Chapter 9

Overview of a Platform for International Collaborative Research: Schemes of Japan (MEXT and JSPS) and South Africa (DHET and NRF)

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9.1 Introduction

This chapter returns with a wide-angle view, discussing the possibilities of a platform for international collaborative research[1] by focusing on the schemes of Japan and South Africa (SA). First, this chapter analyses the characteristics of each country's government and relevant research funding organisations. More specifically, it focuses on the characteristics of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Japan Society for the Promotion of Science (JSPS) when analysing the case of Japan, and the Department of Higher Education and Training (DHET) and the National Research Foundation (NRF) in the context of

1 As Masaki (2020:31) discusses, "international collaborative research" varies from conducting individual research and publishing books with researchers from other countries to conducting cross-border research to tackle a challenging task common to multiple countries.

SA.[2] Second, the chapter compares the characteristics of the above-mentioned education departments and organisations from the perspective of international collaborative research. Finally, this chapter discusses the salient points and prospects for the development of a platform for international collaborative research.

According to Ito, in the 1990s, there was growing interest "in the international society on global issues", such as disasters and terrorism. Therefore, international cooperation morphed into "multi-layered cooperation" (Ito 2016:206). Furthermore, Ito mentions that in the field of advanced research, objectives and information have become "bigger, more complex, and broader". Thus, more "multilateral research cooperation with several countries" has taken place (Ito 2016:206). In that sense, as Sooryamoorthy (2013:1) states, "[s]cience is no longer a centralised activity located in a single place, but is dispersed far and wide". Indeed, as Ito also indicates, "in the present globalised society, researchers cross borders", and they are enmeshed in a situation characterised by "big brain circulation" (Ito 2016:202). As Zhou, Cai, and Lyu (2020:1345) note, "[i]nternational collaboration is important to promote the development of science". Nowadays, conducting international collaborative research can be considered one of the keys to promoting scientific advancements.

When exploring the world of science, as Zhou et al. (2020:1332) state, "[g]overnment funding plays a significant role in the development of science, and has attracted extensive interests from [the] academic community". Certainly, "[f]unding support plays a critical role in scientific research" (Zhou et al. 2020:1343). From these statements, it can be inferred that it is important to explore the roles of

2 This chapter is based on the information collected by 20 November 2021. Thus, it is important to understand that some of the characteristics of the four institutions have changed since that time (e.g., the name of funding). Also, it needs to be noted that some of the URL links in this chapter are no longer available online).

governments and/or research funding organisations when discussing international collaborative research.

It is important to note here that, as Madonda mentions, the two countries focused on in this chapter—Japan and SA—"signed an agreement on cooperation in science and technology" in 2003, and the NRF, JSPS and other organisations played responsible roles in the implementation process (Madonda 2015:31). According to the NRF, the "main objective of the collaboration is to contribute to scientific advancement in both countries through the funding of joint research activities in specified research fields".[3] Madonda stated that researchers from both countries have "strengthened relations and collaborations by hosting activities like exchange of researchers, students and experts; jointly organised conferences, symposia, workshops, exhibitions and training courses", and that the "joint research projects have advanced into world class research discoveries aiming at improving the lives of the citizens of both countries and the world at large" (Madonda 2015:31).

An example of a platform for collaboration between Japan and SA is the "South Africa-Japan University Forum".[4] It was founded in 2007, and "provides a dedicated and strategic platform for research and development engagement between higher education institutions in the two countries".[5] At its third gathering in 2017, its members reiterated the plans, such as "[e]stablish periodically opportunities such as joint academic seminars to share research interests, achievements and perspectives and to discuss possibilities for collaboration" to "[a]ctively share information on

3 NRF website. *South Africa/Japan Joint Science and Technology Research Collaboration Call for Joint Project Proposals 2015*. https://www.nrf.ac.za/division/gmsa-irc/funding/south-africajapan-joint-science-and-technology-research-collaboration-call [20 November 2021].

4 NRF website. *In support of the SDGs: SA-Japan University Forum, Tokyo, Japan*. https://www.nrf.ac.za/media-room/news/support-sdgs-sa-japan-university-forum-tokyo-japan [20 November 2021].

5 Ibid.

funding programmes to promote academic cooperation and joint projects" and to "[e]stablish, share, and implement concrete programmes and projects for academic exchange, human development, and cooperation with society, including the private sector, international organizations, and NGO".[6]

Since Japan and SA have been conducting international collaborative research for more than a decade, it is imperative to compare the characteristics of Japan (MEXT and JSPS) and SA (DHET and NRF) to identify salient points for discussions on international collaborative research.

As Zhou et al. discussed, "[b]oth funding and international collaboration play vital roles in scientific research but were treated in isolation in many studies" (Zhou et al., 2020:1332). Thus, it is crucial to explore the characteristics of research funding for international collaborative research, especially as the characteristics of the funding for such research in Japan and SA have not been compared or discussed much in previous studies.

9.2 The Japanese Scheme (MEXT and JSPS)

9.2.1 A Brief Introduction to International Collaborative Research in Japan

As Ito indicates, "the history of state-led international science and technology cooperation is short" in Japan (Ito 2016:206). It appears that Japan is facing "a delay in the internationalisation of research developments". Therefore, researchers are "isolated from an international brain circulation" and are enmeshed in a situation of "galapagosisation" (Ito 2016:203). In fact, as Murakami (2016:130) states, "Japan is known as a country which has few international collaborative research". This phenomenon is evident in the field of international co-authored papers. Notably, the rate of international co-authored papers in Japan tends to be relatively low (see Igami, Saka & Nagaoka 2016:157; Ito 2016:203). Igami et al.

6 Ibid.

also stated that "it is important to increase involvement in knowledge production in the world through international collaborative research in order to increase the diversity of our country's [Japan's] research" (Igami et al. 2016:157). Based on the context, it can be concluded that, so far, Japan has not been deeply contributing to the field of international collaborative research compared with other scientifically advanced countries.

On another front, Japan has recently promoted "collaborative research with overseas [researchers], including international science and technology cooperation" to play "an important role for science and technology"' (Ito 2016:202). Additionally, Murakami (2016:130) has noted that Japan is promoting international collaborative research to "establish international research networks and build a system for making the most of knowledge resources across the world efficiently in order to increase Japanese competitiveness". Consequently, it can be inferred that a strong emphasis has recently been placed on international collaborative research in the field of science in Japan, which begs the following question: How is such research being promoted by MEXT and the JSPS?

9.2.2 Overview of MEXT and International Collaborative Research

Saruwatari, Sasaki, and Sato (2016:200) have noted that universities in Japan have been, under the direction of the MEXT, "working on reinforcing governance for the purpose of increasing [Japan's] world presence by conducting international alignment activities". For example, on MEXT's webpage, "Strategic Promotion of International Activities in the Fields of Science, Technology and Academics", it is stated that MEXT "is promoting collaborative research with each country in the world, and science and technology cooperation such as personal exchanges and cooperation to international organisations".[7]

7 MEXT website. *Kagaku Gijyutsu niokeru Kokusai Katsudou no Senryakuteki Suishin [Strategic Promotion of International*

MEXT introduced a project called "The Top Global University Project" in 2014. It aims "to enhance the international compatibility and competitiveness of higher education in Japan" and "provides prioritized support for top world-class and highly innovative universities that can lead the internationalization of Japanese universities".[8] Furthermore, the "International Strategy of the MEXT", which was announced in 2005, emphasises means of enhancing Japan's "international competitiveness" in the age of globalisation.[9] Specifically, it states that to reinforce Japan's "international competitiveness" and promote "competition, collaboration, and cooperation between international universities", efforts need to be made, especially in the field of science and technology—in which Japan occupies a "leading position"—and it is important to grasp any field of study in which Japan's performance is excellent or inferior, while focusing on providing funding for the field.[10]

Additionally, regarding funding, it has been said that "there is a need to make a maximum effort in order to get closer to the public spending of Western countries and establish a plural and detailed funding system for tertiary education", so that education can play an important role in advancing "national strategies such as international

Activities in the Fields of Science, Technology and Academic]. https://www.mext.go.jp/a_menu/kagaku/kokusai/index.htm [20 November 2021].

8 JSPS website. *Top Global University Project*. https://www.jsps.go.jp/english/e-tgu/ [20 November 2021].

9 MEXT website. *Monbu Kagakusho niokeru Kokusai Senryaku (Teigen) Hajimeni [International Strategy of the MEXT (Advocates) Introduction]*. https://www.mext.go.jp/a_menu/kokusai/senryaku/teigen/05092901/001.htm [19 November 2021].

10 MEXT website. *1. Sekai Daikyoudou Jidai niokeru Wagakuni no Kokusai Kyousouryoku no Kyoka [1. Reinforcement of International Competitiveness of Our Country in the Era of Great World Competition]*. https://www.mext.go.jp/a_menu/kokusai/senryaku/teigen/05092901/002.htm [19 November 2021].

competitiveness".[11] Moreover, there is a section in the strategy for the "Promotion of Exchanges between Researchers and Promotion of International Collaborative Research on Regional Common Tasks",[12] according to which, "it is important to develop friendly relationships with foreign countries through science, technology, and academic exchanges, especially in Asian countries".[13] From these texts, it can be concluded that international collaborative research is considered an important issue by MEXT, especially on the Asian continent.

However, it is important to mention the challenges of international collaborative research in Japan in terms of research funding. Tsunogae (2018:50) indicates that "since the 1980s, while neoliberal reform was progressing, the tendency to suppress the national costs of tertiary education has become common" and "researchers gradually have become exposed to a competitive environment for acquiring research funds". Additionally, Saruwatari et al. (2016:197) state that "especially in the national universities, nowadays, while management grants continue to decrease, universities generating research funds strategically are highly needed". Therefore, it is important to consider the role of the system for research funding in promoting international collaborative research in Japan. Thus, this chapter explores the case of the JSPS.

9.2.3 Overview of the JSPS and International Collaborative Research

The JSPS is "an independent administrative institution, established by way of a national law for the purpose of contributing to the advancement of science in all fields of the natural and social sciences and the humanities".[14] Its

11 Ibid.

12 MEXT website. *2. Wagakuni no Sofuto Pawa no Zoukyou [2. Strengthening the Soft Power of Our Country]*. https://www.mext.go.jp/a_menu/kokusai/senryaku/teigen/05092901/003.htm [19 November 2021].

13 Ibid.

14 JSPS website. *About Us*. https://www.jsps.go.jp/english/aboutus/index2.html [20 November 2021].

"operation is supported in large part by annual subsidies from the Japanese Government" and it mainly functions to "foster young researchers", "promote international scientific cooperation", "award Grants-in-Aid for Scientific Research", "support scientific cooperation between the academic community and industry" and "collect and distribute information on scientific research activities".[15]

Several programmes within the JSPS are related to international collaborative research. For example, they include the "Fund for the Promotion of Joint International Research", which consists of "Fostering Joint International Research", "International Activities Supporting Group" and "Home-Returning Researcher Development Research".[16] Regarding "Fostering Joint International Research", there are two types (A and B) within the programme. On the one hand, type A supports the "joint international research project", enabled by the JSPS grants "in collaboration with researcher(s) at foreign university or research institutions" and "seeks to markedly advance research plans for the root research project and to foster independent researchers who can be internationally competitive".[17] On the other hand, type B supports a "joint international research project conducted by multiple domestic researchers and a researcher who belongs to [an] overseas research institution" and "seeks to build out [an] infrastructure of joint international research or further strengthen joint international research and to foster researchers who can be internationally competitive".[18]

It can be also noted that in the JSPS's grant programmes, there are ones which mainly focus on international collaborative research.[19] For example, the "International Joint

15 Ibid.
16 JSPS website. *Programs*. https://www.jsps.go.jp/english/programs/index.html [20 November 2021].
17 JSPS website. *Types of Grants Programs*. https://www.jsps.go.jp/english/e-grants/grants01.html [20 November 2021].
18 Ibid.
19 JSPS website. *Programs*. https://www.jsps.go.jp/english/programs/index.html [20 November 2021].

Research Program" aims to advance "collaborative research between excellent researchers in Japanese universities and institutes and their overseas colleagues, while providing opportunities for young researchers to hone their skills".[20] The "Bilateral Programs" mention that the "JSPS promotes international scientific exchanges between Japan and counterpart countries in accordance with agreements or memoranda of understanding concluded with academies, research councils and other science-promotion organizations in those countries" and the programmes "mainly take the form of joint research projects, joint seminars and researcher exchanges".[21] In the "Core-to-Core Program", two content areas—"Advanced Research Networks" and "Asia-Africa Science Platforms"—are established, and the purpose of the programme is explained as follows:[22]

> This program is designed to create top world-class research centers that partner over the long term with other core research institutions around the world in advancing research in leading-edge fields, on issues of high international priority, and in areas that contribute to the solution of prevailing problems in the Asia-African regions. While advancing research in these fields and building core research and education hubs in the Asia and Africa, the Core-to-Core Program also concentrates on fostering the next generations of trailblazing young researchers.[23]

Through the programme "Inviting Excellent Researchers from Other Countries to Japan" ("JSPS International Fellowships for Research in Japan"), the JSPS provides "overseas researchers who have an excellent record of research achievements with

20 JSPS website. *International Joint Research Program.* https://www.jsps.go.jp/english/e-bottom/index.html [20 November 2021].

21 JSPS website. *Bilateral Programs.* https://www.jsps.go.jp/english/e-bilat/index.html [20 November 2021].

22 JSPS website. *Core-to-Core Program.* https://www.jsps.go.jp/english/e-c2c/index.html [20 November 2021].

23 Ibid.

an opportunity to conduct collaborative research, discussions, and opinion exchanges with researchers in Japan".[24] From these explanations for each programme, it can be concluded that the JSPS offers several opportunities for research funding for international collaboration.

Delving deeper into the field of research funding opportunities for "young researchers", it can be observed that the JSPS offers several programmes.[25] For example, the "Academic Workshops and Seminars for Young Researchers" programme states that based on "agreements with overseas partner research organizations", the JSPS "carries out academic workshops and seminars to promote bilateral research collaboration in all research fields including the humanities and social sciences, while fostering young researchers and supporting scientific research based on the researchers' own free ideas".[26] Through the "Overseas Challenge Program for Young Researchers", an opportunity is provided to doctoral students to "go overseas to challenge a new research environment, one in which they engage in joint research with researchers in other countries".[27] In the "Program for Advancing Strategic International Networks to Accelerate the Circulation of Talented Researchers", the purpose is described as follows:

> This program works to foster excellent young Japanese researchers who will form the nucleus of networks that are formed by Japanese research groups with a high degree of potential, that draw upon the international circulation of

24 JSPS website. *Inviting Excellent Researchers from Other Countries to Japan*. https://www.jsps.go.jp/english/e-inv_researchers/index.html [20 November 2021].

25 JSPS website. *Programs*. https://www.jsps.go.jp/english/programs/index.html [20 November 2021].

26 JSPS website. *Academic Workshops and Seminars for Young Researchers*. https://www.jsps.go.jp/english/e-asia_seminar/index.html [20 November 2021].

27 JSPS website. *Overseas Challenge Program for Young Researchers*. https://www.jsps.go.jp/english/e-abc/index.html [20 November 2021].

> good brains, and that carry out international joint research with top-ranked overseas research institutions.[28]

It also states that the above-mentioned aim should be achieved "by supporting Japanese universities and research institutions with programs to dispatch for long stays young Japanese researchers to counterpart countries and to invite researchers from those countries to Japan".[29] Based on the above, it can be seen that the JSPS is also keen on funding "young researchers" to promote international collaboration.

9.3 The Scheme in SA (DHET and NRF)

9.3.1 A Brief Introduction to International Collaborative Research in SA

According to Onyancha (2011:100-101), SA experienced an "academic boycott" between "the 1960s and 1990 by the international academia" because of apartheid. Yet, "[r]esearch collaboration between South Africa and other countries has increased since 1986, with most of it being recorded after 1994"—the year SA's first democratically elected government rose to power (Onyancha 2011:110). As Sooryamoorthy (2013:3) indicates, in SA, "scientific collaboration is an accepted practice among scientists, supported by the government, higher education institutions, research institutes, industry, the private sector and individual scientists". Indeed, "[c]ollaboration has been considered as part and parcel of science, which is now promoted with vigour' (Sooryamoorthy 2013:3). Subsequently, it is seen that since the abolishment of apartheid, SA has been actively involved in the field of international collaborative research.

On another front, Ariail (2016:30) has noted that "SA has a number of world-class universities and is the higher

28 JSPS website. *Program for Advancing Strategic International Networks to Accelerate the Circulation of Talented Researchers*. https://www.jsps.go.jp/english/e-zunoujunkan3/index.html [20 November 2021].

29 Ibid.

education leader on the African continent". Sooryamoorthy (2013:3) concurs that SA has taken "a leading role in collaboration with other African countries" and can be seen at the centre of international collaborative research on the African continent. Therefore, exploring the characteristics of the country's policy and its attempts to provide opportunities for such research is vital not only for discussions on education in SA, but also for ones on education in Africa and the rest of the world.

Moreover, as indicated by Onyancha (2011:11) below, it can be seen that SA has the potential to change the climate of international collaborative research and become a leader in science on the African continent:

> Unfortunately for Africa, most decisions about the subject areas of research collaboration, especially at the international level, are made by foreign countries which fund most research in developing countries. This affects South Africa to an extent. However, South Africa has the potential in terms of the available financial and human resources to dictate the choice of research focus areas for collaboration within and outside Africa.

9.3.2 Overview of the DHET and international collaborative research

According to the DHET, in SA, "international engagements between institutions had been carried out in the absence of an official South African national policy on the internationalisation of higher education" until "the development of the Policy Framework for Internationalisation of Higher Education" (DHET 2019:12). Thus, the policy framework, of which the first draft was introduced in April 2017 (DHET 2017), can be said to play a vital role in the internationalisation of higher education in SA.

The purpose of the policy framework is "to provide high-level principles and guidelines; to set broad parameters; and to provide a national framework for internationalisation

of higher education within which higher education institutions can develop and align their institutional internationalisation policies and strategies" (DHET 2019:19). When exploring the policy framework related to international collaborative research, the section for 'international research collaboration' states that "[b]uilding, expanding and ensuring research collaboration between South African and international scientists and scholars – including the development of international research partnerships – is a high priority for South Africa" (DHET 2019:34). Additionally, this section states that "[t]he establishment and maintenance of international partnerships with governments, agencies and foundations across the world, in the interests of increasing access for South African scientists and scholars to international research funding opportunities and international research facilities, is a high priority" (DHET 2019:34). As inferred from these texts, promoting international collaborative research at tertiary institutions is one of the core components of the internationalisation of higher education in SA.

Furthermore, the DHET outlines the "goals and targets" of the "internationalisation of higher education" in the *National Development Plan 2030: Our Future – Make it Work* (NPC 2012). For example, a "more stable funding model is needed for all educational institutions that conduct research" (NPC 2012:16). This statement could be a response to the issue that Ariail (2016:33) points out: "while the higher education system in SA is strong, it is in need of greater financial support from the government". To further explain the system of research funding in the field of international collaborative research in SA, this chapter explores the characteristics of the NRF.

9.3.3 Overview of the NRF and International Collaborative Research

The NRF is "an independent statutory body" established by a national law, which "funds research, the development of high-end Human Capacity and critical research infrastructure

to promote knowledge production across all disciplinary fields".[30] The target is described as follows:

> The goal of the NRF is to create innovative funding instruments, advance research career development, increase public science engagement and to establish leading-edge research platforms that will transform the scientific landscape and inspire a representative research community to aspire to global competitiveness. The NRF promotes South African research interests across the country and internationally, and together with research institutions, business, industry and international partners we build bridges between research communities for mutual benefit.[31]

According to Damonse (2019:26), the NRF is "[l]everaging partnerships within the continent and abroad" and it "uses its competitive advantage in supporting and promoting research excellence to accelerate engagements between countries on the African continent, in collaboration with international partners". These descriptions indicate that the NRF plays an important role in promoting international collaborative research in SA by funding research in these areas.

When exploring the characteristics of the NRF in the field of international collaborative research specifically, it can be noted that the International Relations and Cooperation (IRC) Directorate "plays a contributing role in the promotion of research excellence, with regards to the internationalisation of research and higher education, and in particular to the concerted focus on Africa within the NRF".[32] The missions of the IRC are described as follows:

30 NRF website. *About NRF: Corporate Overview*. https://www.nrf.ac.za/about-us/ [21 June 2021].
31 Ibid.
32 NRF website. *International Relations and Cooperation*. https://www.nrf.ac.za/division/irc/about [20 November 2021].

- "To facilitate the generation and transfer of knowledge and technology to achieve international competitiveness for South Africa",
- "To enhance international science collaboration (networking), especially amongst emergent and developing economies" and
- "To promote and support continental/regional scientific collaboration in order to contribute to socio-economic and sustainable growth on the African continent".[33]

Specifically, the IRC focuses on "African Cooperation", "Overseas Cooperation", "Bilateral and Multilateral Agreements", and "Regional Cooperation".[34] For example, through "African Cooperation", "continental and regional scientific collaboration in order to contribute to socio-economic and sustainable growth on the African continent" are promoted and a "strong emphasis is placed on human capacity and skills development as the driver for promoting international competitiveness through knowledge transfer".[35] In "Overseas Cooperation", "the Intergovernmental and Inter-agency Bilateral Agreements [...] funding joint research projects and in the process ensures capacity building in key strategic areas" are ensured by working with the Department of Science and Technology (DST).[36] When delving deeper into the "Overseas Cooperation" component of the IRC, it can be noted that the following four goals have been established:

1. "To promote local science and technology research and development in order to strategically position South Africa in the global arena",
2. "To facilitate the generation and transfer of scientific knowledge and technology so as to increase South Africa's international competitiveness",

33 Ibid.
34 Ibid.
35 Ibid.
36 Ibid.

3. "To contribute to the socio-economic and sustainable development of South Africa through the promotion of international scientific collaboration" and
4. "To facilitate access to international opportunities for study and research for South African students and scientists."[37]

In the "Bilateral and Multilateral Agreements", "the intergovernmental and interagency agreements by funding joint research projects and in the process ensures capacity building in key strategic areas" are ensured by working with the DST.[38] "Regional Cooperation" is "facilitated primarily through the activities of the three units of the IRC with the main aim of promoting and supporting continental, regional and global scientific collaboration in order to contribute to socio-economic and sustainable growth of South Africa and the rest of the continent".[39] As seen from these texts, the NRF offers a variety of funding options, from research to travel grants, to promote international collaborative research.

Within the NRF, an emphasis seems to be placed on collaborative research with African countries. In "The National Research Foundation of South Africa: Fostering Science and Research Collaboration in Africa", the "[g]overnment departments and higher education institutions in South Africa are actively working towards increasing collaboration between relevant role players on the continent and overseas to stimulate research and innovation, as well as to promote high-level capacity development".[40] Also, when focusing on the programmes of the NRF in the category of "International

37 NRF website. *Overseas Cooperation Information Brochure*. https://www.nrf.ac.za/sites/default/files/documents/Overseas%20Cooperation%20Information%20Brochure.pdf [20 November 2021].

38 NRF website. *International Relations and Cooperation*. https://www.nrf.ac.za/division/irc/about [20 November 2021].

39 Ibid.

40 NRF website. *The National Research Foundation of South Africa: Fostering Science and Research Collaboration in Africa*. https://www.nrf.ac.za/sites/default/files/documents/NRF%20Africa%20Engagements_2015.pdf [20 November 2021].

Research Grants", for example, there is a programme called the "BRICS STI Framework Programme" that aims "to support excellent research on priority areas which can best be addressed through a multinational approach".[41] Another programme called the "South Africa / Japan Joint Science and Technology Research Collaboration" aims to "contribute to scientific advancement in both countries through the funding of joint research activities in specified research fields" and "provide an opportunity for young researchers in the two countries to meet and interact".[42] Based on the context, it can be inferred that through these programmes, the NRF not only promotes collaborative research with African countries but also with a wider range of international actors, such as BRICS and Japan.

Notably, similar to the JSPS, there is a programme for supporting international collaborative research for "young researchers" within the NRF. For example, the "Knowledge, Interchange and Collaboration" programme aims to "build and maintain excellence in South African research, rather than to only facilitate international collaboration".[43] More specifically, the objectives of the programme are as follows:

- "internationalising South Africa's research platforms",
- "enhancing networking within the global science system, in particular the African science system" and
- "fostering collaboration in order to improve the quality of research outputs by researchers".

41 NRF website. *BRICS Multilateral Call for Pre-Proposals 2021*. https://www.nrf.ac.za/division/funding/brics-multilateral-call-pre-proposals-2021 [20 November 2021].

42 NRF website. *South Africa / Japan Joint Science and Technology Research Collaboration: 2022 Call for Joint Research Proposals*. https://www.nrf.ac.za/sites/default/files/SA%20-%20Japan%20%28JSPS%29%20Call%20for%20Joint%20Proposals_Final%20Framework.pdf [20 November 2021].

43 NRF website. *Knowledge, Interchange and Collaboration (KIC) 2nd Call: Scientific Events/ Travel Grants 2021*. https://www.nrf.ac.za/sites/default/files/KIC%20Review%20Period%202%20-%202021.pdf [20 November 2021].

The support components consist of items such as "Travel Grants for Individual Researchers (including attendance and participation in virtual events)" and "African Interaction".[44] As seen from these texts, within the NRF programmes, there seems to be an emphasis on promoting international collaborative research among "young researchers".

9.4 Discussion and Conclusion

This chapter has analysed the characteristics of international collaborative research in Japan and South Africa. By comparing the characteristics of each country, it can be argued that regarding the promotion of international collaborative research by the relevant government bodies (MEXT and DHET) and funding institutions (JSPS and NRF), Japan and SA share several common characteristics.

First, international collaborative research seems to be promoted as one of the core strategies for the development of scientific advancements (especially in Japan, where management grants from the government to national universities have been decreasing). Thus, there are a variety of funding types available for such research (e.g., research grants, travel grants, grants for seminars and workshops, etc.).

Second, an emphasis seems to be placed on promoting collaborative research within the continent where a country is located, especially in SA. Additionally, the target country seems to play a leading role not only in the context of the continent where it is located but also in the international arena (e.g., SA emphasises collaboration with other BRICS countries).

Third, it can be seen that an emphasis is placed on promoting opportunities for "young researchers" to conduct international collaborative research. Last, it is meaningful to discuss the fact that both countries place an emphasis not only on "collaboration" but also on "competition" in international collaborative research. To summarise, it is crucial to consider ways of maintaining a balance between the two objectives.

44 Ibid.

Before concluding this chapter, discussions on the prospects for developing a platform for international collaborative research are presented, along with the phenomenon of promoting the humanities and social sciences and an examination of the need for collaboration between academia and businesses.

Ito (2016:217) discusses the "new development of international collaborative research" and the fact that when "aiming at science and technology with society, the implementation of co-creation, which includes various stakeholders, such as researchers of the humanities and social sciences, the political and administrative sides, and general citizens, is desired in the early stage of research development". Moreover, when considering the sixth *Science, Technology and Innovation Basic Plan* (Cabinet Office 2021:26), which aims to "promote international collaborative research by actively informing [the public] about our country's [Japan's] efforts internationally, to attempt to improve the Japanese presence and collect the wisdom of the research institutions of each country in the world", it is meaningful to note that there is a section for the "Advancement of the Humanities and Social Sciences and Creation of Comprehensive Knowledge". This section highlights that such fields are reinforced by collaborative research systems and promoted by funding bodies, which include the programmes of the JSPS (Cabinet Office 2021:56).

As Oki (2021:43) discusses, from the sixth *Science, Technology and Innovation Basic Plan*, the "humanities and social sciences have officially become targets of advancement". In this vein, it can be noted that the "Program for Constructing Data Infrastructure for the Humanities and Social Sciences" was announced by the JSPS to "promote joint researches domestically and internationally, thereby promoting humanities and social sciences through building a comprehensive system that researchers can utilize to share data on humanities and social sciences research across disciplines and countries while fostering a shared culture" and

that the "Japan Data Catalog for the Humanities and Social Sciences" began "full-scale operations" in November 2021.[45]

Additionally, *The Yomiuri Shinbun* reported online on 18 November 2021 that the Japanese government had decided to "expand a research subsidy program from [the] next fiscal year to promote joint international research".[46] It will be implemented through the JSPS programmes, and the "program, which offers subsidies for a wide range of research including natural science, social science and the humanities, will be expanded to further promote cutting-edge research".[47] Based on the context, it can be seen that increasing attention is being paid to the humanities and social sciences in the field of international collaborative research.

As Sooryamoorthy (2013:1) mentions, the "production of scientific knowledge is no longer the monopoly of universities" and "[e]qually important are non-academic institutions, engaged in groundbreaking research". Related to this statement, in SA, the *National Development Plan 2030: Our Future – Make it Work* states that "[t]he government must support collaboration between the business, academic and public sectors" (NPC 2012:327). Collaboration between the academic and industrial fields has also been promoted from the Japanese side.[48] From this phenomenon, it can be inferred that, presently and in the future, international collaborative research needs to be considered not only in academia but also in business.

45 JSPS website. *Program for Constructing Data Infrastructure for the Humanities and Social Sciences*. https://www.jsps.go.jp/english/e-di/index.html [20 November 2021].

46 The Yomiuri Shinbun. 2021. Government to Expand Research Subsidy Program. *The Japan News*, 18 November. https://the-japan-news.com/news/article/0008003784 [18 November 2021].

47 Ibid.

48 JSPS website. *University-Industry Research Cooperation Societally Applied Scientific Linkage and Collaboration*. https://www.jsps.go.jp/english/e-soc/index.html [20 November 2021].

Thus, the following question must be asked: What further issues need to be discussed when considering the two avenues for international collaborative research? It is important to recall, as Onyancha (2020:578) mentions, that "institutions or countries do not actively collaborate in research; rather, it is individual researchers who collaborate". Additionally, as Sooryamoorthy (2013:2) states, "[m]utual respect and recognition, irrespective of skills, knowledge or location, regular communication on project matters without regard for seniority, and more or less equally distributed benefits are contributing conditions in collaboration". Considering these arguments, it is crucial to remember that the humanities and social sciences are the fields whose cores are themes related to relationships between human beings (and society). Therefore, these fields can be expected to play a vital role in international collaborative research.

A second question must be asked: What needs to be specifically discussed in the fields of the humanities and social sciences regarding international collaborative research? In the end, this chapter focuses on presenting tasks related to tensions between the promotion of international collaboration and national competitiveness to identify salient points in the discussion of international collaborative research.

Carnoy (1999:21) mentions that "the power of the nation-state is not diminished by globalization because ultimately nation-states still influence the territorial and temporal space in which capital has to invest and where most people acquire their capacity to operate globally". Thus, it can be inferred that, although society has become globalised, there is still an undercurrent related to "anti-globalisation" views, namely nationalistic ones.

A nationalistic statement regarding international collaborative research is evident in the following quote: "From now on, there is a need for an attitude of actively making use of international collaboration as one of the means which aims at maximising the national interest" (Ito 2016:205-206). In fact, there is a programme being offered by the JSPS (on behalf

of the MEXT) named "Projects for Promotion of Japanese Studies Based on International Collaboration",[49] which aims to promote Japanese studies, the internationalisation of the humanities and social sciences in Japan, and so on, by promoting international collaborative research on "Japanese studies".[50]

Furthermore, in the policy of the DHET, although it is stated that "[a]ctivities related to the internationalisation of higher education must be of mutual benefit to both a South African higher education institution and its international partner(s) in agreed collaboration or partnership" (DHET 2019:23), "priority focus" is established as follows: "In the design of internationalisation of higher education activities relating to teaching, learning, research, and community engagement by South African higher education institutions, priority must be given to South Africa's interests" (DHET 2019:22). Considering the above statements, it can be concluded that there are tensions between the strands of international collaboration and national competitiveness in the field of science. Specifically, it is important to be cautious regarding these tensions when discussing the promotion of international collaborative research.

Moreover, when considering relationships between countries, the notions of 'developing countries' and 'developed countries' should also be considered. On the one hand, as Zhou et al. (2020:1345-1346) state, international collaboration between these countries has a positive impact:

> The value of international collaboration is not just citation impact, is that it can promote academic communication, enhance research capabilities, and expand the academic network of researchers from developing countries. In addition to contributing to their talents, scholars from

49 JSPS website. *Kokusai Kyodo ni motozuku Nihon Kenkyu Suishin Jigyou [Projects for Promotion of Japanese Studies based on International Collaboration]*. https://www.jsps.go.jp/j-ic/ [20 November 2021].

50 Ibid.

> developing countries can make up for the shortage of human resources faced by research projects of developed countries.

On the other hand, there is a negative impact, as Onyancha (2011:109) mentions: "Whereas continental research areas are largely dictated by unique problems which are common to most countries in Africa, subject areas of research in international collaboration are usually determined by the international community which, in most cases, funds the research". Additionally, in a discussion of the "EDU-Port Japan" project (a project that is a "'public-private, nationwide' initiative to proactively introduce Japanese-style education overseas by providing a platform from in which the public and private sectors collaborate in achieving this objective"),[51] Hashimoto (2019:467) criticises the fact that, in terms of the international development of education, "it can be said that the 'dissemination of Japanese-style education' is still not ethically desirable". From the statements above, it can be concluded that it is important to be cautious not only about the positive aspects but also the negative ones related to international research collaboration. Indeed, there are several vital points which need to be continuously considered when discussing the prospects of international collaborative research. Therefore, the natural sciences, humanities and social sciences are expected to play crucial roles in such research.

Finally, when considering international collaborative research during the COVID-19 pandemic, it is important to consider the fact that the means of conducting such research could remain impacted for an indefinite period. In a world with an unpredictable present and future, situations should be considered on "a case by case basis".[52] In other words, tackling

51 MEXT website. *What is EDU-Port Japan?* https://www.eduport.mext.go.jp/en/about-en/summary-en/ [20 November 2021].

52 NRF website. *Knowledge, Interchange and Collaboration (KIC) 2nd Call: Scientific Events/ Travel Grants 2021*. https://www.

situations with flexibility, may be one of the keys to promoting international collaborative research—in fact, flexibility may be a necessary component in all forms of scientific research.

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