRAMEWORK

Highlights

- Indonesia spends about 0.25 percent of its GDP on research, which is ten times lower than other countries in the region, limiting the production of high-quality, impactful research.
- Social science and humanities research received the lowest levels of funding, which is often justified by the assumption that these subjects do not require the hard infrastructure and materials that the natural sciences do.
- There is a stark gender gap between actors in the policy community and those in the other two categories, researchers and research administrators. Women are significantly under-represented in the policy community (21.4 percent) and policymaking remains a heavily male-dominated domain.
- A significant number of researchers declared not having access to mentoring, and most feel the mentoring system is ineffective.
- A significant number of respondents felt that research was a promising career path.
- A significant number of researchers in Indonesia feel they do not receive adequate training to improve their capacity to communicate their research to academia and the public.
- Discussions on sensitive social issues are not always inclusive, with the disbanding of some discussions on topics that are deemed controversial or not aligned with mainstream political positions.
- There is a growing recognition of the importance of evidence-based policymaking and, as a result, a greater demand for research inputs, though the commissioning of research remains a largely bureaucratic requirement.

- The majority of policymaker respondents (92.9 percent) report benefiting from research products such as scientific papers, working papers, presentation slides and position papers.

This section presents the DRA framework and our findings based on the established indicators. Before elaborating on the findings on research production, diffusion and uptake, the authors would like to address an important issue – gender. There is a stark gap between actors in the policy community and those in the other two categories, researchers and research administrators. Women are significantly under-represented in the policy community (21.4 percent) and policymaking remains a heavily male-dominated domain. (Fitzgerald, 2012; Sakhiyya & Locke, 2019).

In comparison, in the DRA sample, 64.7 percent of the researchers were male and 35.3 percent female, while for research administrators, 55.8 percent were male and 44.2 percent were female.

With this in mind, the authors also critically look at the gender ratio generated from the survey, and link these with the context analysis to provide a more rounded view of the state of Indonesia's social science research ecosystem.

Production of Research

The production of research relates to the process through which research is created by individual researchers as well as by research institutes. This process includes research inputs, research culture and support services, research output and training, as well as research opportunities. These are further detailed below.

Research inputs

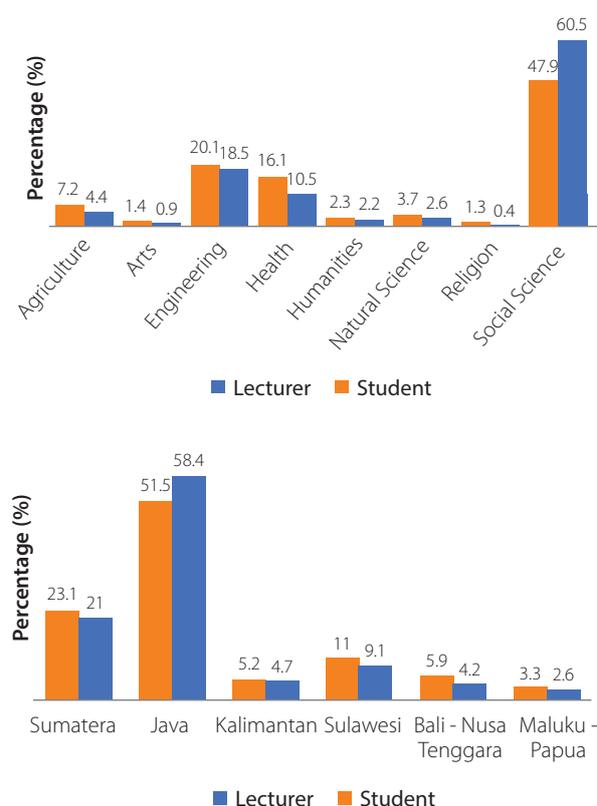
Research inputs refer to the resources – the people, funding, infrastructure and relevant data – required to produce social science research.

As discussed in the introduction to the section on stakeholder mapping, there is no data on the exact number of social science researchers (and researchers in general) in Indonesia. There is, however, available data on lecturers who are also researchers in the higher education sector. First, however, we need to define what we mean by a ‘researcher’. The definition in the DRA guidelines, adopted from the OECD, defines social science researchers as “professionals engaged in the conception and creation of knowledge through research, improving and developing concepts, theories, models, techniques, instrumentation, software or operational methods (OECD, 2015)”. Social science researchers can be employed in universities, research institutes or research centers (independent from a university), non-governmental research organizations and research consultancy firms.

Indonesia has 89.2 Full Time Equivalent (FTE) researchers (in both the social and natural sciences) for every million people, which is significantly lower than for Singapore (6,729.7 FTE per million) and Malaysia (2,274 FTE per million) (Cornell University, INSEAD, and WIPO, 2018). There are approximately 2,959 million FTE researchers working within and outside HEIs. However, there is a growing interest in pursuing higher academic degrees and research in social science. In 2015, the number of social science students (60.49 percent of the total number of higher education students) was significantly higher than for other subjects, such as engineering and health science (18.5 percent and 10.54 percent respectively). Similarly, social science lecturers account for

47.85 percent of all lecturers, which is higher than for engineering (20.14 percent) and health sciences (16.06 percent) (Kementerian Ristekdikti RI, 2016). The majority of students and lecturers are based in the more economically developed islands of Java and Sumatra. These islands account for more than 70 percent of students and lecturers in the country (Kementerian Ristekdikti RI, 2016).

Figure 9. Distribution of lecturers and higher education students by field of study and location (2015)



Source: Kementerian Ristekdikti RI (2016)

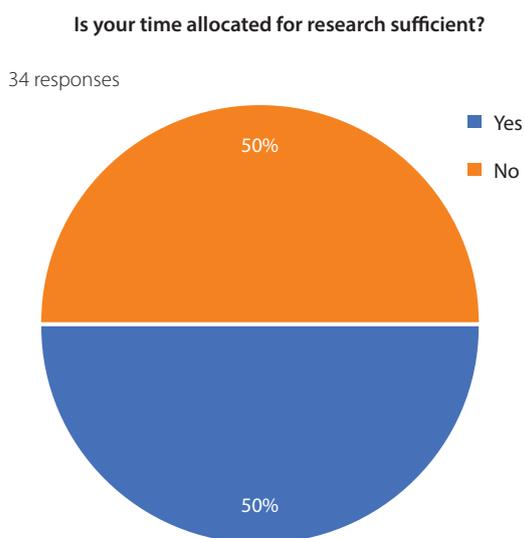
For FTE researchers, the viability of research is determined by the time allocated for conducting enquires. Because of onerous red tape, research projects face massive bureaucratic hurdles and audit practices (Rakhmani & Siregar, 2016). This tends to limit the time available for carrying out the actual research. An interview with one of the researchers from a middle-tier private university in Central Java illustrates this point. He states that the emphasis

on auditing is time consuming and even counterproductive.

My colleagues and I are sometimes reluctant to do research because of the reporting process (for audits). It has a very specific and rigid format, such as the balance sheet. If our report does not follow the template, they will return it to us and ask us to revise and resubmit. So, it's all about formatting and formatting. Revision and revision. It's really time consuming. (Researcher, personal interview, 2019).

This is also reflected in our survey: half of our respondents felt that they did not have sufficient time for carrying out research. The majority of these have up to seven journal publications and most of them are based in Jakarta.

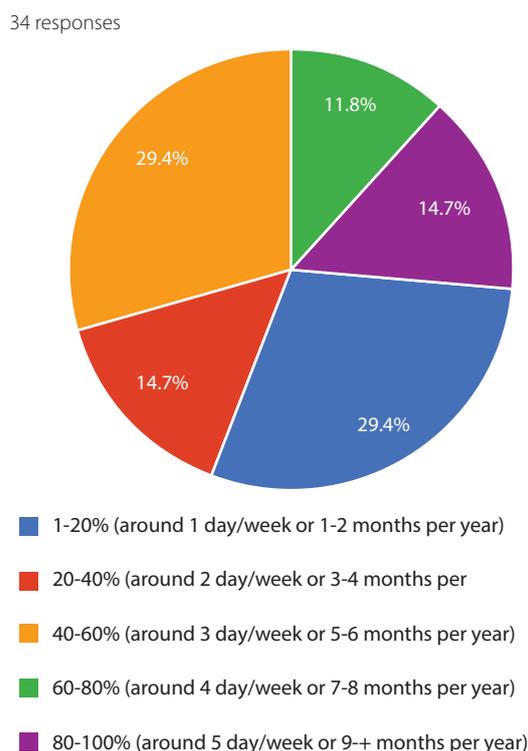
Figure 10. Time allocated for research



Source: DRA survey

Some of our respondents (29.4 percent) devote one day a week or one to two months a year to research, and those with relatively high publication rates (29.4 percent) dedicate approximately three days a week or five to six months a year. Others (14.7 percent) spend around two days a week, and a few of our respondents (14.7 percent) – professional researchers in government and funding

Figure 11. Time dedicated to research



Source: DRA survey

agencies – spend five days a week or nine or more months a year on research.

In terms of research funding, government spending on education and R&D is much lower than in other countries in the region. Over the past five years, Indonesia, on average, has spent around 3.5 percent of GDP on education. Regionally, Indonesia ranked below Malaysia (4.83 percent of GDP) and Thailand (4.12 percent of GDP), although it was higher than Singapore (2.91 percent of GDP). Gol's spending on higher education, together with Thailand and Vietnam, is around 15 percent of the total education budget. In comparison, Singapore and Malaysia spend more than 20 percent of their education budget on higher education (United Nations Development Programme, 2018; World Bank, 2018). Indonesia's investment in R&D is one of the lowest in the region, with a gross expenditure of 0.25 percent of GDP in 2017, despite an increase

Table 5. Distribution of research funding and funded proposals by research topic (2011-2015)

Research Topics	Research funding (in million USD)	Quantity of funded proposal	Research funding per proposal (in USD)
Renewable energy	2.8	250	11,277
Social science and humanities	73.4	27,609	2,658
Maritime	7.2	1,519	4,759
Food and agriculture	50.9	7,147	7,117
Advanced material	17.7	123	143,958
Transportation	2.2	214	10,512
ICT	18.9	4,894	3,859
Health	21.6	5,474	3,954
Defense and safety	1.7	84	19,906
Others	89	18,095	4,918

Source: Compiled from Direktorat Jenderal Penguatan Riset dan Pengembangan (2017)

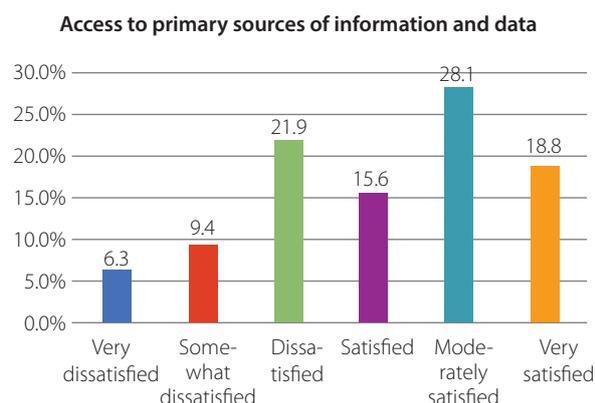
from 0.09 percent in 2013. It is still well below Singapore (2.2 percent of GDP), Malaysia (1.3 percent of GDP), Thailand (0.6 percent of GDP) and even Vietnam (0.4 percent of GDP) (Cornell University, INSEAD, and WIPO, 2018).

Gol is attempting to boost research capacity and knowledge production by allocating R&D funding for various research initiatives. In the period 2011-2015, MRTHE provided research funding of USD 285.5 million, which was distributed across 65,409 research proposals from various fields (Direktorat Jenderal Penguatan Riset dan Pengembangan, 2017). Interestingly, the majority of funded proposals came from the social sciences and humanities: more than 27,000 proposals were funded from 2011 to 2015. Not only that, social sciences and humanities also received the largest total funding (USD 73.4 million). However, funding per proposal for social science and humanities received the lowest levels of funding: on average, only USD 2,658 per proposal; the assumption being that these subjects do not require the hard

infrastructure and materials that the natural sciences do. The highest average funding per proposal was for 'advanced material' (materials created through specialized processing and synthesis technology): on average, USD 0.14 million per proposal – although the Ministry only funded 123 research proposals for this particular area of research (Direktorat Jenderal Penguatan Riset dan Pengembangan, 2017). While the data suggests that there is a high demand from the government for more social science research, it also shows a serious underfunding of all research but especially social science research.

These numbers suggest that there has been an increase in government support for social science research, but with little evidence of attempts to link research to policymaking and/or public engagement. There is also little evidence that funding is targeted at basic (non-instrumental) social research that could have long-term implications for the country's welfare and the reduction of inequality. Indonesia does not yet have a sufficient level

Figure 12. Access to primary sources of information and data

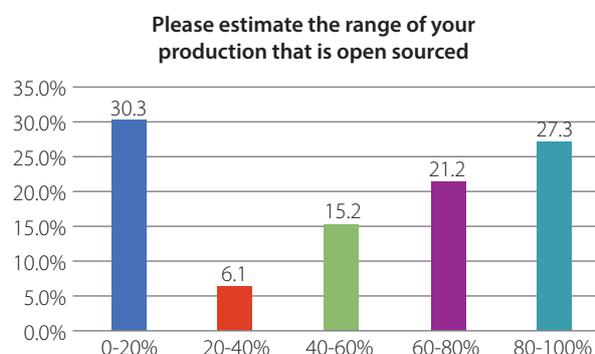


Source: DRA survey

of human development to encourage social research beyond instrumentality – which is in many ways more socially relevant, as it engages more directly with issues of public concern compared to social research for policymaking (Burawoy, 2007).

Access to primary sources of information and data remains a major challenge. According to the DRA survey, 28.1 percent were moderately satisfied with access to primary data, 15.6 percent were satisfied, and only 18.8 percent were very satisfied. Conversely, 37 percent experienced problems accessing data. As the questionnaire did not ask for the geographical location of respondents, it is difficult to determine geographical disparity in access; there is a need for future research to examine the geographical divide. In addition,

Figure 13. Open-sourced research products



Source: DRA survey

the availability of researchers' own research products – whether they are available to the public (by making them open-source) – might also give an indication of levels of access to primary data. Some 27.3 percent of our respondents always open-source their research products, and 21.2 percent sometimes do so. Open source social science resources not only benefit researchers (especially those in the early stages of their career) but also increase the impact of research. Unfortunately, 30.3 percent do not open-source their research products.

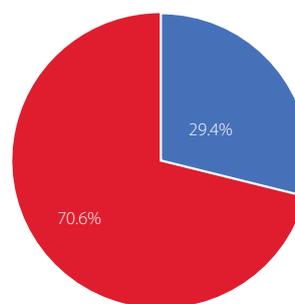
Research infrastructure, such as offices, computers and printers, are also essential in supporting researchers. The survey reveals that while offices are often provided, other supporting facilities are not. Our respondents mentioned the limited availability of a number of resources, namely computers (they need to have their own), digital libraries (access to online books and articles), plagiarism software and interlibrary loan facilities.

Research culture and services

The National Research Body (*Badan Riset Nasional* – BRN), as the central state-led institution for public research management, is responsible for ensuring the availability, effectiveness and efficiency of research funding for supporting national research policies (MRTHE, 2017). There are also other

Figure 14. Awareness of national research body

Is there a national research body mandated to oversee social science research in your country?



Source: DRA survey

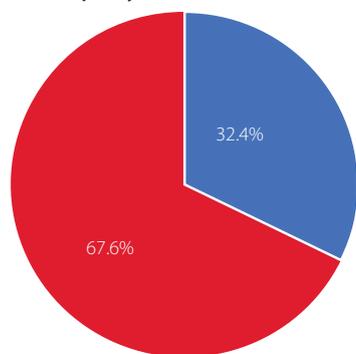
shadowing research bodies, which will include (once it has been established) the National Research Council (Dewan Riset Nasional). But due to BRN's nature as an organization independent from research organizations, its impact is limited. The lack of awareness of a state-led institution dedicated to public research management is reflected in the survey: 70.6 percent of respondents believe that there is no national research body.

In 2019, the House of Representatives drafted a Bill on the National System for Knowledge and Technology (RUU SISNAS IPTEK) – currently awaiting the President's signature – that regulates national research systems and performance. This bill seeks to replace the outdated Law on the National System for Research, Development, Knowledge and Technology (No 18, 2002). While the proposed bill aims to improve research systems and performance by "supporting the advancement of knowledge and technology as the scientific basis for the formulation and making of development policies" (2019, Chapter 1, verse 1, p. 3), it does not say anything about academic freedom, which is crucial for enabling researchers and research actors to produce and promote their research and contribute to policymaking processes.

More problematically, the bill includes a much-disputed penalty clause for

Figure 15. Awareness of national policy on social science research

Is there a national policy related to social science research?

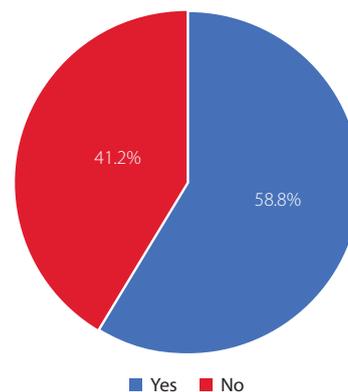


Source: DRA survey

■ Yes ■ No

Figure 16. Access to research mentors

Do you have access to research mentors?



Source: DRA survey

■ Yes ■ No

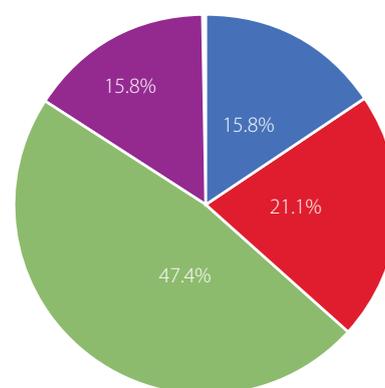
unregistered foreign academics gathering primary data in Indonesia without a permit. However, this was not reflected in the survey results. This may be because the survey was carried out before the bill was launched for public trial. As a result, there is limited awareness of the bill (67.6 percent were unaware of its existence – Figure 16).

Quality of mentoring

The quality of mentoring also influences the production of social science research. Only half of the respondents (58.8 percent) have access to mentoring, which reflects the findings from the context analysis.

Figure 17. Effectiveness of mentoring system

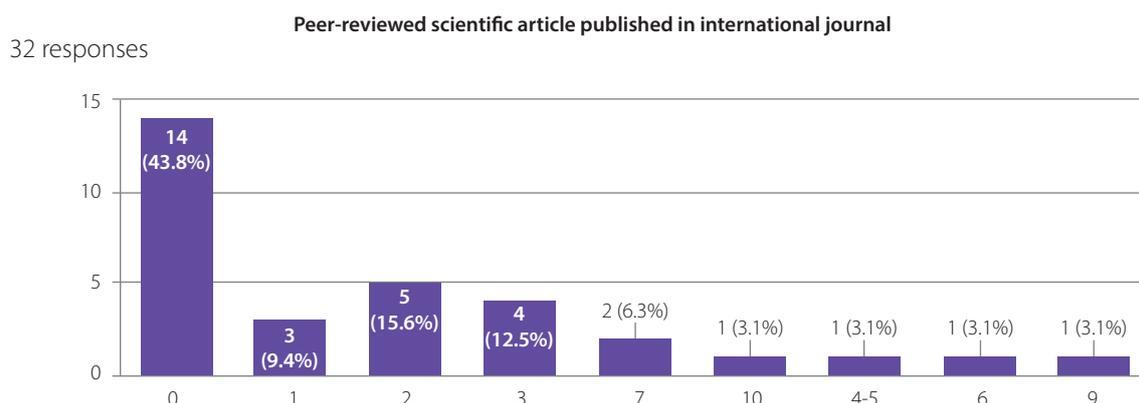
Please rate your satisfaction with the current mentoring system in the following areas



Source: DRA survey

■ Moderately ineffective ■ Moderately effective
■ Somewhat effective ■ Very effective

Figure 18. Peer-reviewed articles



Source: DRA survey

Furthermore, with the many structural barriers that hinder knowledge transfer, the relatively limited access to research mentoring has resulted in a process which does not appear to be very effective, as shown in Figure 18 below.

Research output and training

Almost half of the respondents (43.8 percent) have not published in peer-reviewed international journals (Figure 19). Those who have are predominantly from Java-based universities (85 percent), particularly universities in Jakarta (56 percent). This confirms previous studies (Rakhmani, 2019;

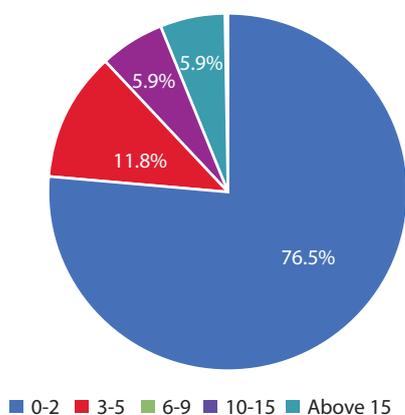
Rakhmani & Siregar, 2016) which show “the limited capacity to publish, but also the disparity in capacity among state universities, where publishing academics tend to be found among the major universities located in Java” (Rakhmani & Siregar, 2016, p. 40).

Most of our respondents have benefited from research training. However, most of the research training in the last three years was only for 0-2 weeks (76.5 percent), which demonstrates the lack of intensive and continuous training.

The number of PhD researchers/lecturers in social science remains low. The limited

Figure 19. Duration of research training

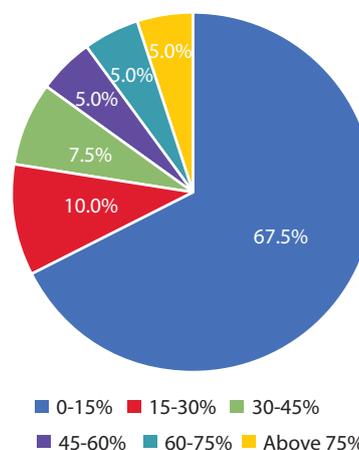
Duration of research training in the last three years (approximate number of weeks)



Source: DRA survey

Figure 20. Percentage of staff with PhDs

What is the % of university staff (in social sciences) with PhDs at your institution?



Source: DRA survey

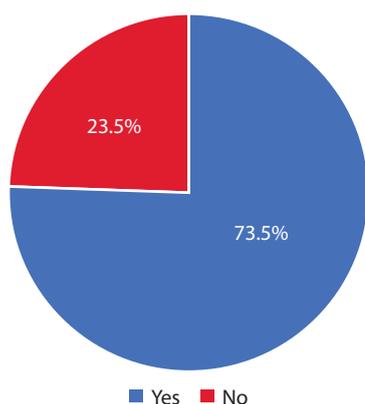
number of academics with PhDs in Indonesian universities hinders the capacity and potential for high-quality research. In the higher education sector, only 12 percent hold a PhD, while the majority (63.8 percent) have a Master's level qualification (PDDIKTI, 2017). Our survey reflects the national statistics: the majority (67.5 percent) of institutions have a limited number of staff with PhDs (0-15 percent). According to GDN (2018), the higher the percentage of university staff with PhDs, the higher the quality of research training at university.

Learning and sustainability

Of the 43 responses received, the majority of respondents (73.5 percent) have positive perceptions of career opportunities for researchers. According to the survey, these are based on, among others, personal aspirations, opportunities to work in reputable NGOs and the current trend in evidence-based policymaking. The survey does not deal with financial rewards or job security.

Figure 21. Perceptions of research as a career

Do you feel that there are attractive career opportunities for researchers?



Source: DRA survey

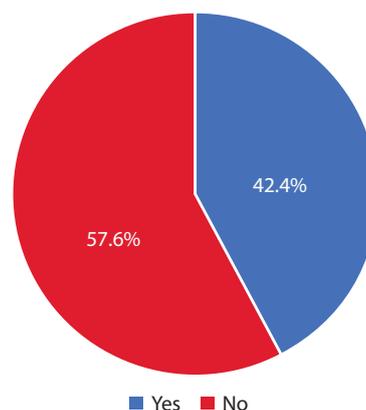
Interestingly, one respondent commented that “the problem is not in the perception of a research career, but whether we are able to compete in the research ecosystem

in Indonesia. This is mainly because the ecosystem is far from ideal – we have greater administrative workloads, financial rewards are low, and social science does not have sufficient funding” (researcher, personal interview, 2019).

Membership in a professional research network helps to sustain research productivity and diffusion. However, the majority of our respondents (57.6 percent) are not members of a professional research network. The remaining 42.4 percent are members of either regional, national or international research networks.

Figure 22. Membership of professional research network

Are you a member of a professional research network?



Source: DRA survey

In summary, our findings show that there are notable areas of concern for the production of research in Indonesia – the process through which research is created by individual researchers as well as by research institutes. In terms of research inputs, a significant number of researchers feel that they do not have enough time to do research and are only moderately satisfied with access to primary sources of information and data. This is exacerbated by the fact that many researchers do not open-source their research products. In regard to research culture and support services, a significant number of researchers

do not have access to mentoring, while most do not feel the mentoring system is effective. Likewise, almost half of the respondents do not publish their articles in an international journal. They do not receive sufficient research training and there is a lack of academics with PhDs in their organizations. Nonetheless, there is encouraging potential in terms of research opportunities. Most respondents felt that research was a promising career path. The majority, however, are not members of professional research networks – which could provide an avenue for capacity-building and improving research inputs through collaboration with international peers.

Diffusion of Research

This section presents the findings on research diffusion in Indonesia – the process through which research-based products are disseminated and communicated through intermediaries to different audience groups such as academia, policymakers, civil society and the private sector. There are four indicators for diffusion: actors and networks, research communication practices, research communication products, and

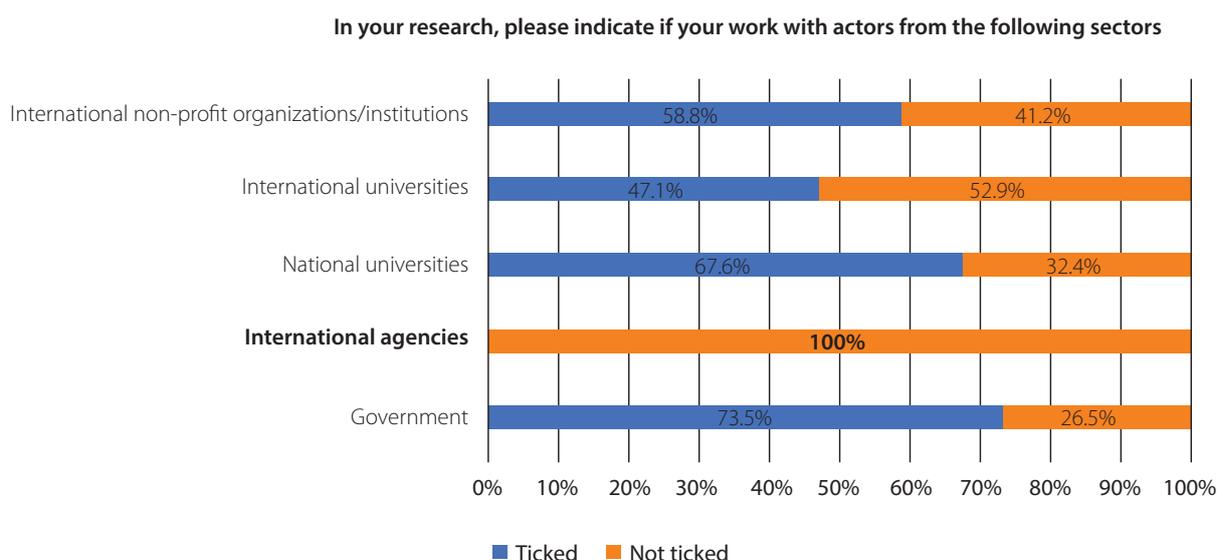
the popularization of science. Our aim is to analyze how research is circulated (through intermediaries) within society and determine the main factors influencing this process.

Actors and networks

Actors and networks, whether researchers or research institutions, have access to a range of stakeholders interested in social science research. The greater the diversity of actors and networks, the more opportunities there are for research and research products to reach a wider audience and have an impact. Our survey reveals that while researchers have access to stakeholders from government, international non-profit organizations, and national and international universities, they do not have any access to international agencies such as OECD, UNESCO and the World Economic Forum.

The frequency/number of research collaborations with other organizations/institutions provides an indication of the extent of multidisciplinary approaches – multi-stakeholder collaborations strengthen the research–policy nexus, especially where government stakeholders are involved. The

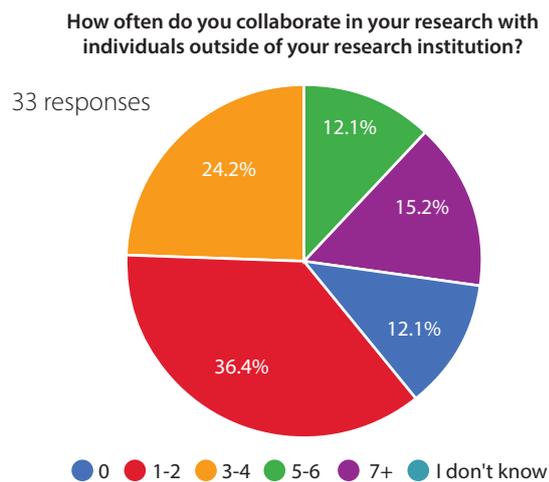
Figure 23. Levels of multi-stakeholder collaboration



Source: DRA survey

majority of respondents have collaborated once or twice (36.4 percent) or three to four times (24.2 percent); 12.1 percent have undertaken five to six collaborative research projects, and 15.2 percent have carried out more than seven. However, 12.1 percent have not collaborated in their research (see Figure 24 below).

Figure 24. Frequency of research collaboration



Source: DRA survey

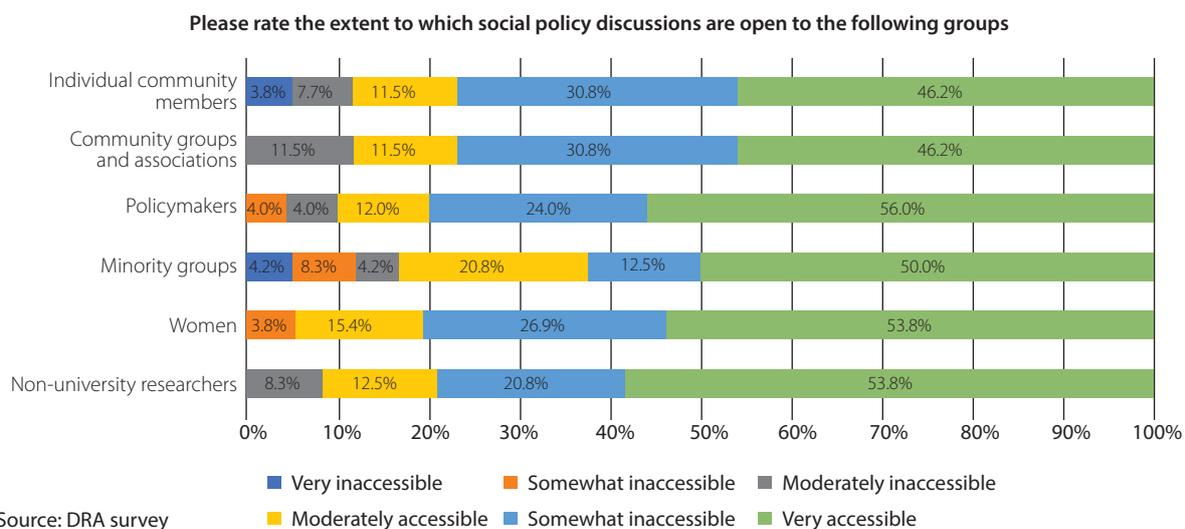
Research communication

An important aspect of diffusion is the communication of research to inform policy discussions relevant to issues

in social science research. This entails involving a wide range of stakeholders (researchers, NGOs, international agencies, policymakers, community and minority groups), especially in terms of access to forums for policy discussion. In general, social policy discussions are inclusive and open to all groups affected by public policies. However, our survey of the policy community shows that access for people with disabilities is limited due to a lack of suitable infrastructure. As discussed in the context analysis, previous studies on academic freedom also suggest that discussions on sensitive social issues are not always inclusive, with the disbanding of some discussions on topics that are deemed controversial (Wiratraman, 2018). See Figure 25 for further details.

Communication training is important in enhancing researchers' capacity to promote and communicate their research to internal and external audiences. However, the majority (66.7 percent) of our respondents have not received any communication training. This shows that the research system does not support the wider communication of research.

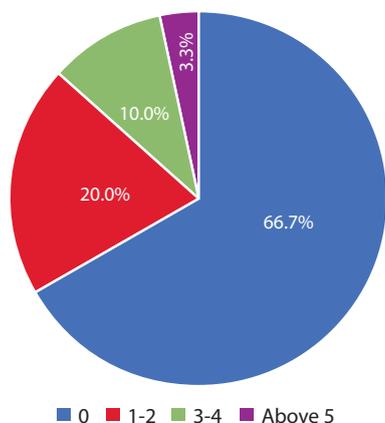
Figure 25. Inclusiveness of social policy discussions



Source: DRA survey

Figure 26. Participation in communication training

How many communication trainings have you participated in over the past three years?



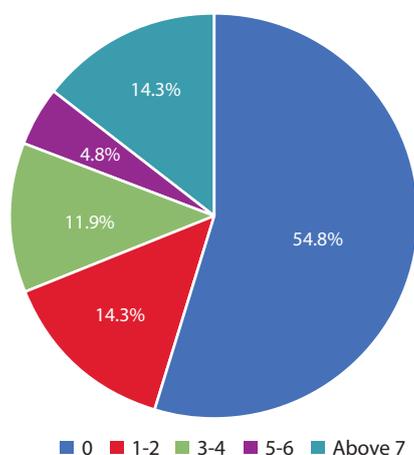
Source: DRA survey

Research communication products

Research communication products, here, refer to the channels used to disseminate research findings, such as academic conferences and public debates or discussions. The former is used for sharing academic knowledge with a predominantly academic audience, while the latter are used to communicate with the wider public to increase social relevance and impact. The majority (54.8 percent) of our respondents

Figure 27. Academic conferences

How many academic conferences has your institution organised in the past three years?



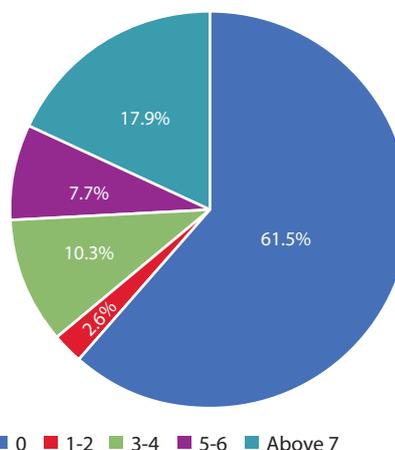
Source: DRA survey

stated that their institutions do not organize academic conferences. Some (14.3 percent) organize one or two, while 11.9 percent host three to four conferences. The remaining 14.3 percent organize more than seven conferences; this share is made up of institutions from Jakarta.

While academic conferences are fairly common, public debates are rare. There is also a stark gap between Jakarta-based institutions and those outside the capital. The majority of our respondents (61.5 percent) have never organized a public debate, while 17.9 percent of institutions in Jakarta have organized more than seven events. This demonstrates that institutions in the capital have made greater efforts to communicate their research findings to raise awareness, not only among academics but also politicians and civil society.

Figure 28. Public debates

How many public debates has your organisation organised in the past three years?

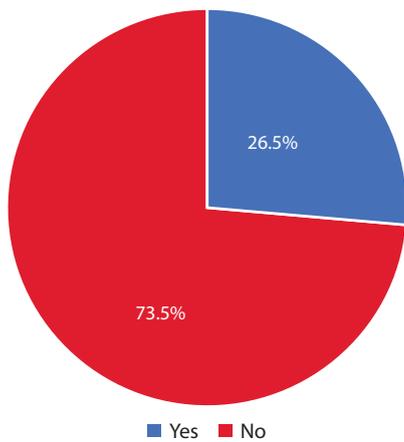


Source: DRA survey

The use of online sites and networks improves online visibility, highlighting information about research, and could potentially open up more opportunities and networks. Personal webpages, in particular, are important for providing access to researchers' work and products. However, the majority of our respondents (73.5 percent) do

Figure 29. Personal webpages

Does your institution provide personal webpages with access to your research work?



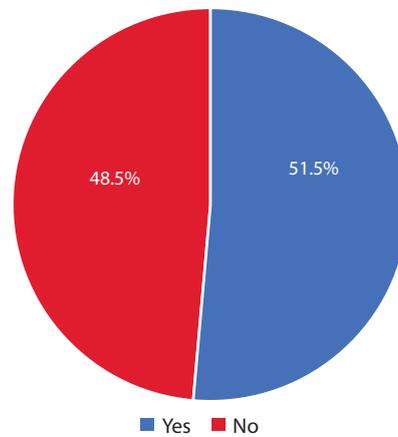
Source: DRA survey

not have a personal webpage provided by their institution.

This insularity is exacerbated by the fact that more than a half of our respondents (51.5 percent) are not registered in an international database or repository. This might be due to structural barriers, such as excessive bureaucracy, HR promotion mechanisms and the tendency toward monodisciplinarity. Again, this reflects GDN's initial study on reforming research (Rakhmani & Siregar, 2016), which highlights the academic insularity experienced by Indonesian academics.

Figure 30. Registrations in international repositories/databases

Are you a registered author in an international database or repository?



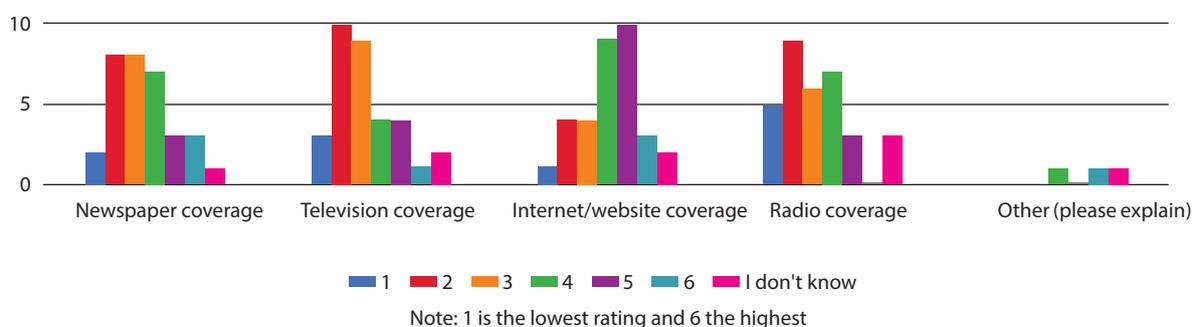
Source: DRA survey

Popularization of science

Previous efforts by a variety of actors to disseminate research and present it in more tangible terms, has helped to popularize science and demonstrate the important role it plays in people's lives. This can be measured by the level of interest in media coverage of research findings. The coverage is well-distributed across all media channels – newspapers, television, the Internet and radio – especially when institutions collaborate with the media. However, our respondents expressed concern over the lack of access

Figure 31. Media reports and coverage

How would you rate the quality of media coverage of organised events and published research with non-academic media?



Source: DRA survey

to media coverage for research that has no commercial purpose.

In summary, research-based products are disseminated and diffused through a variety of intermediaries to reach different audience groups: academia, policymakers, civil society and the private sector. The findings provide evidence of researchers collaborating across multiple sectors. While these collaborations could be seen as evidence of a strong science-to-policy nexus, in practice, the authors relate this more to the 'marketization' of social science research and the use of research to influence government policy for the benefit of particular clientele – not unlike the ways in which market research serves the interests of corporations. As argued elsewhere in this report, without a strong culture of academic freedom, research could be used to benefit powerful interests.

In relation to research communication, a significant number of researchers in Indonesia feel they do not receive adequate training to improve their capacity to communicate their research to academia and the public. Along with the growing popularization of science, Indonesian researchers have been quite effective in communicating through multiple media platforms. Boosting the online visibility of peer-reviewed work through personal/institutional websites is also a promising channel for communicating research. However, as in the case of the research-to-policy nexus, effective communication of quality research to the public relies on a strong academic research tradition. In addition, communication training could be carried out not only among researchers, but also among science journalists to help them identify reputable academics to cite in media reports (the Conversation editor, personal interview, 2019).

Research Uptake

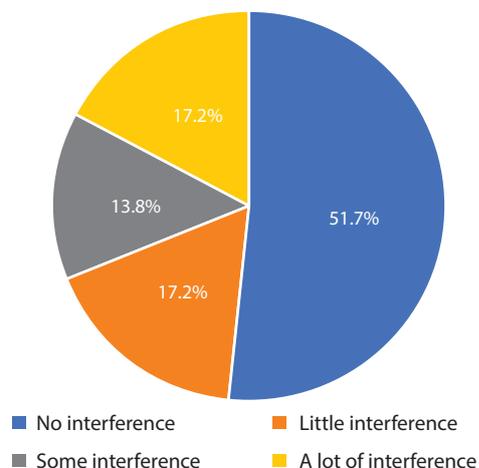
This section presents the findings on research uptake in Indonesia: the nature of policy-friendly research, the extent of research-based policymaking and the state of the research-to-policy nexus. The authors critically interpret the data in line with the results of the context analysis. More specifically, we assess the effects of the marketization of research and the ways in which this shapes the research-to-policy nexus, particularly in terms of catering to the interests of particular government clientele; and how, as a result, the types of research informing policymaking are predominantly technocratic with little theoretical engagement. In this section, we also examine the issue of regional inequality and the ways in which universities in Java benefit from direct access to central government (particularly in terms of income).

Policy-friendly research

Policy-friendly research refers to the extent to which researchers are able to conduct research into issues of social importance without undue influence from the policy community and the degree to which researchers are able to formulate research products aimed at supporting policymaking. More than half of our respondents (51.7 percent) claim that they carry out their research without any interference from the government; 17.2 percent experience little interference, 13.8 percent some interference, while 17.2 percent face a lot of interference. Those who do not experience any interference are predominantly located in Jakarta, Central Java, Jogjakarta, Borneo and Sulawesi. Conversely, those who experience a lot of interference are also from Jakarta, West Java and Central Java.

Figure 32. Level of research independence

Please indicate your ability to conduct research without undue influence from policymakers



Source: DRA survey

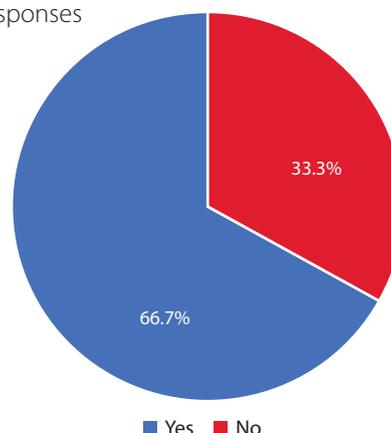
This interference is due to the proximity of Jakarta, as well as West and Central Java, to state institutions of power, which are more likely to use social science research as a political instrument (see Hadiz and Dhakidae, 2005).

The level of independence in conducting research relates to the demands made by the government in developing policy. The majority of our respondents (66.7 percent) have received requests from the policy community for inputs and expert advice from academics on issues of social relevance during the development of policy. They are predominantly based in Jakarta.

Figure 33. Demand for research inputs for policymaking

Do you receive requests from policymakers to produce research on particular topics?

33 responses

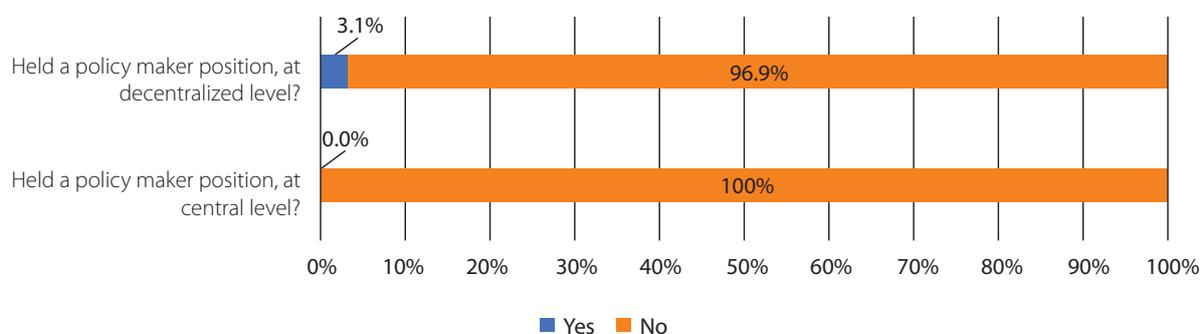


Source: DRA survey

The research–policy nexus is more effective when researchers have access to policymaking, which includes holding a policymaking position. Researchers that have experience in decision-making positions (central or local government, parliament) provide insights into the processes for researcher–policymaker exchanges. Collaboration between researchers and policymakers, through a direct channel transferring research findings into policy processes, has proven to be the most effective mode of research–policy transfer. Only a few of our respondents have held a policymaking position – 3.1 percent at a decentralized level and none at the central level.

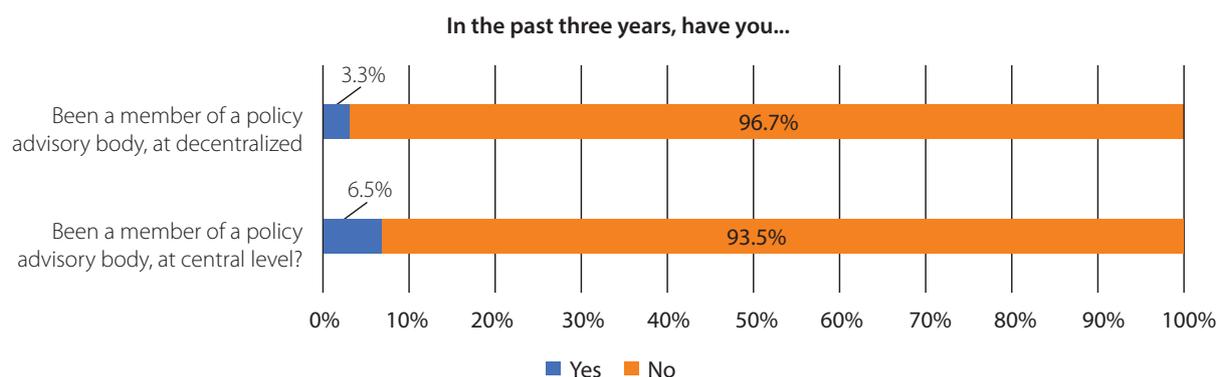
Figure 34. Researchers in policymaking positions

In the past three years, have you...



Source: DRA survey

Figure 35. Researchers in policy advisory positions



Source: DRA survey

While researchers in political positions are few and far between, there are some in advisory positions: 6.5 percent of our respondents (based in Jakarta) are members of policy advisory bodies at central level and 3.3 percent at decentralized levels.

Research-based policymaking

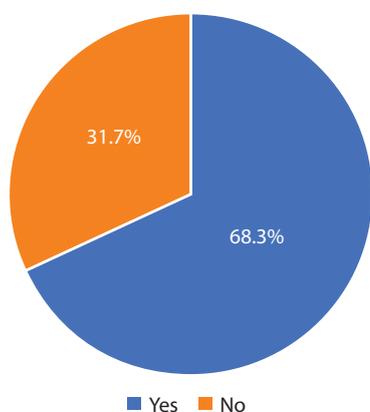
The level of independence in conducting research is related to the extent of demands made by the government in developing policy. Currently, there is a growing recognition of the importance of evidence-based policymaking and, as a result, a greater demand for research inputs. This is reflected in our survey results. The majority

of our respondents (68.3 percent) have worked on research commissioned directly by policymakers over the last three years. The 31.7 percent who have not undertaken government-commissioned research are predominantly from institutions outside Jakarta and Java.

Individual researchers also carry out research commissioned directly by policymakers. The majority of our respondents (66.7 percent) have worked on government-commissioned research, with budgets ranging from USD 100 to USD 6,000. These researchers are also predominantly based in Java, especially Jakarta.

Figure 36. Government-commissioned research

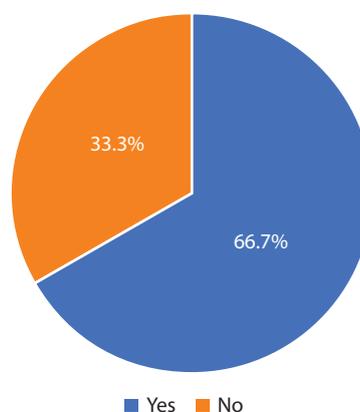
Did your institution work on research commissioned directly by policymakers over the last three years?



Source: DRA survey

Figure 37. Researchers working on research commissioned by policymakers

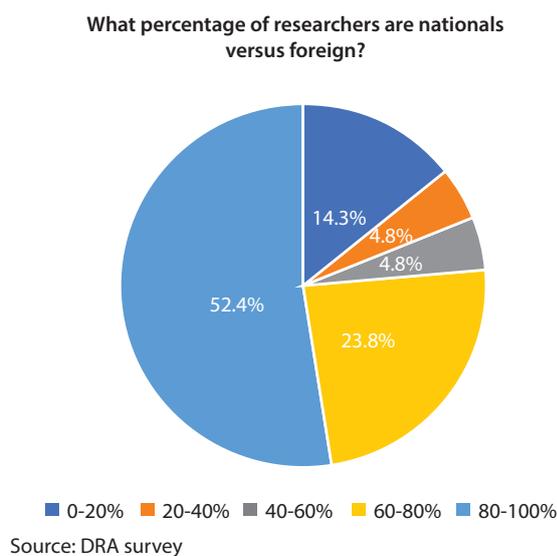
Did you work on research commissioned directly by policymakers over the last three years?



Source: DRA survey

The diversity of research actors also matters for the quality for research inputs in policymaking. This diversity is reflected in the ratio of national versus foreign researchers. In the majority of institutions (52.4 percent) 80-100 percent are national researchers. A more balanced ratio, 40-60 percent, is less common (4.8 percent). The same is true for a ratio of 20-40 percent, which accounts for 4.8 percent of institutions.

Figure 38. National versus foreign researchers



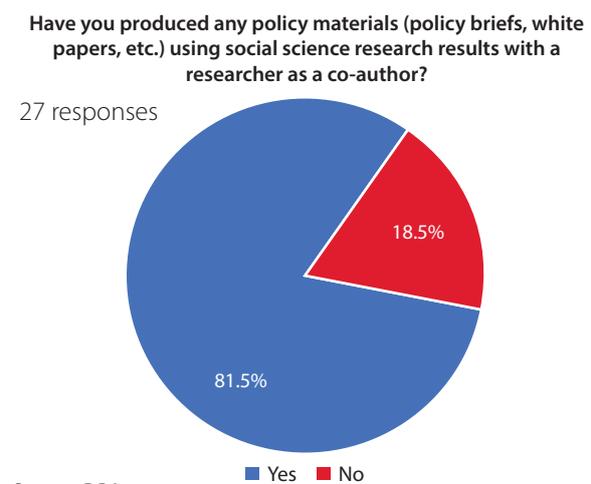
Research-based policy products

Research-based policy products refer to publications of social science research used to support evidence-based analysis and decision-making. Of the 28 responses received from the policy community, the majority (81.5 percent) co-author policy materials with researchers.

The use of research for better policies

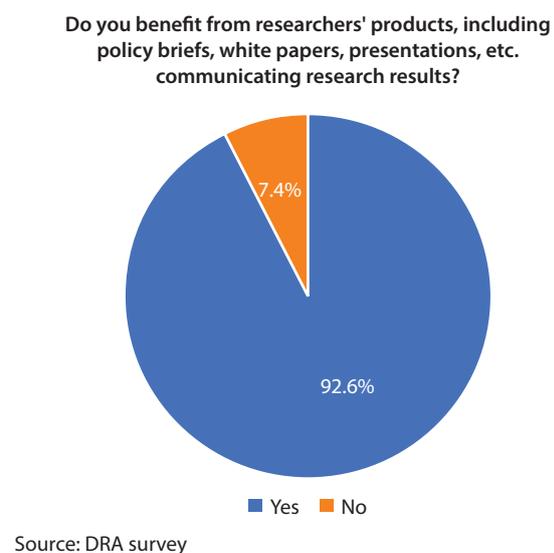
This section discusses the extent to which the policymakers use research inputs and consult researchers on policy-related issues. The use of research inputs can be either instrumental or symbolic. Instrumental use can be

Figure 39. Production of research-based policy products



measured by examining research citations in policy documents to support evidence-based analysis and decision-making, while symbolic use can be measured by looking at references to research in communications from policymakers. The overall aim is to enable social science research to play a role in developing more effective policies. Our survey of the policy community measures the perceptions of the usefulness of research. The majority of our policymaker respondents (92.9 percent) report benefiting from research products such as scientific papers, working papers, presentation slides and position papers.

Figure 40. Research use



In this section on research uptake, we examined the survey data through the lens we developed in the context analysis. Although the data presented in Figure 36 and 37 shows that social science research conducted in Indonesia is 'friendly' to policymakers, and that there is evidence of research-based policymaking and a research-to-policy nexus, the performance of social science research in Indonesia remains poor. This means that policymaking is predominantly informed by research with limited theoretical engagement and

that lacks a strong tradition of peer review. This is due to the fact that government-commissioned research is the main source of income for research organizations. Not only does the system help to reproduce poor quality research, it also exacerbates regional inequalities as much of the capacity is absorbed by Jakarta and Java-based universities. Without an effective system for the production, diffusion and uptake of social science research, the spread and use of poor-quality analysis in policymaking will continue.

CONCLUSIONS

Highlights

- Greater gender-inclusivity should be encouraged within institutions and organizations, with an emphasis on incentivizing professionals and managers to put in place socially inclusive policies.
- Researchers should be permitted to look into issues that are currently considered taboo or politically sensitive.
- Organizations and researchers that provide market research services to private sector companies are unable to publicize their findings because of the dictates of market competition.
- It is important to promote networking with international peers – which, in turn, would also help local researchers interact with policymakers.

This report presents an assessment of the Indonesian social science research ecosystem and the implications of our analysis. We begin with a context analysis of the current state of Indonesia's social science research system. In line with the transition toward democratization and decentralization (1998 to the present day), Gol has implemented reforms among ministries and state-funded HEIs. New regulation was also put in place, with ambitions to internationalize the higher education sector to enable Indonesia to compete in the regional student market. Reform efforts have been uneven at best, while bureaucratic structures established by the central government continue to impinge on any systematic attempts to professionalize social science researchers. This is why attempts to increase research funding and grant HEIs greater autonomy have not resulted in a significant improvement in the quality of research or a deeper engagement between high-quality academic work and policymaking.

The authors highlight a fundamental problem with the make up the social science research ecosystem in Indonesia: inequality. Regional inequalities, particularly between the more industrialized urbanized island of Java and the islands of Sumatra, Kalimantan, Sulawesi and Papua, exacerbate the disparities in levels of reform among higher education institutions. Research organizations based in Java have more direct access to revenue (driven by the marketization of social science research).

Gender inequality remains an issue. The authors argue for more gender-inclusive institutions and organizations, with an emphasis on incentivizing professionals and managers to put in place socially inclusive policies. Although there is some gender balance among researchers, this is not the case higher up the career ladder, with fewer women occupying strategic positions. This is important, not only for the sake of gender balance within the research system, but also to encourage the mainstreaming of gender-inclusive policies.

Inclusivity should also extend to marginalized issues which are currently seen as controversial (LGBT issues, religious minority rights, etc). Policymaking for these areas should involve groups/organizations working to address them. This also relates to academic freedom – in the sense that researchers should not be prohibited from looking into issues that are currently considered taboo or politically sensitive.

The authors acknowledge the structural problems that impinge on the quality of social science research performance in Indonesia, specifically for HEIs, which are subject to MRTHE policies and regulations. These have created a disconnect between public and private researchers: the latter are much more able to provide professional consultancy services to both government and private-sector clients, while government policies

and regulations place constraints on public institutions, putting them at a disadvantage. In addition, organizations and researchers that provide market research services to private sector companies are unable to publicize their findings because of the dictates of market competition. This means that some professional research organizations, be they public or private, do not see themselves as part of the social science research ecosystem despite the fact that they conduct social science research. As a result, there is very little connectivity and exchange between the different types of actors and organizations.

Significantly, there is evidence of promising research leadership within the CSO sector, which has been able to link research with policymaking in meaningful ways. These CSOs have benefited from the growth in digital literacy, and have been successful in using low-cost social media and digital platforms to disseminate academic writing to the public as well as in involving academically-inclined policymakers on their board of directors. Likewise, media platforms that specialize in science communication have been effective in disseminating quality social science research to the public. It is important to note that research conducted by CSOs is less market-driven, but rather, relies on donations, sponsorship and collaboration. This is a potential approach that could be applied by researchers, research administrators, and policymakers working to improve social science research performance in Indonesia.

Policy Recommendations

As identified in the previous sections, the Law on the National System for Knowledge and Technology, which regulates the national research system and performance, was issued after the DRA survey. It is important that follow-up research is conducted on the implementation of the law.

This law replaces the outdated Law on the National System for Research, Development, Knowledge and Technology (No, 18, 2002). While the law aims to improve the research system and performance by “supporting the advancement of knowledge and technology as the scientific basis for the formulation and making of development policies” (2019, Chapter 1, verse 1, p. 3), it does not say anything about academic freedom, which is crucial for enabling researchers and research actors to produce and disseminate their research, let alone contribute to policymaking processes. In addition, criminal sanctions included in the law are counterproductive to Indonesia’s efforts to promote international research collaboration (AIPI, 2019; ALMI, 2019). Articles 74-77 of the law states that without a government permit, foreign researchers undertaking high-risk research (research with the potential for high impact but a high probability of failure), development research, assessments and applied research face a maximum of two years imprisonment, or a maximum fine of IDR 2 billion. This clause potentially inhibits international research collaboration. This requires further research into how the policy impacts on the production, diffusion and uptake of research and on Indonesia’s knowledge sector more generally, as well as the implications for the DRA framework.

In addition to the need for regulations and laws to ensure a conducive research ecosystem, it is important to promote networking with international peers – which, in turn, would also help local researchers interact with policymakers. As previous research suggests, Indonesian scholars tend to be insular: “researchers lack academic mobility and international peer interaction, and opt to stay within their own institutions” (Rakhmani & Siregar, 2016, p. ii). Policies on research therefore also need to address the need for greater international collaboration.

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