Indonesian government’s LPDP international scholarship program and technocratic legacy in the country

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Indonesian government's LPDP international scholarship program and technocratic legacy in the country

（インドネシア政府の LPDP 留学制度とテクノクラシー）

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Tables and Figures

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Terms and Abbreviations

UU	(Undang-undang)	: Commonly translated as "law" in English-language literature. The second highest rank of government regulation in Indonesia just below the constitution. Formulated by the parliament and authorized by the President. The English word "law" can also refer to the legal concept/system in general, which in turn refers to the word "hukum" in Indonesian language.
PP	(Peraturan Pemerintah)	: Governmental Regulation. A type of government regulation in Indonesia, ranked below undang-undang (UU), enacted by the President in principle to support the enactment of the content of a certain UU.
Perpres	(Peraturan Presiden)	: Presidential Regulation. A type of government regulation in Indonesia, ranked below peraturan pemerintah (PP), encated by the President to support the enacment of a certain PP, or to execute a certain governmental authority.
Peraturan Menteri		: Ministerial Regulation. A type of government regulation enacted by a minister to facilitate the enactment of certain policies.
PMK	(Peraturan Menteri Keuangan)	: Finance Minister Regulation. A ministerial regulation enacted by the Minister of Finance of Indonesia.
Bappenas	(Badan Perencanaan Pembangunan Nasional)	: National Development Planning Agency. Formed in 1963 as a government agency in charge of planning and organizing national developent, whose head reports directly to the president. Since 1971, except for 1999-2001, the head of Bappenas would serve concurrently as the State Minister of Development Planning. During the New Order regime, it was in charge of drafting the "developmental budget" within the national budget.
RPJPN	(Rencana Pembangunan Jangka Panjang Nasional)	: Long-term national development plan white paper drafted by Bappenas, covering a period of 20 years. The current form is RPJPN 2005-2025.
RPJMN	(Rencana Pembangunan Jangka Menengah Nasional)	: Medium-term national development plan white paper drafted by Bappenas, covering a period of 5 years.

Notes on Indonesian language spelling

Titles/names of laws and regulatory texts, along with names of the first two Presidents of Indonesia are written in the modern spelling for the sake of consistency (e.g. Sukarno instead of Soekarno, Undang-undang instead of Oendang-oendang). Names of contemporary figures that by default are written in the old spelling, or names containing a mix of old and modern spellings are left as they are commonly written (e.g. Boediono *not* changed to Budiono, Sumitro Djojohadikusumo is written as is).

Chapter 1

Introduction

1. Background

The Lembaga Penjamin Dana Pendidikan (The Indonesia Endowment Fund for Education; LPDP) is an endowment fund attached to the Indonesian Ministry of Finance with the policy making and management supported by multiple ministries. More than 24,000 Indonesians have signed a contract to study as LPDP awardees since it opened its post-graduate scholarship program in 2012, most of which cover tuition fee and living cost for post-graduate education in Indonesia and abroad without the obligation to return the money. Annually, the LPDP provided scholarships around three time what Indonesians normally get from the EU's Erasmus+ international student mobility scholarship (an average of 258 students per year between 2015-2019) (European Commission, 2020) and almost double the allocation from Japanese Government MEXT Scholarship (893 students in 2019) (Ministry of Education, Culture, Sports, Science and Technology – Japan, n.d.).

As a government institution, LPDP is unique in that its initial funding (with possible addition in non-regular basis) came from national government expenditure (the Anggaran Pendapatan dan Belanja Negara, abbreviated as APBN), but with operational budget coming from investment profit and is separate with the national government budget. As an organization, it is a "non-echelon work unit at the Ministry of Finance," although its policy direction is decided through an inter-ministerial Board of Trustees. The expenses for overall scholarship program in 2018, with 9,881 ongoing scholars was 2.1 trillion rupiah (LPDP, 2018) which is equivalent to the operational expense of the University of Indonesia (Universitas Indonesia, 2017), one of the leading public universities with more than forty thousand ongoing students. With such scale, the LPDP and its scholarship program have been subjected to discussions within the government including national assembly meetings

(see e.g. CNN Indonesia, 2019a), and public discourse on what role the awardees should have and what kind of public accountability they should bear (see e.g. BBC Indonesia, 2018).

2. Research Question

To study the scholarship program as a policy instrument of national (economic) development planning, especially in the sub-field of education, science, and human resource development, the main research question of this dissertation is:

"How does government scholarship program under LPDP scheme serve as an instrument for human resource/capital development in Indonesia in relation to the country's effort to catch-up with the world-economy?"

To help answer the question, three sub-questions are utilized:

a. Why and how did the Indonesian government develop the LPDP scholarship?

This question focuses on how the scholarship under the LPDP scheme came to be, including (1) the political context especially in relation to national development planning within which the program was initiated, and (2) how this program differs with—or becomes a successor to—previous government scholarship programs and related policies.

b. What are the constraints faced by the government in implementing the program?

This question takes a look on factors that might limit the effectiveness of the scholarship program as well as LPDP as an endowment fund in relation to their status as policy products of the Indonesian government.

c. How do the scholarship awardee's career path and perception compare to government's aim in regard to the program's implementation and by extension the economic development plan?

Given the emphasis that LPDP put on its awardees in the national development, especially as catalyst for accelerating economic growth, this question takes a look on how the awardees (i.e. recipients of the scholarship) perceive their position and role within the national economic development in Indonesia.

3. Methodology and overview of the chapters

This dissertation analyzes the LPDP scholarship program as a policy instrument (see e.g. Hogwood and Gunn, 1984 p. 16 on "policy as a [program]"; cf. Vining and Weimer, 2015) of the Indonesian government. More specifically, this dissertation places an emphasis on the "analysis of policy content…values, assumptions, ideologies…" (Olssen, Codd, and O'Neill, 2004 p. 72) which contributed to the creation of LPDP scholarship and its perceived role as both an education and economic development policy.

While this dissertation considers its subjects to be political in that (Indonesian) domestic and to some extent international political processes are integral to the making of—and as would be discussed later, changes in—the endowment fund and its scholarship program, it is more a policy analysis rather than a political analysis—in a strict sense—in that it does not deal very much with the power relations (see e.g. Hay, 2002 p.3) in the making of said programs. More specifically, this is a study on policy content, process, and to a more limited extent outputs (Hogwood and Gunn, 1984 pp. 26-27), which attempts to illustrate the formation and redefinition of the endowment fund and its scholarship program into a policy instrument which ties up advanced education with a broader human resource/human capital development agenda, and by extension is geared toward supporting economic growth and development especially in the context of Indonesian government's agenda for economic catch up.

The terms "education policy" and "economic development policy" are utilized here—directly and otherwise—in reference to their usage in rhetoric of the Indonesian government, relevant public figures (see e.g. Indrawati and Kuncoro, 2021), and researchers (see e.g. Thee, 2006) which consider the two to be intertwined. This dissertation does not seek to refute existing definitions of the aforementioned concepts. Rather than declaring any ideological or political stance, this dissertation endeavors instead to provide an insight that is useful to audience across positions and disciplines.

This dissertation is mainly a product of qualitative analysis, with numerical data in form of descriptive statistics but without making any rigorous statistical inference (cf. Bryman, 2008 pp. 155-156 and pp. 386-388). A field trip to Indonesia was planned for 2020/2021 (the

author was based in Fukuoka, Japan throughout the duration of the research), but was scrapped due to the Covid-19 pandemic. This situation forced a heavier reliance on sources accessible remotely and/or online. Dr. Suryadi and Dr. Teguh Trianung from Universitas Negeri Jakarta (UNJ), Indonesia, provided tremendous help in gathering some of the materials and introducing the author to some of the informants in Jakarta.

Indonesian legal and regulatory texts are mostly available online at databases provided by the National Financial Audit Bureau (Badan Pemeriksa Keuangan—BPK), the Constitutional Court (Mahkamah Konstitusi—MK), and other governmental institutions. Historical statistics came from various sources including databases affiliated with the World Bank, the Indonesian Central Bureau of Statistics (Badan Pusat Statistik—BPS), public information disclosure request to governmental institutions, reports by international organizations, and academic works. Annual reports of LPDP are available on the organization's website. A series of requests for additional information from LPDP were made using the public information disclosure request in February-March 2021, resulting in two batches of information granted in March and July 2021.

Targeted interviews with (then-current and former) government officials were conducted either via teleconference/video call, email correspondence, and/or social media chat between 2020 and 2022, with the selection and identification of informants done continuously in contingent way starting from 2019, taking into account the then-ongoing pandemic. Interviews with LPDP scholarship awardees were conducted between August and September 2020, starting with an open-answer electronic questionnaire followed by teleconference/video call, email correspondence, and/or social media chat. The informants were identified and approached by snowballing from individuals acquainted with the author, including a former LPDP scholarship awardee who acted as a referral but not interviewed.

Personal communication with various individuals, as well as and academic discussions at Kyushu University with academic advisors and colleagues at the ISGS Comprehensive East Asian and Japanese Studies Integrated Seminar, at the 18th Asia Pacific Conference in Beppu, November 2020, and with the editors and anonymous reviewers throughout the course of journal article publication associated with this research helped to shape this dissertation.

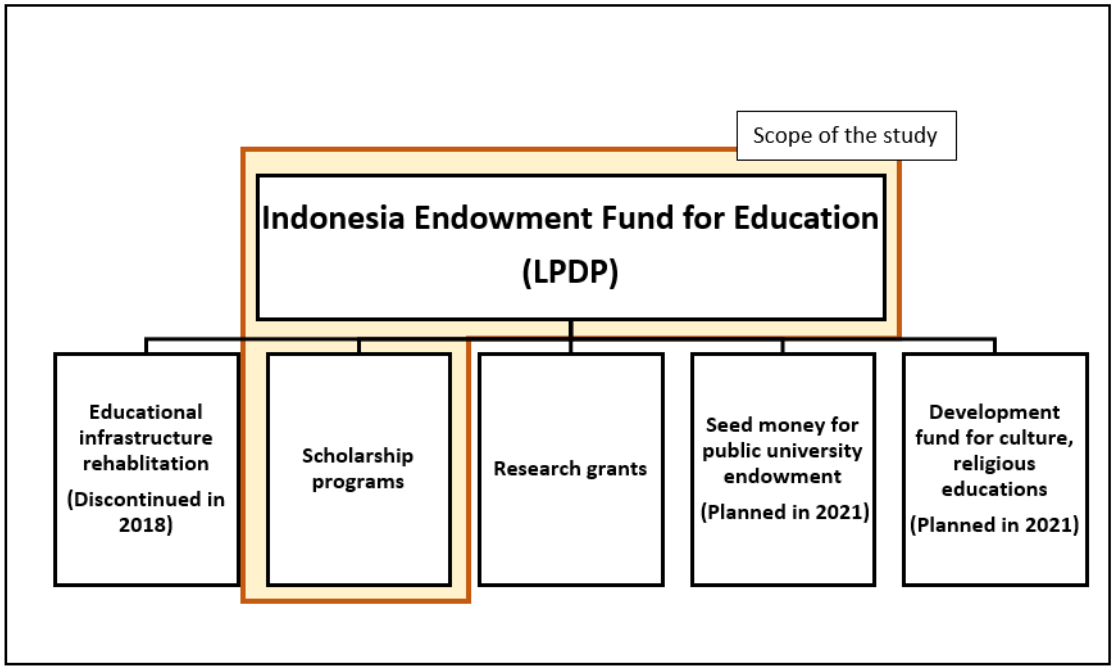

Figure 1 Scope of this dissertation: LPDP as an endowment fund organization, and its scholarship program.

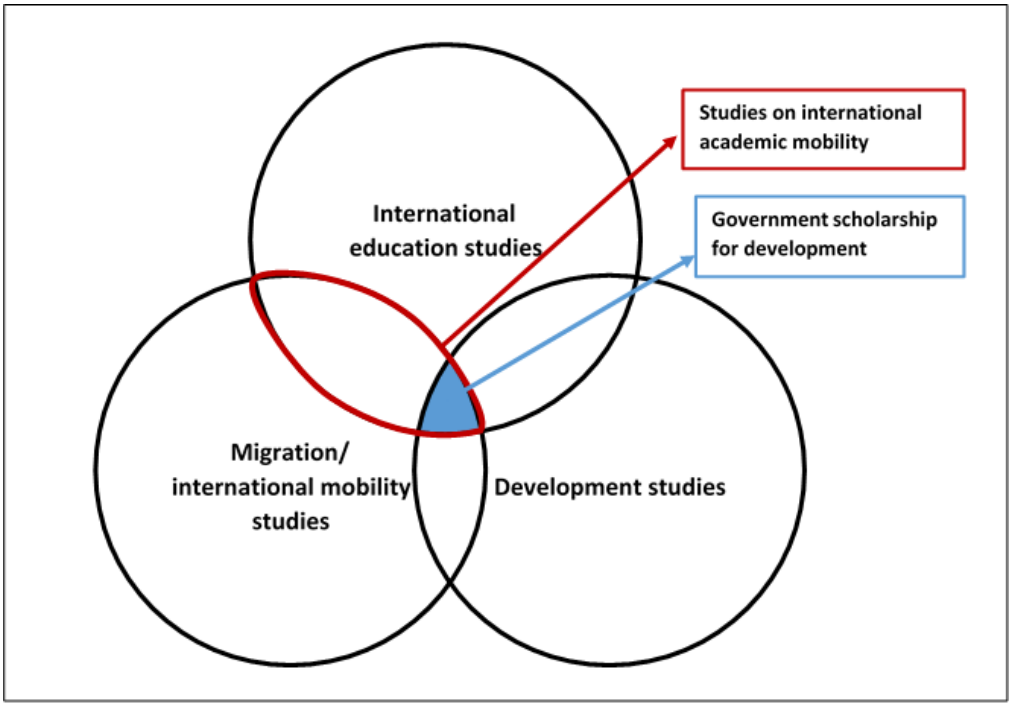

Figure 2 Position of the study within the academic literature.

Overview of the chapters

Chapter 2 provides a literature review on topics relevant to this dissertation, focusing on international scholarship programs and relevant reviews of education system and political scape in Indonesia, as well the theoretical frameworks it utilizes, focusing on economic catch-up theories, skilled migration, and development.

Chapter 3 goes over the historical background of LPDP. This chapter utilizes Indonesian legal and regulatory texts, historical statistics, and targeted interviews as its main source of information. This chapter shows how LPDP and its scholarship program reflect the trend of integration between higher education, research, and development policy. This chapter also shows how the budget politics in Indonesia led to the creation of LPDP as an alternative funding mechanism for certain education projects.

Chapter 4 provides an overview of LPDP and its scholarship program, and changes in government regulations concerning the LPDP as an endowment fund institution between its founding in 2011 and 2021. It would mainly analyze legal documents which regulate the founding—and later changes on—the LPDP and its programs, as well as annual reports and other documents published by the LPDP management and other relevant government bodies. Some numerical data, news articles, and targeted interviews (i.e. personal communications) with current/former officials are used to provide additional context and/or explanation.

Chapter 5 serves to illustrate how the government and relevant public officials perceive and portray the LPDP scholarship program, especially the international scholarship program, particularly on the expectations placed upon the awardees. It also provides a historical overview of government scholarship programs in Indonesia. This chapter utilizes textual sources like official publications, news, and statements and writings by public figures as its main source of information, contextualized with secondary sources in the relevant literature.

Chapter 6 shows the early findings regarding the output of LPDP scholarship, as well as some insight on how awardees of the scholarship perceive their positions and roles in regard to the expectations from the government. These are meant to help grasp how the scholarship have been implemented and positioned vis-à-vis the overall economic development. This

chapter utilizes data from LPDP official publications as well as from public information requests, along with semi-structured interviews with several LPDP scholarship awardees.

Chapter 7 provides a discussion meant to tie up findings of previous chapters and concludes the dissertation by answering the research question and sub-questions before providing some policy recommendations and ideas for future research.

Notes on limitations

The course of this dissertation was affected by the Covid-19 pandemic. Difficulties related to travelling internationally—and to some extent domestically in Japan—forced the cancellation of planned field works and dictated a heavier reliance on sources accessible remotely and/or online. The pandemic also affected relevant government institutions, making the collection of information more difficult or requiring more time to process.

Aside of issues related to the pandemic, Indonesian government institutions reserved the right to withhold certain information from being released through public information request for a certain period of time. For the purpose of this dissertation, the request for more information on LPDP endowment fund's investment details and some aspects of LPDP scholarship selection process was not granted, citing concerns for unhealthy competition in regard to relevant public investment and risks concerning fairness in the scholarship selection process and protection of the applicants' private information (LPDP, 2020b).

4. Significance

This dissertation is essentially a multidisciplinary case study of a government program—i.e. public policy product. Academically, this dissertation would contribute to the discussion on how education and economic policies intersect, especially in the context of a developing country (see e.g. Welch, 2000, cf. Gunter, Apple, and Hall 2017). It would also contribute to the growing literature of scholarship programs as a tool to provide a sort of exceptional access to higher or post-graduate education especially for students coming from developing countries (see e.g. Perna et al, 2014, Cosentino et al, 2019, Campbell and Neff, 2020).

Highlighting not only the potentials but also uncertainties and possible limitations of such programs' ability to contribute toward national economic growth and development, this dissertation would hopefully also provide some input to further research endeavors on this front (see e.g. Benhabib and Spiegel, 1994, Hanushek, 2013, Carlsson, 2011).

Focusing on Indonesia, this dissertation also contributes to the literature on the country's social, political, and especially economic development through the analysis on how its technocracy (cf. Sato, 2019, Shiraishi, 2014, Karsono, 2013) was shaped by, and in turn help shaping the relation between advanced education and economic development. This contribution can also be extended to relevant literatures focusing on a broader geographic area like Southeast Asia (cf. Khoo, Tadem, and Shiraishi, 2014), Asia, and/or the developing countries.

At the most practical level, this study provides an outsider's insight into an ambitious education and human resource development program of the Indonesian government, endorsed by public officials across multiple cabinets, backed by a special budget mechanism, and the running budget of which matches the country's top public universities. More broadly, LPDP is arguably among the best windows to take a peek into the contemporary Indonesian political and societal landscape. For instance, public discourse on the compulsory return policy for awardees of LPDP scholarship also involved the issue of patriotism and Papuan separatism (see e.g. CNN Indonesia, 2020). Another interesting aspect is how it also highlight the position of Islam as a personal belief and as a source of ideology in the world's largest Muslim-majority country. There are discussions in some circles over the (Islamic) religious permissibility of scholarship funded by investment profit (see e.g. Minhatiy, 2022), while LPDP itself has been trying to accommodate prospective scholarship applicants who are wary of benefitting from interest-based investment profit by also investing in sharia-compliant instruments with some degree of details included in its annual reports (see e.g. LPDP, 2015, 2016). Members of selection committee of LPDP scholarship program also experienced allegations of both Islamic radicalism (see e.g. Ernis, 2019) and Islamophobia (see e.g. CNN Indonesia, 2022).

The issue on patriotism would be briefly touched upon in the latter part of this dissertation, while the issue of Islamism and political Islam are largely beyond the scope of this dissertation. With the main body of research covering only up to 2021, there are tips and information that the author came across on important developing issues surrounding LPDP which unfortunately need to be left out from this dissertation. These include disputes and maneuvering in the parliament prior to the final formalization of LPDP and lobbies by a certain government minister to set up a specific sub-program under the LPDP scheme[1] which apparently bore a fruit in form of a scholarship program to study metallurgy and material science at specific universities in China (see e.g. Caesaria, 2022). Furthermore, the reception in both policy circles and the wider public on a new type of international non-degree scholarship available for undergraduate students (the Indonesian International Student Mobility Award—IISMA) under the LPDP scheme[2] is also worth observing.

All things considered, this dissertation would hopefully be beneficial as a starting point for those interested in the subject, whether in the policy-making circle, the academia, or beyond.

[1] Both came from a personal communication with a former member of Indonesian parliament.
[2] Thanks to Nobuhiro Aizawa for the tips.

Chapter 2

Literature review

This dissertation frames its main object of study, the LPDP international scholarship program, as a form of government-organized academic mobility and skilled migration program meant to support national economic growth and development through the creation of highly skilled human resource. With that context in mind, this chapter would provide a literature review to help situate the discussion of this dissertation and how its findings and arguments contribute to the existing understanding—and/or debates—on the relevant topics.

The literature review is provided in three parts. First is that on scholarship programs in the context of international education, which highlights how the "international" dimension complicates the discussion of educational (or education-related) activities in term of, among others, perceived objectives and benefits. The second part discusses academic mobility and skilled migration, highlighting the complexity of relation between agency and structure involved in such phenomena. Third, shifting the focus closer to domestic affairs in Indonesia, is the discussion of concepts used to explain (or theorize about) national economic growth and development, focusing on the "total factor productivity" (TFP) approach to economic growth and economic catch-up, both of which were utilized by the Indonesian government in its economic development rhetoric, and in a sense serve as the practical objective of the international scholarship program analyzed in this dissertation.

1. Scholarship programs as an international education phenomenon

Aside of financially facilitating educational endeavors per-se, the international scholarship program under LPDP also facilitates cross-border mobility of students. Campbell and Neff (2020) provided a remarkable survey of the goals and rhetoric of international scholarship

programs especially those targeting students from the global South, and found six most common "rationales," which could overlap with, or bring about one another as a secondary outcome (cf. Perna et al., 2014). These include "skill and knowledge acquisition for human capital development," scholarships for "diplomatic aims," scholarships meant to bring "social change" or promote "social justice," for "international or sustainable development or as a humanitarian aid," for the "internationalization of universities," and scholarships meant to "provide access to higher education" especially members of disadvantaged population. To this list, it is possible to add scholarships aimed to train and attract foreign students to work in the sponsor country to help develop certain sectors, for example a Singaporean government's scholarship program meant to help develop the country's biomedical sector (Pereira, 2008). On the other hand, international scholarship programs' potential contribution toward the global development agenda was also given a political recognition through Goal 4.b. of the United Nations Sustainable Development Goals (SDGs),[3] which calls for a larger volume of official development assistance in form of higher education scholarship programs for students from least developed countries, African countries, and small island developing states to study in developed or fellow developing countries (United Nations, 2015).

From its characteristics, the international scholarship under LPDP scheme can be categorized within a subset of government-sponsored study abroad programs for the "development of advanced knowledge" (Perna et al, 2014), which typically have a restricted list of study destination, almost exclusively for post-graduate degree attainment, and mostly require the awardees to return to their home country post-study.[4] As far as practical objective is concerned, these scholarship programs can be categorized as scholarship programs meant to promote the transfer of knowledge and skills obtained abroad into the sending country's domestic sectors, where the scholarship awardees would channel their

[3] Thanks to an anonymous reviewer for suggesting the relevance of this SDGs goal to the author.

[4] The classification in Perna et al (2014) only took into account scholarship programs organized by the sending country, thus excluding programs meant to attract foreign students into the receiving country like Japan's MEXT scholarships as well as programs organized by international organizations like the ERASMUS scholarships. That said, it curiously included Fulbright Scholarship programs outside the United States despite these being organized bilaterally and are explicitly serving the American interest.

newly-obtained knowledge by working or participating in their country's economy and society after returning from their studies (Campbell and Neff, 2020).

The study on international scholarship programs also constitutes a part of a wider literature on the so-called "international education," which can mean anything from (re)development of domestic higher education institution to cope with or stay relevant in international arena (see e.g. Enders and Teichler, 1995 in Enders and Fulton, 2002, Nulhaqim et al, 2016, Okada and Okada, 2011) to education as a market commodity traded across national borders (see e.g. Collins, 2012 and Jon, Lee, and Byun, 2013), and conceptualization and theory-making related to the issue (see e.g. Enders and Fulton, 2002, Teichler, 1988).

Enders and Teichler (1995, in Enders and Fulton 2002) argued that the internationalization of higher education may not be perceived equally by countries around the world—and by individuals within these countries. They proposed four ways countries can (or be forced to) approach the phenomenon. First is what they call "would-be" internationalization where a country leans toward internationalization but faces tough challenges in competing internationally. Next is the "life-or-death" internationalization, where the survival of members of the academia in a country depends on their success in international arena. Third is what they call "two-arena" internationalization, where "big academic market" existing in a country allows its academia to choose whether or not to enter the international arena. The last one is what they call "one-way" internationalization, a phenomenon observed mainly in English-speaking countries where internationalization is almost singlehandedly defined by the admission of foreign students into a country's education system. In proposing these approaches, Enders and Teichler assumed the existence of an overarching international structure which encompasses smaller national and/or regional structures, inhabited by individuals who are unequal in term of development and capabilities of benefitting from the internationalization of education.

Pike (2015) proposed a typological compass on the goals of such cross-border educational activities, with "education for profit versus education for freedom" at the x axis, and "common good versus privilege" at the y axis. The chart, although ideologically-charged and the proposed content of which is open for debate, is nonetheless useful at categorizing

activities related to cross-border activities based on the perceived benefit and potentially helpful in grasping and analyzing trends in the issue.

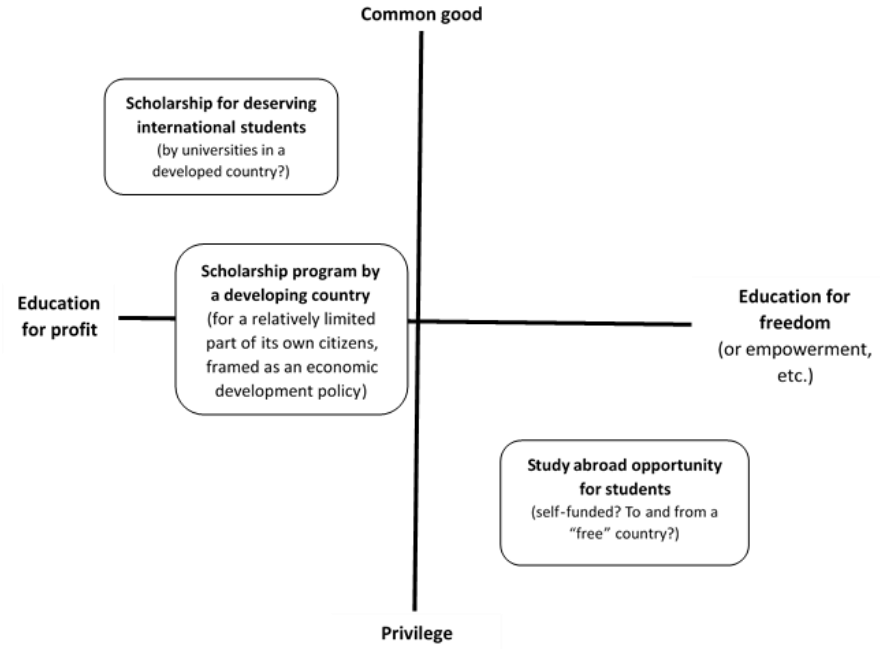

Figure 3 "Scholarship" and "study abroad opportunities" according to Pike's (2015) quadrants of cross-border educational activities. Scholarship programs run by government of a developing countries purportedly as part of economic development policy may not fit nicely in any of the quadrants.

Pike's diagram put "scholarship for deserving international students" inside the "shared prosperity" quadrant covering activities which could be considered common goods and at the same time lean toward the provision of education for the sake of profit. On the other hand, "study abroad opportunity for students" (implying activities promoted or sponsored by their home institution or home country) inside the "targeted internationalization" quadrant which covers activities leaning toward providing education for freedom, but focus of privileged individuals or parts of the society rather than being a common good. This assertion is similar to that of Andere (2004) who, commenting on a scholarship program for Mexican students co-funded by the US and Mexican government, pointed out concerns on whether publicly funded scholarship programs really results in a public *good*. He concluded that the program is an unnecessary form of publicly-funded market-intervention benefitting mostly the already-privileged parts of the society.

Setting aside the question of whether it was proper in the first place to put profit and freedom on opposing poles, pitting Pike's diagram against the findings in Campbell and Neff's (2020) and the assertion in Andere's (2004) as mentioned earlier provides a more nuanced view for analytical purpose. A scholarship program *could be both a common good and a privilege*, and as later parts of this dissertation would suggest, it would be beneficial to look at the role and agency of each actors involved in such programs especially when the very rhetoric of its benefactor—the government in this case—implies the utilization of purposefully privileging certain parts of the society for the benefit of the rest (cf. Perna et al, 2015, and Purdey, 2015 in Campbell and Neff, 2020).

On the other hand, Bamberger (2022) noted that while literature on "diaspora as human capital" often see the highly educated nationals abroad "as an exogenous source of knowledge capital to be harnessed to the state's desire," there is a lack of "discussion of heterogeneity" among members of the so-called "knowledge diaspora" and that their "unquestioned, affective allegiance" is taken for granted. While there are studies showing that such allegiance cannot be taken for granted (see e.g. Oldac, 2022), it is still helpful to be wary of the risk of oversimplifying or making too broad of an assumption regarding subjects of this topic, for example due to the need to select and isolate specific set of actors to study certain phenomena, social networks, or policies. The next section would further discuss the complexity of studying phenomena related to international education, specifically in term of the relation between agency and structure(s).

2. Academic mobility and skilled migration

The first thing to address when discussing the existing literature on international education, academic mobility, knowledge diaspora, and skilled-migration, the terms used to frame these social phenomena as theoretical frameworks—and indeed the lines between the phenomena themselves are sometimes blurry. While strictly defined, each of these terms have their own specific usage, tolerating the blurriness can at times be helpful and facilitate a broader range of interrelated discussion. An example can be seen in Bamberger (2022), which started by outlining the various definitions (traditional and common-current usage) of the term

"diaspora" whose original meaning was specific to the historical phenomenon concerning the global Jewry, but later get broadened to include historical international dispersion of other ethno-national groups (e.g. African diaspora), and in more recent usage got even broader to include groups of migrants who maintain their ethnic or national identities—without necessarily including the historical dimension (e.g. international students and academic staffs from the Southern hemisphere in universities in the Northern hemisphere). Another example is that in Mercier (2016), which studies "migration experience" of political leaders across the world, yet included study abroad experience within the definition of "migration." This dissertation embraces this flexible use of relevant theoretical framing.

Bamberger (2022) argued that many studies on diaspora and higher education have been "framed around discourses of globalization, national development and competition," where a "global war for talent" is being waged all around as higher education is increasingly perceived as a crucial factor for a country's national development. Faist (2008) described several scenarios regarding the movement/migration of highly skilled individuals. There is a scenario where a temporary brain drain occurred where highly skilled migrants stayed away from their home country, but later contribute in some form to develop their home country's relevant sectors, initiating a "brain gain" which in turn helps foster national development. Another possibility is an absolute brain drain, where the highly skilled migrants simply vanished from their home country leaving a gap in crucial sectors there. The third scenario, called "brain chain," affects not only a pair of countries as sender and receiver, but a chain of countries in a (presumably vertical) international division of labor. Finally, there is the so-called "brain waste" which occurs when highly skilled migrants did return to their home country, but could not optimally utilize their skills either due to the lack of relevant jobs/positions or other factors.

Skeldon (2008) wrote that in literatures connecting migration and (economic) development, the burden of promoting development has increasingly been placed on the agency of the migrants, and urged for more attention on the structural aspects when studying the linkages between migration and development. The "structure" here should not be limited to domestic structures (e.g. labor market, economic structure) of the home/sending country, but also how each involved countries play their roles in an international/global structure. Taking

cues from the conceptualization by Cox (1987, p. 394), three level of analysis can be employed in studying the making of the world system: (human activity of) production, the state, and world order. He argued that the system employed in organizing one of which contribute in constructing the higher level, yet none of these three levels are singlehandedly causative toward the other. These levels are contextualized with the relation between human action and structure, of which Cox argued that "Structures are in one sense prior to individuals…People learn to behave within the framework of social and political structure before they can learn to criticize or oppose or try to change them" (p. 395). Shifting the focus of the first level from production to human (individual) agency in a broader sense, education in this context can be seen as a mean to construct structures, be it economic structure within which production takes place, or social and political structure under which people/citizen learn to behave (see also e.g. Green, 1997 pp. 1, 35).

However, specifically in the international context, education can also be seen as a mean to enhance the agency of individuals. By definition, international education—as has been loosely defined above—provides them access to multiple structures. In the cases where academic mobility and/or skilled migration is on the table, studies such as Artuc et al. (2015), Gaule (2014), and Sbalchiero and Tuzzi (2017) have shown that education—and related credentials—provides the involved individuals with the agency to move across structures, and under some circumstances, also to define or re-define their relations with each structures that they could enter or belong to. Even when an objective, desired effect, or simply the object of study is specified such as national development of the "home" country (however broad and loaded the concept actually is), the discussion would involve multiple actors with overlapping identities belonging to a complex web of structures.

A practical example on the interplay of individual migrants' agency and the structure(s) across two countries were given by Lee and Saxenian (2013), who argued that the retention/return rate of highly trained migrants may be connected to job market and potential career of both the home country and the country where these individuals had studied, but at the same time, migration of highly skilled individuals is not simply a matter of return and retention. They described a system of human resource distribution and circulation where the Korean government and independent US-educated Korean citizens

both facilitated the formation of ethnic networks in Silicon Valley which in turn help promoting the interest of both Korean new companies home and abroad and the innovation system back in Korea through "strategic coupling" of Silicon Valley Korean network and Korean local supplier network. As a sort of counter-example, Kuznetsov and Freinkman (2013) described how a more formalized Korean government-sponsored diaspora network did not fare as well, comparing it to a "living dead" venture project whose return "barely covers its cost" in the sense that the network was relatively active but not seen as providing much benefit. In this sense, they argued that the ideal form of diaspora networks useful for developing countries might be ones with institutional base but at the same time are not completely formalized, leaving rooms for creativity among members and preventing a political capture by vested interests.

Explained in this theoretical framework, the scholarship program which is the focus of this dissertation can be said to be an effort by a set of actors (the Indonesian government) to harness the perceived benefit of international education and academic mobility while presuming structural risks such as potential brain drain or a subservient position in a brain chain (cf. Faist, 2008). On the other hand, another set of actors (awardees of the scholarship) found themselves encouraged to temporarily cross the structures and engage themselves in learning activities—both in the specific sense academic endeavor and in a broader sense of gaining life experience—and with the credentials that they would earn, an access to move more freely than before across the structures. While there is a formal mechanism prepared by the Indonesian government to control (i.e., limit the mobility) of the scholarship awardees in form of the compulsory return policy, it is a relatively loose one and can be said to be dependent on another, less tangible factor: the intrinsic motivation of the awardees to contribute to their home country.

Kuznetsov (2013) argued that intrinsic motivation can serve to improve the engagement between migrant communities (or, a loosely defined diaspora) and their homeland, and in turn the potential for contribution. Yet, he added that "by definition intrinsic motivation comes from within" and "cannot be mandated or managed." This pessimistic view on the migrants' intrinsic motivation is definitely not shared by everyone. There is already some example in the literature on conscious efforts to utilize and/or nurture the intrinsic

motivation of migrants or members of a diaspora to contribute to their homeland. Such efforts are done not just by the state, but also by civil society and transnational actors (see e.g. Tan et al., 2021), as well as by fellow migrants/diaspora members of different generation (see e.g. Ankobrey et al., 2022).

That said, the literature on the efforts to utilize intrinsic motivation has mostly focused on the effort of bringing back talents, or addressing the issue of brain circulation. This dissertation would contribute by presenting an attempt by a government to engineer a class of highly skilled individuals motivated to contribute to the development of their home country, even after they get (or perhaps *specifically after* they get) equipped with the experience of, and future potential for, international mobility.

The last part of this literature review would shift the discussion to domestic factors in Indonesia relevant to the topic of the dissertation.

3. TFP, catching up, and the Indonesian Government's narrative on education and economic development

The founding rhetoric of LPDP and its scholarship program is to create "future leaders and encouraging innovation," based on the Master Plan for Acceleration and Expansion of Economic Development (Master Plan Percepatan dan Perluasan Pembangunan Ekonomi Indonesia, MP3EI) 2011-2025 (LPDP, 2013). The Master Plan itself is an economic development white paper published by the National Development Planning Agency (Badan Perencanaan Pembangunan Nasional; Bappenas) during President Susilo Bambang Yudhoyono's term, which put forward the need for Indonesia as a country to go beyond "business as usual" to accelerate an "economic transformation" in order to become a high-income country by the year 2025. Among its agenda, the white paper stressed the need for "public-private partnership" where the government goes hand in hand with the private sector in building the national economy, and included "Strengthening of national human resource and science and technology capabilities" as one of its three pillars (main agenda) alongside reinforcing national economic potential through the creation of "economic corridor" and improving national connectivity (Bappenas, 2014b). The master plan

explained that Indonesia ought to "optimize existing human resources with master and doctoral degrees, and aim to create 7,000 to 10,000 new science and engineering PhD by 2014." (Bappenas, 2014b) It is unclear whether the English term PhD in the otherwise Indonesian-language white paper was intentional to imply foreign graduates or was just an overlook by its drafters.[5]

The aforementioned master plan itself is part of an earlier long-term development plan white paper which covers the year 2005-2025, in which the Indonesian government considered "education" as a mean to develop its citizens, considered to be both "human capital" and "human resource" as well as ones "who would enjoy the fruit of development…" (Bappenas, 2007). On a more practical term, the government included variables like school participation rate are in the government's calculation of "total factor productivity" (TFP) which in turn becomes the basis of predicting economic growth of the country (see e.g. Bappenas, 2019) to outline the relation between education and (economic) development.

The TFP approach treats "the level of education" and/or "human capital" as a factor which contributes to the rate of economic growth through, for instance, the presumed capability of educated labor force in taking advantage of the development of technology in improving the overall productivity level (See e.g. Romer, 1990, Benhabib and Spiegel, 1994; for more recent studies see e.g. Barro and Lee, 2013 and Hanushek, 2013). The approach is a part of a larger tradition in economics which seeks to rationalize and theorize how economic growth is produced, and more specifically how knowledge and innovation contribute to such growth (see e.g. Fagerberg and Godinho, 2004; see also Kurz, 2012 for a historical overview of related theories).

On the other hand, the concept of human capital can be said to be the entry point for modern economics into national education planning, treating "education as an investment" (Schultz, 1960 p. 571 in Olssen, Codd, and O'Neill, 2004 p. 147) to improve a nation's overall capital by increasing its citizens' cognitive capacity, which would translate into better productivity and in turn more earning (ibid., p. 148). Phillips and Schweisfurth (2006 p. 70) elaborated that conventionally human capital theory considers education to be "a sound investment

[5] The Indonesian language term for doctoral degree holders is either "*doktor*", or *"Strata 3 (*S3)"

both for the individual and the nation," although as the return of investment for tertiary education is deemed to skew more toward benefitting individual students compared to public benefit reaped by the nation/society, governments might find more incentive to subsidize education at primary and secondary levels. A policy review paper co-authored by Indonesian Finance Minister claimed that "Policy making in Indonesia is heavily influenced" by human capital theory through the work of Gary Becker (Indrawati and Kuncoro, 2021).

This approach to education, which were explicit in recent agenda of Indonesian government's development planning, that is to bolster national competitiveness in order to catch up with high income economies and escape the so-called middle-income trap (see e.g. Bappenas, 2014a), connects it to the concept of "catching up." "Catch up" as a concept (spelling varies) has several related definitions related to efforts by, or the process of, (relatively) less economically/industrially-developed countries to "[narrow] the gap in productivity and income" (Fagerberg and Godinho, 2004) with the perceived top performing countries or just more economically developed countries in general. The concept is at times used loosely to reflect one, or a combination, of these definitions.

This dissertation considers the Indonesian government rhetoric on the need for economic growth enough to escape the so-called middle income trap mentioned above, as well as the need to be able to compete internationally (see e.g. Bappenas, 2007, 2014b), to be an example of catch up rhetoric by a government. Previous studies indicated that such "catch up" project can be undertaken by—similar to TFP jargons—improving the population's "social capability" to absorb technology (Abramovitz, 1986), which can be achieved through, among other means, subsidized learning and non-reliance on cheap labor in keeping the economy afloat (Amsden, 2001/2003, pp. 6-7), with the subsidized learning touted to provide a jumpstart to the industry (Amsden, 2001/2003, p. 6). In this perspective, international scholarships theoretically serve a double purpose of not only providing a (supposedly standardized) education, but also as a "conduit" of foreign knowledge and technology (Campbell and Neff, 2020).

This direct tie-up between educational policy and economic planning can be seen as an example of what Welch (2000) described as a tension "between democracy and technocracy."

Such tension has been seen across the globe especially in the so-called third-world countries where in the last two decades of the 20th century economists prevailed over educationists (Watson, 1996, p. 59 in Welch, 2000) in deciding the contents and provisions of education. The impacts varied from country to country, with budget-cut or relegation of education funding into lower priorities were observed, limiting access to basic education for poorer parts of the society. Content-wise, he also observed a tension between providing education for economic functionality and civil participation or democracy.

In the Indonesian context, as would be further elaborated in the next chapter, the tension would continue in a more complex way to the present-day, where preservation and expansion of access to basic education is actually set as the default setting within the national education system, and a technocratic aspiration facilitated the creation of a special funding mechanism for exceptional education-related policies specifically designed for supporting economic development policies. Adding to the complexity is the observation raised in this dissertation that its focus, the LPDP scholarship, contains elements of both economic functionality and the promotion of civil participation in national socio-economic development by broadening the base of a (loosely defined) technocratic class in the country.

As a final note, it is important to also mention that in the current literature, post-graduate degree holders are often not well-reflected in labor force statistics and—perhaps in effect—in aggregative studies related to human capital and in TFP estimation. Variables or categorizations in relevant studies tend to be capped at "tertiary education" or "university/college educated" (see e.g. Goldin and Katz, 2008, Jaume, 2021, Harris and Yan, 2019, Artuc et al., 2015, and Arif, 2022), although in some cases—depending on research design used—education beyond bachelor degree can contribute to variables like "years of schooling" without having its own specific variable (see e.g. Barro and Lee, 2013 and Hanushek, 2013). In the Indonesian context, a recent paper co-authored by the Finance Minister (Indrawati and Kuncoro, 2021) in its paragraph on LPDP stated that the endowment fund's scholarship program serves "to improve the quality of human capital at the tertiary level." This lack of ability to measure the impact of post-graduate degree holders vis-à-vis overall tertiary education-graduate members of the labor force or economic structure—and by extension in regard to economic growth and development—is not an

issue that can be solved with a single academic work, and would require continued endeavor by all stakeholders involved, in and outside the academia.

Chapter 3

LPDP as an endowment fund: Connecting education and economic objectives

Before moving on to discuss the LPDP international scholarship program, it is important to take a look at LPDP itself as a governmental endowment fund organization. By shedding a light into the factors leading to the founding of LPDP as a special funding mechanism set aside from the regular annual national budget, this chapter would contribute in answering the first-half of the sub-question "Why and how did the Indonesian government develop the LPDP scheme and its scholarship program?."

This chapter utilizes Indonesian legal and regulatory texts, historical statistics, and targeted interviews as its main source of information, contextualized with information from academic literature and secondary sources. This chapter shows how LPDP and its scholarship program reflect the trend of integration between higher education, research, and development policy. This chapter also shows how the budget politics in Indonesia led to the creation of LPDP as an alternative funding mechanism for certain education projects.

1. National education system and funding in Indonesia

As this chapter focuses on LPDP as an endowment fund meant to be a funding mechanism for the government's education program, it is just proper to start by reviewing the issue of education funding, especially that of higher education, and more specifically in Indonesia. Just like practically anywhere in the world, the public higher education system competes for public money with other levels of education managed by the government (see e.g. Altbach, Reisberg, and Rumbley, 2009, pp. 67, 75, Hirosato and Kitamura, 2009, Glover and Levacic, 2020, p. 16). In Indonesian case, the developmentalist New Order government(s) under Suharto, especially in the decades between 1970s and 1980s decided to focus first on expanding access for primary (and later also junior-secondary) education (Sato, 2019). More

recently, source of income for public universities especially at more prominent institutions have diversified, lessening but not nearly eliminating their reliance on resource from the government (Wicaksono and Friawan, 2011) and raised concerns over marketization and/or privatization of public universities (see e.g. Tilaar, 2003, p. 40, Susanti, 2010).

The current Indonesian higher education system itself is one where the majority of students study in private universities, but national/public universities continue to be "quality leaders" (Wicaksono and Friawan 2011, see also and Welch, 2011, 2016), a development that was also observed in several Latin American and East/Southeast Asian countries (Altbach, Reisberg, and Rumbley, 2009, p. 75). While globally speaking the system as a whole is seen to be peripheral (Welch, 2007), the government has been continuously trying to improve or at least standardize the quality of the institutions (see e.g. Hartono, 2017 and Wicaksono and Friawan, 2011). The said effort to develop domestic higher education system, especially in term of public universities, was partially supported by foreign assistance from donors such as the World Bank, Japan, the Netherlands, and some other Western countries, which contribute to facilitate some degree of autonomy of public universities (Bastiaens, 2007, p. 209-210).

Although throughout the implementation period of Long Term National Development Plan 2005-2025[6] the Indonesian government managed to extend access to primary education (covering primary and junior high school) nationwide, and recently the bulk of government's education budget still went for keeping public primary education (i.e., primary and junior high school; grade 1-9) free,[7] the tensions mentioned by Welch has not been entirely absent. Indonesian governments continually tried to find the right balance between developing the secondary education and higher education (Ali, 2009, pp. 127-128) and to optimize between academic and vocational education (p. 272) for the sake of "competitiveness" (see also Thee, 2006). While enrollment in higher education has increased significantly in the first decade of 21st century, there is an indication that it consistently correlated positively with the level

[6] See for instance opening and rhetoric sections of Medium Term national Development Plan(s) of 2004-2009: Presidential Regulation Perpres No. 7 Tahun 2005 on the Medium Term National Development Plan 2004-2009, and 2020-2025: Bappenas (2019)

[7] In 2011-2018, higher education got only around twelve percent of education budget; data obtained through public information request to Indonesian Ministry of Finance.

of family income (Bappenas, 2014a). Students bear a significant portion of higher education cost even in public universities (see e.g. Wicaksono and Friawan, 2011) and while the tuition fee at public universities is generally cheaper, some "high-demand courses" could cost more than less-popular courses at private universities (Welch, 2007, p. 680 in Welch, 2011).

The next review needed is on the term "endowment fund" used throughout this chapter (and the rest of this dissertation), based on LPDP's own English-translation of its name.[8] While endowment fund can refer to any fund set aside for investing and whose profit is then used for certain purposes, the fact that LPDP is thoroughly owned by the Indonesian government makes it by definition a "sovereign wealth fund" (often abbreviated as SWF, see e.g. Alhashel, 2015), and more specifically a subset of SWFs called "development fund" (Sharma, 2017, see also Affuso et al., 2020). SWFs come in various size, but more often than not started with either "resource rent," i.e. income generated from the production of natural resources, or as an effort to fulfil future commitments which carry some form of income or deposit in the present like pension funds (Carpantier and Vermeulen, 2018). Before LPDP, Indonesia already has at least three SWFs in form of pension fund, Hajj (Islamic pilgrimage) fund from the government-managed pilgrimage's advance payment/deposit (Koran Tempo, 2005, Tempo, 2010), and "geothermal endowment fund" which came from both World Bank soft loan and capital placement from the Indonesian government meant to explore and develop geothermal energy sources in the country (Tempo, 2018), all of them satisfy the characteristics mentioned earlier.

With the background image established, the rest of this chapter would discuss the recent drive in the Indonesia government to better integrate national policies on education, science and technology, and economic/industrial development, together with the post-1998 political landscape contributed to the creation of LPDP as an endowment fund, as well as its scholarship program.

[8] Used especially in its annual reports, see e.g. LPDP (2014, 2015). It is not a direct, word by word translation of its name in the Indonesian language. The Lembaga Pengelola Dana Pendidikan can be translated as "Education Fund Management Agency," although before it was finalized as an organization, it was sometimes referred to as "dana abadi pendidikan" which can indeed be translated as "endowment fund for education."

2. Indonesian government's drive for a stronger integration between higher education, science and technology sector, and economic/industrial development

In a sense, LPDP itself can be seen as a perfect starting point to talk about the recent drive by the Indonesian government to better connect education, science and technology, and economic development policy. In its first publicly released annual report, the endowment fund claimed to "[maintain] its course and strategy according to the 2011-2025 Masterplan of Acceleration and Development of the Indonesian Economy (MP3EI) to ensure high quality human resources…and to encourage innovation for a prosperous, democratic, and just Indonesia" (LPDP, 2013). The statement referred to a white paper by Bappenas whose main rhetoric was, in turn, to break free from "business as usual" and to nurture a system of public-private partnership to help Indonesia accelerate its economic growth in order to become a high income developed country (Bappenas, 2014b pp. 20-21). Seeing the aforementioned first annual report as a sort of introductory letter to the public, LPDP put itself responsible in supporting the "education" policy not only for the sake of education itself, but rather as a component of national economic development policy.

The integration between education and economic development of course did not start with the creation of the endowment fund, and indeed, national prosperity and/or development has always featured in higher education related rhetoric (and to some extent, national education system in general). However, it is interesting to see how after the fall of New Order regime, the mechanism of *how* education can help the country to develop *economically* started to be explicitly mentioned. The 2002 law on national system of research, development, and application of knowledge, science, and technology for instance mentioned that a competitive edge in science and technology serves to enable market penetration against other countries, and that "other countries lagging behind in term of science and technology" would have a difficulty penetrating the country's market.[9] This conception would later be picked up by the latest iteration of higher education law passed in 2012, where higher education was positioned as a mean to advance national science and technology, "to improve national competitiveness in facing all aspects of globalization."[10]

[9] General explanation of UU No. 18 Tahun 2002
[10] Consideration part of UU No. 12 Tahun 2012

More recently, the government also made it explicit that science and technology are "capital as well as short, medium, and long-term investment for the national development," [11] signaling a willingness to put more resource on this sector.

Source	Year	Purpose(s) of higher education
Article 7.4, UU 1950 No. 4 (of the Previous Indonesian State)	1950 (reaffirmed in 1954)	Train persons capable of: • Providing leadership in the society • Preserving the advancement of knowledge & social life
General Explanation, UU No. 22 Tahun 1961	1961	• Prepare expert cadres to execute the planned universal development
Article 16.1, UU No. 2 Tahun 1989	1989	• Prepare members of society able to apply/develop/create knowledge, technology, and/or arts
Consideration part, UU No. 12 Tahun 2012	2012	• Develop knowledge & technology with humanistic values, a continuous cultural development and empowerment of the nation • Produce intellectuals/scientists/professionals to improve national competitiveness vis-à-vis globalization

Table 1 Function/purpose of higher education according to national education system/higher education system laws across the years. Processed by author.

On the other hand, the drive to integrate higher education, science and technology, and industrial/economic development cannot be completely separated from the rest of the national education system—i.e., lower levels of education. On this front, the government is faced with both the problem of nationwide less-than-satisfactory learning outcomes as reflected in the OECD-affiliated PISA test result (which received some degree of public coverage, see e.g. CNN Indonesia, 2019b, Kompas.com, 2019), and the unequal distribution of quality across the country as reflected in recent results of high school graduation exams. With entry to most public universities (in addition to many of the private ones) is organized competitively through entrance examination and similar systems, it is in the best interest of the system to have as large pool of prospective high school graduates as possible across the country.

[11] Article 6.1 of UU No. 11 Tahun 2019

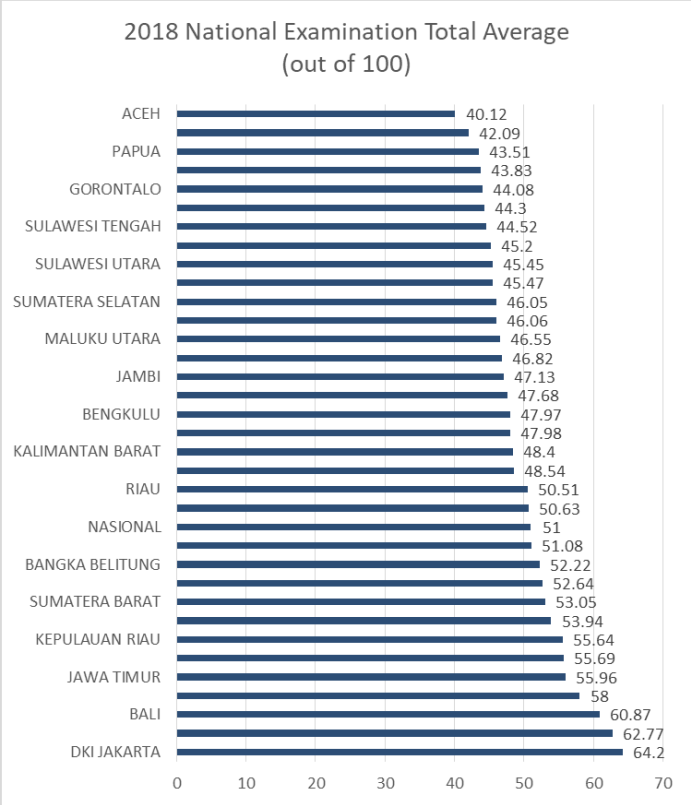

Figure 4 2018 High School national graduation exam average for each province. Source: Ministry of Education and Culture, (n.d.)

What it means—as already mentioned in the previous section—is that despite the rhetorical willingness to invest more on higher and advanced education, the need to improve lower levels of education limits the resources available for the sector. The next section would further explore the situation pertaining budget allocation among levels of education, contextualized further with central-regional government education budget division in the era of regional autonomy, as well as the post-1998 Reformasi political landscape.

3. Higher education as an outlier of the national education system

Since the first comprehensive law on the national education system passed shortly after the country's independence, the Indonesian government has attempted to include and regulate

the higher education. Education as a concept has a prominent position in the founding mythos of independent (i.e. post-colonial) Indonesia, and many of the founding fathers of the country had enjoyed tertiary or advanced education during the colonial period, whether in the colony or abroad. Hence, it is not strange that since very shortly after the declaration of independence the government emphasized the need to both provide formal education opportunities to the citizens, and to shape the education system "so that education and schooling can be implemented in a manner suitable to the national dream of the Indonesian people."[12]

This rhetoric of political significance of education also holds true for the higher education. In 1950, a few months before the first national education system law was passed by the emergency government in Yogyakarta, the still Jakarta-based then-federal government of Indonesia passed an emergency bill dictating the takeover of a higher education institution affiliated with the colonial administration, Universiteit van Indonesie[13] which would then develop into several public universities in the country. The takeover was carried out, "even in violation of existing regulations if needs be…so that the Higher Education Institution can fulfil the national currents of the Republic of Indonesia."[14] A decade later in 1961, the first comprehensive law on the higher education system mentioned that aside of its role as a scientific institution,[15] a higher education institution is also "a tool of the revolution" and ought to be "based on the Pancasila and the Political Manifesto of the Republic of Indonesia."[16]

These rhetoric of political significance notwithstanding, and despite the establishment of more than 20 new public HEIs in the 1960s "[bringing] higher education to a mass scale" (Wicaksono and Friawan, 2011), for the most part of its history higher education in Indonesia remained an outlier of the national education system. This section would discuss this line of thinking citing three factors, the very low enrollment rate before the 1990s, its

[12] Consideration part of the Undang-Undang (UU) 1950 No. 4 of the Previous Indonesian State.
[13] UU Darurat No. 7 Tahun 1950 of the Federal Republic of Indonesia.
[14] Article 1 of the UU Darurat No. 7 Tahun 1950 of the Federal Republic of Indonesia
[15] Article 1 of the UU No. 22 Tahun 1961
[16] General explanation of the UU No. 22 Tahun 1961

relatively low budget priority compared to the whole national education system, and the notable reliance of said budget on non-regular or external sources.

Very low enrollment rate before the 1990s

According to the 1950 national education system law, higher education was initially meant to train the students into "a person capable of providing leadership in the society as well as preserving the advancement of knowledge and the advancement of social life."[17] While there is no record available for the 1950s when the law was passed, throughout the 1970s the gross enrollment rate fluctuated below 3% (World Bank, 2020). So scarce were the holders of higher education degree, that in 1961—the same year with the first law on higher education institution—the government passed a law on compulsory employment for bachelor degree holders, meant to reserve the most educated individuals in the country for government services for a few years after their graduation.[18] The law was carried over at least into the first few years of the New Order period before silently disappearing into oblivion—or perhaps just into the chasm of not-yet-digitized Indonesian archive—with almost no mention of it beyond late 1960s.[19] Interestingly, the law itself was not officially repealed until the passing of the 2003 labor law.[20]

[17] Article 7.4 of the UU 1950 No. 4 of the Previous Indonesian State.
[18] UU No. 8 Tahun 1961
[19] A mention of the compulsory employment was found for instance in a 1968 note by the Supreme Court, requesting a dispatch of Bachelors of Law to be employed at the institution (Mahkamah Agung, 1999 pp. 52-53)
[20] Article 192 of UU No. 13 Tahun 2003

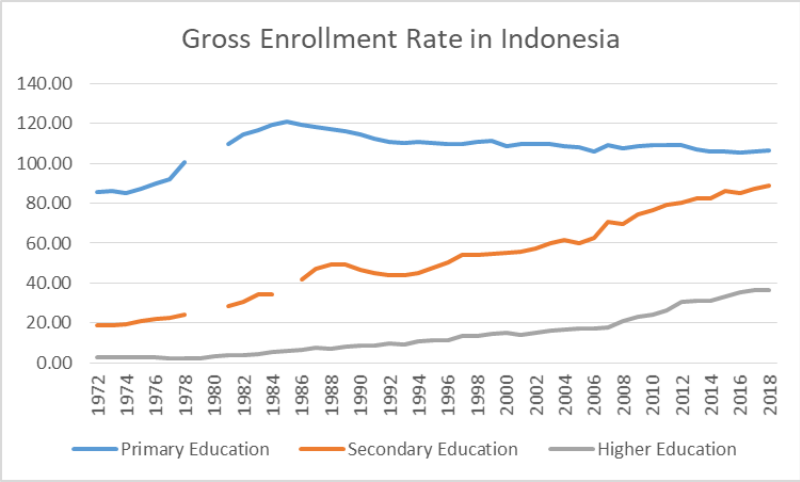

Figure 5 Gross enrollment rate of formal education in Indonesia 1972-2018. Source: World Bank World Development Indicator 2020.

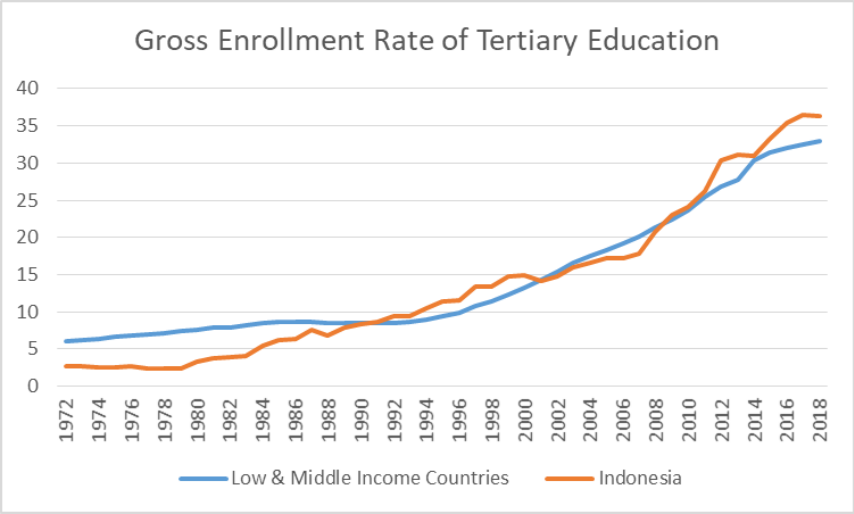

Figure 6 Gross enrollment rate of tertiary education compared to low and middle income countries average. Source: World Bank World Development Indicator 2020.

With a slow but steady increase since 1980, the enrollment rate hit 10% in 1994 and maintained the growth rate until 2008 when the growth accelerated so that the enrollment rate went from 20.7% in that year to 35.4% in 2016, since whence the growth has seemed to slow again. By the 2010s, this growth in the enrollment for tertiary education is roughly similar with the average of low and middle income countries (World Bank, 2020). It is

notable, though, that until the 1970s Indonesia's enrollment rate was consistently below the low and middle income countries average, and that it only managed to catch up in the early 1990s.

Even when the overall enrollment rate has increased, economic capability still determined the access to higher education. By 2005, the enrollment of the poorest 40% percent among Indonesian citizens still hovered well below 5%, compared to enrollment rate of the richest 20% which has surpassed 30% (Wicaksono and Friawan, 2011). By 2012, enrollment rate of the poorest 20% stayed well below 10% while for the richest 20% the rate was already over 50% (Bappenas, 2014a; note that this source reported around 10% higher rate for the richest 20% in 2005).

Low budget-priority

The low enrollment rate and the gap among income groups as discussed above connects directly to structure of higher education provision in the country, and in turn to the government's budgetary commitment. Although the history of higher education in independent Indonesia started with the nationalization of colonial-era institutions, arguably leading to the current system where quality-wise public institutions still take the center stage, by the early 2000s around two-third of tertiary education students belonged to private institutions, and throughout that decade the proportion of students in the private institutions were getting closer to 70% (Susanti, 2011). On the other hand, even in public institutions higher education in general is never free of charge.

Despite its rhetoric on the access to education, the Indonesian government across regimes and across periods has always considered that the cost of education should be shouldered not just by the country but also by the students or their family. The first national education system law of 1950 made it clear that the government would only bear the cost of primary education, and for secondary and higher education even in public institutions the students would have to pay their tuition cost.[21] With the expansion of education access throughout

[21] Article 23-24 of UU 1950 No. 4 of the Previous Indonesian State.

the New Order period and the enactment of nine years compulsory education, the national education system law of 1989 also extended the government's commitment to provide free schooling accordingly into junior high school level or nine years of formal education from the previous six.[22] This commitment of providing nine years of formal education without charge is kept in the newest iteration of national education law passed in 2003.[23]

Year	1950	1989	2003
Law	UU 1950 No. 4 (Previous Indonesian State)	UU No. 2 Tahun 1989	UU No. 20 Tahun 2003
Free tuition commitment	Primary schools (sekolah rendah) and special schools for the handicapped (sekolah luar biasa) would be free of both tuition fee and "fees for educational tools" (Article 22) All public schools except for primary schools and special schools would take tuition fees according to financial capabilities of the parents (or the students themselves in case of adult students) (Article 23)	Each students must contribute in bearing the cost to organize education/schooling (Article 25.1),except for public schools within the range of compulsory education (6 years of primary schooling and 3 years of intermediate schooling) whose cost would be borne solely by the government (Explanation of Article 25.1).	The central and regional governments must guarantee the availability of fund to organize education for all citizens aged 7-15 years old (Article 11.2). The central and regional governments are responsible for providing education funding as stated in Article 31.4 of the UUD 1945 (Article 46.2).

Table 2 Government's commitment to provide education free of tuition fee across Indonesian education system laws. Compiled by author.

That is not to say that the government has not been funding higher education sector. Rather, the government's commitment to guarantee access for primary (and later junior secondary) education necessitates that a significant portion of government's budget for education earmarked for paying the teachers and running the schools across the country's wide territory. This, coupled with the tendency that higher education costs more per-capita than the lower levels (see e.g. Lu et al., 2007, Welch, 2011; see also Jacob, Neubauer, and Ye, 2018) makes it hard to allocate more funding for higher education. The numbers for recent years showed that the funding proportion for higher education has hovered at slightly over 10%

[22] Article 25.1 of UU No. 2 Tahun 1989.
[23] Article 11.2 of UU No. 20 Tahun 2003.

of the central government's education budget, and has not reached the peak allocation (18.1%) reported for 1989.

Year	1975	1985	1989	1991	2004	2011	2012	2013	2014	2015	2016	2017	2018
Primary	38.2	70.0	56.7	64.0	51.8	72.6	75.0	76.6	77.5	76.2	73.1	74.7	70.5
Secondary	14.3	12.9	17.1	13.9	10.6								
Tertiary	7.5	11.1	18.1	12.5	6.9	13.8	13.0	12.1	11.6	12.3	12.6	11.9	12.4

Table 3 Budget allocation for each level of education--percent of education budget; the sum for each year is not 100% because some budgetary items e.g. operational cost of relevant ministries/agencies are not counted. The 2003 national education system law defined primary education as a total of 9 year (6 yr. in primary school and 3 yr. in junior high school). Includes central government spending earmarked for regional transfer, excludes spending by regional governments. Sources:
1975: Estimated from Cowen and McLean (eds., 1984, p. 186-187) and National Budgetary Plan of 1975/1976;
1985-1991: World Bank (1998);
2004: Wicaksono and Friawan (2011);
2011-2018 data from public information request to the Ministry of Finance; processed by author.

The discussion of higher education funding in Indonesia does not just stop there. Up until the early 1990s, most public universities were reliant on funding from the central government, and —although the method of accounting used by public institutions and other factors make accurate estimation difficult (see e.g. Bastiaens, 2007 p. 7)—a significant portion of the funding came from several donor countries and organizations through international assistance in form of both loans and grants (Bastiaens, 2007, pp. 103-104). The next section would showcase how Indonesia has relied on non-regular sources in funding its higher education system and advanced trainings.

Reliance on external funding

During the New Order period, a significant part of government funding for the higher education sector came from "developmental budget" (Wicaksono and Friawan, 2011, see also Bastiaens, 2007 p. 122). This budget category mostly denoted one-off projects to develop certain sectors in the Indonesian economy, industry, and/or society—hence the

name—and were more reliant on foreign assistance in form of loans and grants (see e.g. Liddle, 1983, see also Murti, 2020) compared to the other category, "routine/current" budget which was mostly self-funded from taxes and other government incomes.

Budget category	Percentage within overall government expenditure	Percentage allocated to education	Percentage allocated to each level of national education		
			Primary	Secondary	Tertiary
Routine budget	58.27	11 (core education expenditure only); <20 (overall education and training)	69	21	10
Development budget	41.73	<5	5	55	40

Table 4 Allocation of government expenditures between three education levels in 1975. Source: data taken from Cowen and McLean (eds., 1984, p. 186-187) and Indonesian Government Budgetary Plan 1975/1976; processed by author.

Throughout this period, foreign assistance contributed in shaping the relation between public universities and the government. Foreign assistance played a notable role in developing capacities and environment suitable for "more decentralized decision making" and therefore stronger autonomy of public universities vis-à-vis the central government (Bastiaens, 2007, pp. 209-210) in addition to improving the quality for example through promoting better education and qualification for the faculties (p. 203).

Outside developing public universities, foreign assistance and other non-regular source of funding also played a major role in providing post-graduate degrees and other forms of advanced trainings of Indonesians abroad. During Sukarno's presidency, Japan started providing training for Indonesians just a few years before the two countries normalized their diplomatic relation (JICA, 2018 p. 8) and the United States through the Ford Foundation provided post-graduate scholarships for a batch of Indonesian students, many of whom economists who would become the so-called "Berkeley Mafia" or the technocrats in charge of economic policies and development planning during the New Order period (Sato, 2019, see also Bresnan, 2006). Domestic sources from this period include state-owned enterprises providing scholarships to study in Europe which helped in producing another set of New

Order bureaucrats trained in science and engineering including former Minister of Education Wardiman Djononegoro (see e.g. Djojonegoro, 2016, pp. 45-46; see also Sato, 2019).

Entering the New Order period, the World Bank sponsored several batches of international scholarship for both undergraduate and post-graduate students sent by the Indonesian government (Mohsin, 2018, Djojonegoro, 2016 p. 192). Although reliable sources for the exact numbers are not available, data on number of Indonesians studying abroad in 1985 (Gonzalez and Prijono, 1988) seems to support the estimation that up until mid-1990s foreign assistance helped providing most of post-graduate degree holders working for the Indonesian government (World Bank, 1994 pp. 4, 31) in a context where about 90% of such human resource were concentrated in the public sector (World Bank, 1994, p. 3).

Foreign assistance continued to play its role in Indonesian higher education and advanced training after the Reformasi in 1998. Aside of a more diverse range of scholarships available for Indonesian students in general, certain government projects like campus or dormitory constructions of public universities also utilized foreign loans and grants. Outside the public higher education sector, there are also post-graduate education scholarships for government workers, a notable example being the Center for Planners' Education and Training (CPDET) under the National Development Planning Agency (Bappenas) which is responsible for providing advanced trainings for civil servants. Murti (2020) showed how for a time CPDET had nearly 90% of its scholarship budget coming from foreign loans and grants, with the officials at Bappenas seeing such sources of funding to be less prone to mid-year budget-slash by the central government.

With the picture of the development of higher education sector in Indonesia as well as funding rhetoric and situation introduced above, this chapter would proceed to explore recent development in government rhetoric and how such development ought to be situated within the post-Reformasi political landscape of the country. Starting with the founding rhetoric of LPDP, the next section would trace the stronger integration between government's rhetoric on higher education and the national education system in general with the country's acquisition of science and technological capabilities, and in turn with economic and industrial development.

Post-reformasi budget bureaucracy, regional autonomy

Indonesian political landscape after the fall of New Order regime in 1998 is marked with a diffusion of power among a broader set of stakeholders and interests—although the degree of government intervention in social and economic issues has been observed to increase again a decade afterward around the year 2009 (see e.g. Sato, 2019, Shiraishi, 2014, Kim, 2020), and a move toward political decentralization often dubbed (at least in English-language literature) as "big bang" regional autonomy (see e.g. Hofman and Kaiser, 2002, Alm, Martinez-Vazquez, and Indrawati eds., 2004)[24] for the radical change it brought to the governmental system. The latter introduced among others a tension between the central and regional government (Ostwald, Tajima, and Samphantharak, 2016), a "new intergovernmental fiscal system" between the central and regional governments (Hofman and Kaiser, 2002).

In the public education sector, the drastic political decentralization brought about a shift of funding responsibility (see e.g. Putera and Valentina, 2010) along with some degree of management of primary and secondary education to the local governments (see e.g. Amirrachman, Syafi'i, and Welch, 2009, Rosser and Fahmi, 2016). It is worth mentioning that even before the partial decentralization of education budget was formalized, a portion of budget for primary and secondary education already came from regional governments' pocket. Although the comprehensive record of budget sharing and allocation before the regional autonomy period is scarce, the World Bank (1998) estimated that prior to 1998, the central government constantly provided around 70% of the whole national education budget while the provincial and local/municipal governments provided another 30%. Around the transition period of 2001-2002, a sample of municipal governments' budget showed that wages and salaries distributed through local Education Bureaus made up between 19-60 percent of each municipalities' routine expenses (Toyamah and Usman, 2004). The aforementioned partial transfer of funding responsibility was mandated through the 2003 national education system law, which stated that the "central and regional governments must guarantee the availability of fund to organize education for all citizens aged 7-15 years

[24] The latter is a volume co-written by domestic and foreign analysts, including some figures in (or who would enter) the government service.

old"[25] and the 2004 law on the regional governments,[26] and is executed by earmarking part of education budget of the central government for regional transfer.

Furthermore, the 2003 national education system law also dictated that both central and regional governments "are responsible for providing education funding as stated in Article 31.4 of the UUD 1945 (the constitution)," [27] which, following the 4th amendment of the constitution passed in 2002, obliged the government to set aside 20% of the national budget for education-related spending "*outside educators' salaries."*[28] The clause on committing 20% national budget for education spending outside educators' (i.e. teachers and lecturers) salaries would soon provide a signal of dissent in regard of the country's budgetary commitment for education. In 2007, a teacher-cum-school-supervisor and a university lecturer, both based in South Sulawesi Province, submitted an application to the Constitutional Court for a judicial review against the aforementioned clause, claiming that excluding educators' salaries from the 20% government prevented a prospected rise of incentives mandated in a separate government regulation from being realized, hence harming "their constitutional rights as educators."[29] The Constitutional Court decided to grant the plaintiff's request, through a 5:3 split decision, to invalidate the clause "outside educators' salaries" from the 2003 national education system law, making such salaries part of the government's 20% budgetary commitment.[30] One of the judges in his dissenting opinion commented that the plaintiffs' request amounted to a "constitutional 'trickery'" because at the moment government spending on education would have hovered around 18-19% (hence coming pretty close to the mandated commitment) if the salaries of teachers with civil servant status were included.[31] It is quite obvious that a crucial consequence of the verdict is that the government *is no longer obliged to* spend *more than* 20% of the national

[25] Article 11.2 of UU No. 20 Tahun 2003.
[26] Article 13.1.f and 14.1.f of the UU No. 32 Tahun 2004.
[27] Article 46.2 of UU No. 20 Tahun 2003.
[28] Original version of Article 49.1 of UU No. 20 Tahun 2003.
[29] Constitutional Court Verdict No. 24/PUU/2007 on the request for a judicial review against UU No. 20 Tahun 2003 by plaintiffs Rahmatiah Abbas and Badryah Rifai.
[30] Ibid.
[31] Dissenting opinion by constitutional judge H. Abdul Mukhtie Fadjar, Constitutional Court Verdict No. 24/PUU/2007.

budget for education spending, a clear boon for every other sectors competing for the limited resources.

If one is to believe that the judicial review request was politically motivated,[32] it could then, especially following the verdict to amend the national education law, be seen as a signal showing the unwillingness of some stakeholders to increase the government's commitment for education budget. Another take on the judicial review is that it reflects the lack of fiscal capabilities on the regional governments' side to fulfil their part of the budgetary commitment (or the lack of confidence by involved parties over the matter).[33] Anyhow, it serves to illustrate an obstacle that hinders more allocation for the (public) higher education sector which remains the domain of the central government.

Year	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**
Central	71.3	70.4	69.2	71.7	70.1	71.7	71.7	73.9	70.0	70.1	70.2
Regional	28.7	29.6	30.8	28.3	29.9	28.3	28.3	26.1	30.0	29.9	29.8

Table 5 Provision of funding for the national education system by the central and regional governments prior to 1998. Source: World Bank (1998); procesed by author.

Year	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Central gov't direct spending	39.1	38	43.5	42.9	39.5	37.7	36.5	34.2	37.7
Regional transfer	60.9	62	56.5	56.7	59.6	60.0	62.0	63.6	62.3

Table 6 Breakdown of the central government's education budget showing the percentage of spending managed directly by the central government and the central government budget earmarked for regional transfer. Source: 2007-2012: Biro Analisa APBN (2012); 2013-2015: Public information request to the Ministry of Finance; processed by author.

[32] On which this dissertation refrains from taking a definitive stance; an anonymous expert staff at the Ministry of Finance interviewed for this research also supported the view that this judicial review was not (and should not be seen as) politically motivated.

[33] Interview with Hamid Muhammad, Ph.D, former Director General of Primary and Secondary Education at the Ministry of Education and Culture.

The increased complexity of political decision-making after the fall of New Order regime, even when the central government and its technocrats started to exert more control in pursuit of economic growth, is aptly summarized in an anecdote by former Minister of Finance and economist Chatib Basri before his appointment as minister: "Pak Widjojo (Nitisastro; a top technocrat of New Order period, former Coordinating Minister of Economy and former chief of Bappenas) never understand why our policy making is so slow. He said, at his days, what he should do was only to meet the cabinet secretary to secure the approval of [then-president Suharto]" (Sato, 2019).[34] The regional autonomy added an extra layer of complexity for education budget. Allegedly, the non-optimal absorption of educational budget, along with the budgetary regulation dictating that government expenses, in principle, must be utilized within a single fiscal year were among what motivated Sri Mulyani Indrawati to initiate the founding of LPDP as an endowment fund.[35] Her more recent complain, in 2019, of the quality of schooling within the national education system (see e.g. CNN Indonesia, 2019b, Kompas.com, 2019) means that the concern was still going on.

4. Theoretical implications

With its position within Indonesian's history of higher and advanced education policies established in the previous sections, the remainder of this chapter would explore the theoretical implications of LPDP as an endowment fund. This section would especially highlight two aspects, first of which is LPDP as a developmental state-like policy product, and second its role in potentially enabling a more independent advanced education programs for Indonesia.

As suggested early in the chapter, LPDP was envisioned as a tool of budget exceptionalism, that is, to provide a more flexible funding mechanism for education policies, less restricted by the rules concerning government budget. With its operational budget coming from self-

[34] As a caveat, World Bank (1998) noted that education budget planning, management, and execution up to 1998 was both "rigid" and "fragmented," involving bureaucracies in several government bodies at the central and provincial levels.

[35] Interview with an anonymous expert staff at the Ministry of Finance and Hamid Muhammad, Ph.D from the Ministry of Education and Culture.

generated sources instead of annual allocation from the national budget, it is practically a mechanism to bypass parliamentary check required for normal government spending. The result is, at the moment, a source of funding more resistant to budget slash and other political contingencies. At the same time, this setting up of special funding mechanism could also alleviate potential conflicts involving other levels in the national education system which still requires a constant (or improved) support from the central government (see e.g. Indrawati and Kuncoro, 2021).

Considering its role in furthering the connection between education and economic growth and development, LPDP can in turn be seen as a product of "democratic developmental state" (see Sato, 2019). While it bypasses direct checks by the parliament, its policy-directing Board of Trustees is still shared among several ministries, hence involving a diverse set of career bureaucrats and government ministries who could be appointed from among members of political parties or non-partisan professionals. In short, it can be seen within the tendency within the Indonesian government to return into "politics of economic growth" involving technocrats of both old and new generations, but within a new, more complex political landscape (Shiraishi, 2014). It is worth noting that outside the specific context of education policy, other developments like the reduction of the parliament's control over planned budget[36] and a new direction on the execution of government budget with more flexible language[37] have been happening as well.

A note of caution ought to be provided here is that the government and involved stakeholders need to be aware of limitations and moral hazard associated with the use of irregular source of budget. Unlike other endowment/sovereign wealth funds of the Indonesian government which was initiated to better utilize either extant or potential pool of financial resources like the hajj (Islamic pilgrimage, which in Indonesia and many other

[36] Initially, according to the 2003 law on state finance (UU No. 17 Tahun 2003), approval of the parliament for government budget of a fiscal year must be sought down to the "details including organizational units, functions, programs, activities, and types of spending" (Article 15.5). Following a lawsuit to request a judicial review, the Constitutional Court agreed to invalidate the clauses "activities, and types of spending" from the aforementioned article (Constitutional Court Verdict No. 35/PUU-XI/2013).

[37] Governmental Regulations PP No. 45 Tahun 2013 and PP No. 50 Tahun 2018; the latter explicitly mentioned in its general explanation the need of "speeding up the execution of government budget to support a sustainable national development."

Muslim-majority countries is partly managed by the government) or the pension fund, LPDP instead started with the objective of providing alternative funding source for education programs. It might be important to carefully consider what kind of programs should be considered exceptionally important to be funded through this exceptional mechanism.

The next aspect to be discussed here is the role of LPDP to enable a more independent advanced education policies for the Indonesian government. "Independent" in this context refers to the capability to, for example, enact and maintain high budget one-off policies without depending as much on foreign assistance which may have strings attached. The first aspect of policy independence ought to be discussed here concerns the degree of control that the government holds in regard to the execution, maintenance, and termination of relevant policies (see e.g. Cusworth and Franks, 1993b). The creation of a special budget mechanism to support self-funded programs enables the stakeholders to be less bound to the normally existing norms and regulations, including time dimension (e.g. fiscal year, project period) concerning government policies. Especially in the case of LPDP, this independence works at least in two ways, first, as mentioned above to enable (or at least make easier) government projects across fiscal years, and second to enable programs or projects independent from the timeframe of (or set-up by) external parties, as is common for example of projects funded by (foreign) development assistance.

Another dimension of policy independence concerns how projects supported by foreign assistance could have "strings attached," a clear illustration of which, in the context of higher and advanced education, as described in Bastiaens (2007, p. 5), is when the Indonesian government near the end of New Order period unilaterally decided to stop foreign assistance from the Dutch government due to the donor-side demands concerning human rights reform in the country. More specifically on LPDP, its scholarship program has explicitly involved patriotism and ideological conformity in its selection process (see e.g. Ernis, 2019), similar to government scholarship programs in some other countries (see e.g. Matthew, 2007, Perna et al., 2015; cf. Moss, 2016 for a case where government scholarship became a tool of control and repression). Such examples can be seen as an extension of the perceived function of universities, as the higher-end of national education system capable of producing new generations of elites, as a venue to socialize national ideology (Castells, 1993 and Welch,

2011—the latter put forward Indonesian universities socializing the national ideology Pancasila as an example for the case).

While Castells (1993) suggested that the effort to preserve national ideology might hamper academic freedom and thus full potential of universities, it might also be the case that ideology plays a practical role in alleviating perceived risks such as brain drain given the international mobility associated of individuals with advanced education or training (see e.g. Blake and Brock, 2015 pp. 5-6). More research is needed in this area, although at the moment there is evidence that self-perceived lack of sense of belonging or patriotism might hamper or reduce the motivation of internationally trained individuals from a developing country to contribute to their home country (Oldac, 2022).

5. Conclusion

This chapter has demonstrated that LPDP and its scholarship program reflect the increasing integration of Indonesian government policies in education and research, and between "science and technological capabilities" and economic/industrial development, the rhetoric of which started appearing in the early 2000s but can be traced further to the 1980s during the New Order Era. This trend provided an incentive for the government to put on more resources on higher education, which historically has been an outlier within the national education system, and its funding—aside of being comparatively lower than primary education—has been reliant on non-regular sources. However, such reallocation of resource could not be carried easily in the new post-1998 political landscape. Relative democratization marked with a more complex distribution of power, as well as a much stronger regional autonomy made it harder for the government to radically alter budget distribution including in the education sector.

In this context, the LPDP as an endowment fund came about as a mechanism to allow a smaller number of stakeholders an access to "education budget" that is separate from the regular budgetary mechanism. In a sense, this can be seen as a continuation of the government's reliance on non-regular sources to help fund the higher education sector. More specifically, the LPDP can be understood as the Indonesian government exercising a

developmental-state-like exceptionalism within the relatively more democratic socio-political landscape of the country (see Sato, 2019), although whether this ought to count as a form of "authoritarian innovation" signaling the weakening of democracy as an institution in the country (Mietzner, 2020a) is outside the scope of this dissertation. The notable lack of public opposition to the endowment fund and its programs outside some warnings in its early years (see e.g. Tempo, 2012) could signal the willingness on the part of citizens and stakeholders to accept some degree of less-democratic policies aimed at boosting the chance for the country to grow and develop economically. Results of this policy including its contribution to Indonesia's economic development program in the long run, as well as how this type of endowment fund fares as a funding mechanism for education policies would warrant a separate study.

The next chapter would further discuss the early development of LPDP, as can be seen through the changes in the organization's scope of responsibility as well as the structure of its policy-directing board, throughout which the scholarship remained as its flagship program. The relation between LPDP scholarship and technocracy in Indonesia would be picked up again in chapter 5.

Chapter 4

Developing people to develop the economy: LPDP and its scholarship program

This chapter would discuss the early development of LPDP as an endowment fund organization, focusing on how in its first decade, over several changes in mandates and management, there has been a consistent tie-up between education and economic development rhetoric, and how the scholarships remained as its flagship program. The second-half of this chapter would then re-introduce in more details the aforementioned scholarship program, before tying up with a discussion to demonstrate how the scholarship reflected the integration between education and economic development rhetoric in the Indonesian government. As its materials, this chapter mainly uses legal and regulatory texts, government reports, and statistics, which are contextualized with targeted interview and information from secondary sources.

1. Early development of LPDP: Its inception and redefinition of purpose

The formal inception of LPDP can be traced back to the Minister of Finance Decree 238/PMK.05/2010, which outlined the future form of an endowment fund organization as an "*intergenerational responsibility*" (*sic*; original in English) to "ensure the continuity of education programs." The "intergenerational" aspect of LPDP in a sense sets it apart from the conventional understanding of government projects, especially in the context of developing countries, which can be defined as an "investment of capital in a time-bond intervention to create productive assets" (Cusworth and Franks, 1993a). The aforementioned decree outlined the endowment fund's legal personality, tasks and capabilities, and that the Government Investment Unit (Pusat Inverstasi Pemerintah—PIP) was to manage the endowment fund pending the creation of such managing organization. A Minister of Finance Regulation announced in the following year stated that the Board of Trustees of the new organization (LPDP), which would decide its policy direction, would

consist of the Minister of Finance, Minister of Education and Culture, and Minister of Religious Affair.[38] With the formation of LPDP completed, another decree in 2012 formally handed over the management of the endowment fund from the PIP to the LPDP.[39]

The choice of the three ministries for the Board of Trustees reflected the traditional arrangement of education-budget policy making in the central government. The Ministry of Education and Culture and the Ministry of Religious Affairs are two ministries in charge of managing formal education in Indonesia, and by extension two main beneficiaries and users of government's education budget. Even before LPDP came into being, it has supposedly been the usual practice for the two ministries and other relevant bodies to deliberate the share of education budget under the auspices of the Ministry of Finance.[40] What changed with the new endowment fund is that because its operational budget is completely separate with government's annual budget, there would theoretically be less external influence, e.g. from the parliament or other ministries, in its policy making processes including the budget deliberation.

Between its inception and 2021, LPDP as an organization went through several changes outlined through laws and regulations signed either by the Minister of Finance or by the Indonesian President. LPDP's initial mandate was to manage an endowment fund for (1) education programs/activities, and (2) reserve fund for the rehabilitation of education infrastructure damaged by natural disasters.[41] The first regulatory revision passed in 2016 made more explicit LPDP's "educations programs", changing the names of directorates under LPDP, with a new Directorate of Scholarship and adding the task of managing research grant into the other output directorate, the new Directorate of Research Facilitation and Rehabilitation.[42] Specifically on the scholarship program, LPDP's 2020 regulatory revision further elaborated its vision in regard to the management of the scholarship alumni, creating

[38] Minister of Finance Regulation PMK No. 252/PMK.01/2011, see also inter-ministerial joint letters No. SR-221/MK.01/2011 and No. 483/MPN/KU/
[39] Minister of Finance Decree 186/KMK.01/2012
[40] Personal communication with Professor Ilza Mayuni, former head of the Ministry of Education and Culture Policy Development and Synchronization Bureau; see also World Bank (1998) and Bresnan (2006, pp. 169, 202-203)
[41] Minister of Finance Regulation PMK No. 252/PMK.01/2011
[42] Minister of Finance Regulation PMK No. 143/PMK.01/2016

offices tasked with alumni development (*pengembangan*), alumni data collection and mapping (*pendataan dan pemetaan*), and alumni distribution (*distribusi*).[43]

Between the 2016 regulation and the next revision in 2020, there were also changes enacted outside the usual Ministry of Finance Regulations. Among these, LPDP decided to stop providing new funding for the rehabilitation of education infrastructure and keep only then-ongoing rehabs (LPDP, 2018). The change was made official in a regulation passed in 2020, dramatically reshaping LPDP's mandate to focus on higher/advanced education and research. However, this change might or might not last as the next year LPDP would see another change to its mandate and Board of Trustees formation.

Going back a year, a Presidential Decree signed in 2019 not only broadened the LPDP Board of Trustees membership from the original three ministries into nine, headed neither by ministries in charge of education nor the minister of finance (although the management of the endowment fund seems to stay within the domain of the ministry of finance), but by two ministries in charge of human resource development and national economy.[44] This change could potentially have a wide and deep impact, but almost immediately afterward, Indonesia along with most of the world was dragged into the Covid-19 pandemic, pausing most of LPDP's usual activities for two years. This change in the Board of Trustees composition was partially rolled back in late 2021 through a Presidential Regulation,[45] returning the Board of Trustees membership almost into the original formation of conventional stakeholders of the national education budget while keeping the coordinating minister of human development and culture as its chief with an addition of the "head of the governmental agency in charge of enacting governance in research, development, studies, and application as well as invention and innovation." The latter clearly refers to the newly formed BRIN, an organization created through the mergers of several government-owned research and development agencies including the Indonesian Institute of Sciences (LIPI), National Nuclear Energy Agency (BATAN), and the National Institute of Aeronautics and Space (LAPAN), headed by the

[43] Minister of Finance Regulation PMK No. 47/PMK.01/2020
[44] Presidential Regulation Perpres No. 12 Tahun 2019 on the Endowment Fund for Education
[45] Presidential Regulation Perpres No. 111 Tahun 2021 on the Endowment Fund for Education; thanks to Dr. Tatang Muttaqin for pointing out this regulation after an earlier draft of this chapter was written.

Minister of Research and Technology—in a sense a new stakeholder of the national education budget. The 2021 regulation also dictated that parts of the endowment fund would be allocated to improve the world ranking of leading universities in Indonesia and for cultural development programs, although the recentness of the regulation makes it better to leave analysis of these programs for future studies.

Given the frequency of change, it is hard to say for sure what kind of organization LPDP would ultimately become. At this point, it is tempting to suggest that LPDP's role and mandate follows that of Indonesian government's policy direction in education and development sectors. Nonetheless, membership of the Board of Trustees might not in itself reflect the whole aspects of LPDP policy direction. For instance, there is an indication that the role of National Planning Agency (Bappenas) has been "actively involved" in the planning of LPDP programs as part of the national development planning agenda, and that its role "does not change much" regardless of whether its chief—the Minister of National Development Planning—is formally included in the Board of Trustees.[46]

<table>
<tr><th colspan="2">2011</th><th colspan="2">2019</th><th colspan="2">2021</th></tr>
<tr><td colspan="2">Minister of Finance Regulation
PMK No. 25/PMK.01/2011</td><td colspan="2">Presidential Regulation
Perpres No. 12 Tahun 2019</td><td colspan="2">Presidential Regulation
Perpres No. 111 Tahun 2021</td></tr>
<tr><td rowspan="3">Minister of Education and Culture</td><td rowspan="8">Members</td><td>Minister in charge of coordination, synchronization, and control over ministerial affairs on human development and culture</td><td>1st Chief and member</td><td>Minister in charge of coordination, synchronization, and control over ministerial affairs on human development and culture</td><td>Chief and member</td></tr>
<tr><td>Minister in charge of coordination, synchronization, and control over ministerial affairs on the economy</td><td>2nd Chief and member</td><td rowspan="2">Minister in charge of the national finance</td><td rowspan="2">Vice-chief and member</td></tr>
<tr><td>Minister in charge of the national finance</td><td>Vice-chief and member</td></tr>
<tr><td rowspan="2">Minister of Finance</td><td>Minister in charge of education and culture</td><td rowspan="6">Members</td><td>Minister in charge of education and culture</td><td rowspan="6">Members</td></tr>
<tr><td>Minister in charge of research, technology, and higher education</td><td rowspan="3">Minister in charge of religious affairs</td></tr>
<tr><td rowspan="3">Minister of Religious Affairs</td><td>Minister in charge of religious affairs</td></tr>
<tr><td>Minister in charge of the workforce</td><td rowspan="2">Head of government body in charge of research, technology, and higher education</td></tr>
<tr><td>Minister in charge of national development planning</td></tr>
<tr><td>Minister in charge of state apparatus (public servants)</td></tr>
</table>

Table 7 Structure of the LPDP Board of Trustees (Dewan Penyantun) as stated in the 2011, 2019, and 2021 regulations.

[46] Personal communication with Dr. Tatang Muttaqin, Director of Higher Education and Science at the Ministry of National Development Planning/Bappenas.

It is also worth mentioning that the scholarship program remained central throughout all the regulatory changes that LPDP went through. On one hand, this signals the scholarship's position as a centerpiece of the endowment fund's programs. The rest of the chapter would shift the focus into the scholarship program.

2. LPDP scholarship

Scale of the scholarship program

Between its first opening in 2012 and 2019, more than 24,000 people have signed contract as LPDP scholars. The 2018 Annual Report showed that at the time there were 3,551 on going recipients studying abroad and 6,330 recipients studying in Indonesia. However, the detailed breakdown between overall recipients of domestic and study abroad program is not readily available, and the changing categorization of sub-programs in each annual report makes a detailed analysis rather difficult.

Program/Year	2013	2014	2015	2016	2017	2018	2019	All year
Regular	1008	1847	3299	2987	991	505	928	11565
Medical specialization		37	138	191	64	50	114	594
BUDI (HEI Lecturer)				2168	353	273	586	3380
Affirmative scholarship	26	672	949	1174	400	911	1828	5960
World Top Ranking Universities Scholarship		109					28	137
Eastern Indonesia Scholarship					102			102
Thesis and Dissertation scholarship	521	122	235	662	224	50	165	1979
Top up scholarship		97	30	23	37			187
Civil servant, police, and military scholarship							1002	1002
Science olympiad scholarship							14	14
Co-funding scholarship							6	6
Total	**1555**	**2884**	**4651**	**7205**	**2171**	**1789**	**4671**	**24926**

Table 8 Annual intakes of the LPDP scholarship program (LPDP, 2018). Categorization of sub-programs sometimes differ between each year's annual report, making the breakdown less accurate than the total number.

These numbers can be further contextualized through a comparison with the number of post-graduate students in Indonesian universities. In 2018 and 2019, newly-enrolled master degree students roughly amounted to 10%, and new doctoral students numbered around 1% of new undergraduate students of the same year. Counting only LPDP scholarship awardees for master and doctoral degree programs—i.e., excluding medical specialization programs, thesis/dissertation grants and other non-degree programs, in 2018 there were 1,048 new LPDP awardees for master degree programs, equivalent to 0.99% of the 105,286 new master students in universities across Indonesia. The 375 new doctoral degree awardees on the other hand is equivalent to 4.4% of 8,495 new doctoral students in Indonesia. In 2019, LPDP the 3,469 new master degree awardees is equivalent to 3.29% of the 117,427 new master students in Indonesia, while the 1,088 new doctoral degree awardees is equivalent to 12.8% of the 10,252 new doctoral students in the country.

Unfortunately, it is more difficult to measure the proportion of post-graduate degree holders in the Indonesian economy, due to official statistics on Indonesian labor force education attainment being capped at "university above" and thus everyone with a bachelor degree and above are lumped together into a single category. However, with the gross enrollment rate of tertiary education still hovers below 40% (World Bank, 2020), university graduates being just under 10% of the overall labor force in 2019 (BPS, 2019), and the rough picture of new entrants of post-graduate education mentioned above, there might be some ground for the government to presume that the scholarship alumni entering the workforce with a post-graduate degree would attain some form of leadership position in whichever field they end up at.

Prioritized fields of study and available destination universities

Although most of its scholarship program are open to anyone with bachelor degree in any field of study, LPDP does have a list of prioritized fields and research theme. The fields as listed in a 2015 briefing are as follows.

No.	Fields and discipline	No.	Research/study theme
1.	Engineering	1.	Maritime
2.	Science	2.	Fisheries
3.	Agriculture	3.	Energy resilience
4.	Medicine/health	4.	Food resilience
5.	Accounting/finance	5.	Transportation technology
6.	Law	6.	Defense and security technology
7.	Education	7.	Information and communication technology
8.	Religion	8.	Medical and health technology
9.	Economics	9.	International business law
10.	Humanities	10.	Nursing
11.	Social sciences	11.	Creative industry
12.	Culture/language	12.	Education management
		13.	Environment
		14.	Sharia economics/finance

Table 9 List of prioritized field of studies and research themes for LPDP scholars. Source: LPDP (2015b).

Faithful to the MP3EI, engineering and science topped the priority list, and for the prioritized research theme maritime and fisheries were at the top of the list followed by energy and food resilience, and then transportation technology vital to support the government's vision on improving national connectivity. This priority list, however, does not seem to be an absolute rule which could dictate the awardees quota. This can be seen in the actual breakdown of LPDP awardees' field of study, which according to the 2017 and 2018 Annual Report is as follows.

No.	Field/discipline	2018 sum	Percentage
1	Engineering	3650	18.02
2	Science	3335	16.47
3	Education	2518	12.43
4	Medicine and health	2200	10.86
5	Social sciences	1925	9.50
6	Economics	1377	6.80
7	Agriculture	1167	5.76
8	Accounting and finance	976	4.82
9	Culture, art, and literature	916	4.52
10	Law	912	4.50
11	Religion	797	3.93
	Other	482	2.38
	Total	20255	100

Table 10 Field of study of LPDP scholarship awardees by 2018 sources: 2017 and 2018 annual reports.

The top two fields of LPDP scholarship awardees matched that of the prioritized fields, engineering and science. However, below the top two, the priority list did not match the actual awardee pool. On one hand, as mentioned above this means that LPDP is not that strict in enforcing the priority list, and that the list might not have the final say in the selection process. On the other hand, this could also reflect the difficulty of controlling the input, including what is available within the pool of potential applicants—fresh graduates and part of the workforce hoping to continue their education, be it the qualification of the candidates themselves or the perceived value of pursuing advanced degrees in each discipline.

Another takeaway from the list of prioritized fields is that the LPDP's list differed from that of the BUDI program when it was run by the Ministry of Education and Culture before getting absorbed to the LPDP in 2016. Presented below is the list for 2011 opening.

For lecturer candidates	
No.	Field of study
1	Agricultural science
2	Vocational Education, Early Childhood Education
3	Health Science, Nursing
4	Engineering
5	Regional (Local Ethnic) Language, Foreign Language
6	Mathematics and Natural Sciences, Mathematics and Natural Sciences Education
7	Culture and Art
8	Sports
9	Disaster Management

Table 11 Prioritized fields of study, dubbed "strategic fields" from the 2011 handbook of the DGHE Excellence Scholarship (Direktorat Jenderal Pendidikan Tinggi Kemendiknas, 2011).

Perhaps due to the merging of the scholarship into LPDP between 2016 and 2018, the availability of relevant archive online became limited, making it difficult to see a more complete picture on whether the priority list of the lecturers' scholarship changed over the years. Nonetheless, the difference implies that the desired output of LPDP scholarship might not be the same with that of previously available scholarship aimed specifically to train

university lecturers (and academic support staffs of higher education institutions, although this part arguably served a very specific niche).

Beyond the list of prioritized fields, there is also an evidence that qualifications demanded in the LPDP scholarship selection differed from that of previously available post-graduate study scholarship for university lecturers—called with various names including the BPPS and the Directorate/Ministry of Higher Education International Post-graduate Education Scholarship (BPP-LN). For the purpose of this chapter it would suffice to explain that while the merger in 2016 was meant to address the need to increase the scholarship program's intake (Kemenristekdikti, 2016), the split in 2019 happened in part because many lecturers ironically had trouble fulfilling the requirements set by LPDP (Kemenristekdikti, 2020).

The list of destination universities generally dictates where the scholarship candidates can apply to study using the LPDP scholarship, and is roughly based on international ranking of universities. Although Wageningen University topped the destination list, positions below it are filled mostly by universities in English-speaking countries especially the UK and Australia. Critique of the available destination universities and the candidates/awardees decision on the matter merits further studies, but is outside the scope of this dissertation.

	Country	Awardees	Percentage
1	Indonesia	6330	64.06
2	UK	871	8.81
3	Australia	768	7.77
4	Netherland	544	5.51
5	USA	295	2.99
6	Japan	284	2.87
7	Germany	129	1.31
8	Sweden	79	0.80
9	France	76	0.77
10	Malaysia	72	0.73
	Others	433	4.38
	Total	9881	100

Table 12 Destination countries of ongoing LPDP scholarship awardees in 2018. Source: 2018 Annual Report.

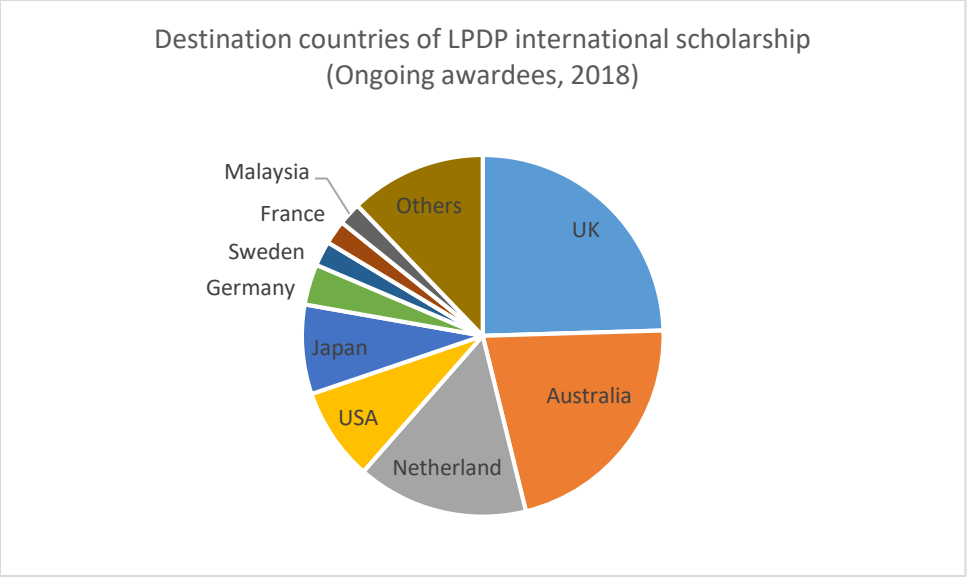

Figure 7 Destination countries of LPDP international scholarship (2018 ongoing awardees). Source: 2018 Annual Report.

	University	Ongoing (2018)	Percentage
1	Wageningen University	145	1.47%
2	Monash University	130	1.32%
3	Australian National University	113	1.14%
4	University of Melbourne	105	1.06%
5	University of Manchester	69	0.70%
6	University of New South Wales	69	0.70%
7	Delft University of Technology	65	0.66%
8	University of Queensland	62	0.63%
9	University of Leeds	62	0.63%
10	University College London	60	0.61%

Table 13 Destination universities of ongoing LPDP study abroad scholarships in 2018. Source: 2018 Annual Report.

3. Contextualizing LPDP scholarship program

Before proceeding, it is important to note that in the current literature post-graduate degree holders are often not well-reflected in labor force statistics and—perhaps in effect—in aggregative studies related to human capital. Education attainment-related variables in studies on labor market (e.g. Goldin and Katz, 2008 and Jaume, 2021), absorptive capacity (e.g. Harris and Yan, 2019), and human capital mobility (e.g. Artuc et al., 2015 and Arif, 2022)

tend to be capped at “tertiary education” or “university/college educated.” In some studies, post-graduate degree holders might contribute to variables like “years of schooling” but still not having a specific variable to account specifically for them (see e.g. Barro and Lee, 2013 and Hanushek, 2013). On the other hand, studies focusing on post-graduate degree holders tend to frame them as an isolated category or phenomenon, for example migration decision of doctoral degree holders (e.g. Gaule, 2014 and Kahn and MacGarvie, 2020, or studies using proxy variables such as “inventors” like Miguelez and Temgoua, 2020), and indeed studies on international scholarship programs mentioned earlier (e.g. Perna et al, 2014 and Andere, 2004). In short, there is currently not enough literature to sufficiently measure the impact of post-graduate degree holders vis-à-vis overall tertiary education-graduate members of the labor force or economic structure. The following discussion ought to be understood within this constrain.

The findings of this chapter showed that the LPDP and its scholarship program, especially—but not limited to the international scholarship program—have evolved to specifically cater the government’s effort in creating high-end human resource/capital through post-graduate education in research commanded by ministries in human resource development. Its control of policy direction was initially shared, on paper, among conventional stakeholders of Indonesian national education system albeit with an economic-growth white paper explicitly put forward as part of its founding rhetoric. Had the 2019 Board of Trustees’ structure remained, it would have been quite literally an instance of educationists giving way to economists in formulating an education-related policy within the national framework (Watson, 1996, p. 59 in Welch, 2000). Nonetheless the partial rolling-back of the shift in 2021 still have the board led, for now, by the Coordinating Minister of Human Resource and Culture. This directly ties up educational policy with broader development agenda, where an education-related policy explicitly became an instrument of national economic interest.

There are definitely personal benefits for the scholarship awardees, at the very least in form of free education opportunity which otherwise would carry a considerable cost even for domestic post-graduate education, and could be extremely expensive for post-graduate education abroad due to the difference in price levels. This alone makes the LPDP scholarship program potentially as contentious as any other publicly-funded schemes. Amid the

worldwide concern of injustice in the form of education governance "privileging only a few but disadvantaging a larger proportion of the population," (Mok, 2005) having its budget isolated from the rest of the government's spending also means that although the LPDP scholarships definitely privilege a few, beyond the initial years it would have a relatively limited impact on the larger population aside of the omnipresent opportunity cost. This shows endowment fund's potential in funding certain type of national endeavors—like quickly expanding access to post-graduate education including that from foreign institution, but the government also needs to be wary of the potential moral hazard of having a perceived low-risk policy instrument. As a side note, it also act as a policy innovation in the funding of national project/priority agenda—and possibly a training ground for a more general-purpose sovereign wealth fund.

Shifting the target and goals of subsidized learning beyond government and public sector into indirectly subsidizing the private sector may not be the first of its kind, but the scale of the program and the method of implementation sets the LPDP program apart. Its open requirement is similar to scholarships offered by foreign governments and organization like Japanese MEXT, Erasmus, and Fulbright, and its scale rivals these programs' allocation for Indonesian citizens. These makes the LPDP scheme merit further studies in the future, both from the (national and international) education studies front and the economic growth studies front (TFP studies in general and late-industrialization and catch up studies in particular.

4. Conclusion

The LPDP is unique in that being (quite literally) an endowment fund for education, it explicitly put economic goals as its founding rhetoric. Although the explicit shift in policy control from the conventional stakeholders of national education system into the stakeholders of national economic planning was partially undone, LPDP nonetheless tied up government's policy on education with that of human resource and human capital development as shown in the presence of the Ministry of National Development Planning, whether inside or outside the formal board of trustees, as well as the leadership of the board

by the Coordinating Ministry of Human Resources (and culture). The changes in LPDP's policy-directing board of trustees could reflect the malleability of the endowment fund's short-medium term objectives. On the other hand, the enduring centrality of the post-graduate scholarship as part of the endowment fund's programs signals the government's willingness to bet on the long term with it. This commitment can be seen as an attempt by Indonesian government to extend the scope of subsidized learning (see Amsden, 2001/2003, p. 6) for the sake of economic growth and opportunity to catch up internationally.

The LPDP scholarship program showed that the Indonesian government is willing to bet on the private sector, using public money to subsidize the advanced training/education of human resources. Another way to look at it is that it potentially showed the shift of Indonesian government's approach to (highly educated or technocratic) elite creation, from specifically targeting relatively few individuals who were already on their way toward leadership and/or technocratic expert positions (cf. Bresnan, 2006), into a relatively mass-produced elites to be diffused throughout the national economy beyond just the government/bureaucracy and the academia.

Taken together with the observations raised in Chapter 4 pointed to how LPDP and its scholarship program reflect an attempt by the Indonesian government to utilize subsidized learning to contribute toward its national economic development project through total factor productivity (TFP) oriented policies such as human resource and human capital development. Especially for the international scholarship program, the Indonesian government is attempting to tap the potential of international education to develop human resource employable in the domestic economy, hence providing an exceptional privilege for a portion of its population in hope that they would pay back by contributing to the national economy, thus resulting in a net positive public good (cf. Andere, 2004, Pike, 2015). These ideas would be picked up again in the chapters that follow.

Chapter 5 would further elaborate on how LPDP international scholarship (and to an extent the scholarship program overall) reflects the technocratic legacy within the Indonesian government, contributing to the expectations placed upon the scholarship awardees by the scholarship management and government officials. Afterward, chapter 6 would shift the

focus to the scholarship awardees, taking a look at early findings regarding the output of the scholarship program in term of alumni career path and destination after graduating, and how some of the awardees perceived their roles and agency in regard to the expectations placed on their shoulders.

Chapter 5
LPDP scholarship and technocratic legacy in Indonesia

1. Introduction

This chapter argues that the concept of "technocracy" in Indonesian context would be useful in discussing the LPDP scholarship, and in a recursive way, international scholarship programs in Indonesia. Information for this chapter is based on a broad range of secondary materials including biographies, op-eds, and news articles, along with official publications and reports by governmental and international organization as well as relevant academic literature. This chapter would provide a historical overview of international scholarship programs in Indonesia in relation to the formation and expansion of technocracy in the country, followed by a discussion on how the technocratic legacy contributed in shaping the international scholarship under LPDP scheme and the expectations placed upon the scholarship awardees. The term "legacy" employed in this chapter and throughout the dissertation refers most closely to it being "something transmitted or received from the past" [47] in the sense that it is in itself an abstract/intangible matter of shared ideas, experience, and tendency passed down from the first-generation technocrats in Indonesia to their successors in the Indonesian bureaucracy from late-New Order period to the present (cf. Shiraishi, 2014, Sato, 2019).

Before proceeding, a brief overview and clarification of the concept ought to be provided. The first thing to clarify is that the concept of technocracy used in this chapter—and throughout the dissertation—is close to the one described in Khoo, Tadem, and Shiraishi (2014) as governance by "technically trained experts," arguably imported to developing countries in Asia and Latin America from the United States in the period following World War II. The emphasis is placed more on how individuals with technical expertise (and/or higher level of education compared to the general population) occupied strategic positions in-and-around the government, and not on the concept's other aspect like political non-

[47] See definition #2 of the word "legacy" in Merriam-Webster Dictionary.

partisanship as used for example in Mietzner (2020b). Some observers have identified and put labels on different strands or camps of these experts, for example Sato (2019) described the competing influence of mainly-economist "technocrats" and mainly-engineer "technologues" within Suharto's New Order regime, which Karsono (2013 p. 421) argued was partly a result of the former president's fascination with intellectuals. These elites played a major role throughout the New Order period, planning and organizing the country's day to day economy and development projects via strategic positions in institutions such as the Central Bank, the Ministry of Finance, and the National Development Planning Agency (Bappenas) as well as state-owned enterprises (see e.g. Shiraishi, 2014, Sato, 2019). Karsono (2013, p. 421) added the mainly-social scientist "technosophes" working side by side with the regime through a non-governmental think tank.

Shiraishi (2014) argued that the New Order technocrats, many of whom hold foreign degrees including the core group who came to be known popularly as the "Berkeley Mafia" after the University of California, Berkeley where the members earned their graduate degrees, can actually be traced to two leading Indonesian universities, the University of Indonesia (UI) and Gadjah Mada University (UGM). He added that the rival faction mainly with a background in engineering—which Sato (2019) dubbed the technologues—can in turn be traced to the Bandung Institute of Technology (ITB). The three universities remained at the top of Indonesia higher education institutions at present.

That said, foreign education can, and arguably should, be seen as a crucial factor in the making of these technocrats—of all camps described above. As briefly introduced in the previous section, the Berkeley Mafia and their fellow first generation technocrats benefited from post-graduate training funded by the Ford Foundation (Shiraishi, 2014, Bresnan, 2006). The technologues, on the other hand, include European-educated engineers, some of them went to study using other Sukarno-era scholarships. This dissertation considers both those who are dubbed "technocrats" and "technologues" as parts of the early generation of Indonesian technocracy, an approach similar to that adopted by Amir (2008), while suspending the clear-cut judgement on the technosophes as described by Karsono (2013, p. 421) for the moment—although in a latter part of this chapter these people are implicitly included in the wider technocracy of Indonesia.

2. International scholarship and the Indonesian technocracy

International scholarship program under the LPDP scheme are not the first international scholarship program organized by, or affiliated with, the Indonesian government. This section would demonstrate the interplay between international scholarship programs—mainly but not limited to the ones run by the Indonesian government—and the formation and expansion of the technocracy in Indonesia.

Pre-1966: International scholarship and the first-generation technocrats

Not much academic literature is available regarding scholarship programs in Sukarno period (pre-1966). Some texts of government regulation show that the Indonesian government did send its personnels to study abroad, using the term "tugas belajar" (lit. "study mission").[48] Funding for the government's international scholarship of this period came from various sources, including for example post-war reparation agreement with Japan (JICA, 2018).

Outside of government personnels, there were reportedly a number of scholarships provided by state-owned enterprises which were open to public albeit with fields of study following to some extent government directives. Former minister of education Wardiman Djojonegoro wrote in his memoir that he went to study in Delft, the Netherlands using a scholarship from Bank Industri Negara (BIN; later merged into Bapindo, subsequently merged into Bank Mandiri) (Djojonegoro, 2016, pp. 45-46). Wardiman recalled that there were scholarships available for studying shipbuilding and aeronautics,[49] which at the time were often mentioned in President Sukarno's speeches as important industries to develop alongside transportation due to Indonesia being an archipelagic country (pp. 45-46). Former president and state minister of research, B.J. Habibie allegedly missed the opportunity to apply for such scholarship program, and instead of waiting for another year he opted to go studying in Germany using his family's private resources. Interestingly, his recollection

[48] See e.g. Presidential Decree (Keputusan Presiden) No. 46 Tahun 1951 on the study mission to the United States for agricultural and veterinary experts.
[49] Indonesian: "perkapalan" and "penerbangan."

suggested that there was some degree of institutionalization of study-abroad scholarship linked to the Indonesian government (Makka, 2017 p. 50). With many of these scholarships prioritized science and engineering (see e.g. Djojonegoro, 2016; Makka, 2017), it is possible that these contributed to the formation of New Order era bureaucrats of the "technologue" camp (as in Sato, 2019).

Although strictly speaking not a program organized by the Indonesian government, it is impossible to not talk about scholarship programs run by the Indonesian office of the Ford Foundation which sent Indonesian economists and social scientists to study in the United States in this section. These programs not only would have a significant impact on the country in the following decades, and provide an illustration on how structural aspects might be just as important as, if not more so than, the agency of individuals for an international scholarship program to have a strong and lasting impact on the home country of the awardees.

The Ford Foundation began its work in Indonesia in the 1950s, and later on started to channel technical assistance by UC Berkeley for the University of Indonesia (UI) Faculty of Economics (FEUI) in 1956 (Bresnan, 2006 p. 37), and sending Indonesian academics to universities in the United States and Canada around the same period. McCawley and Wie (2012) argued that on the Indonesian-side, the establishment and fostering of this relation was part of a pre-emptive move by the economist Sumitro Djojohadikusumo, then-leader of the FEUI, in anticipation of the worsening in bilateral ties between Indonesia and the Netherlands which could affect Dutch professors employed at the faculty. In 1964, amidst the period of heightened anti-Western sentiment in the Indonesian government, the foundation negotiated for thirteen Indonesian PhD candidates in economics to go to the United States by convincing President Sukarno that these scholars would be required to get Indonesia to "[stand] on its own feet" (p. 49), a feat that showed the close relation that the foundation has established with the very top of the Indonesian government at the time. Academics sent to study by the foundation included those who would in time be known as the "Berkeley Mafia" (see e.g. Khoo, Tadem, and Shiraishi, 2014) and considered to be the core members of "technocrats" in the New Order period.

With a caveat that this overview is not necessarily exhaustive, the takeaway from this period is an observation that, other than programs specifically designated for government personnels, the aforementioned programs shared similarities in that there was no rigid contract to enter government service, but at the same time the individuals who received the scholarships can be considered to be a part of an elite circle well connected with either the government or related bodies, at a time when higher education was really exceptional.

New Order and beyond: Institutionalization of government scholarship and the making of the wider technocracy

The New Order regime under President Suharto saw the rise of systematized government-sponsored study abroad scholarships meant to provide human resource for specific government agencies, including research institutions and ministries in charge of national economy, development, and planning. An overview by Ikawati (2006) described three major programs organized by the Indonesian government which focused on training human resources in science and engineering sectors: the Overseas Fellowship Training Program (OFTP, 1985-1992, partly funded through World Bank loan, 1500 employees of non-ministerial government agencies, the Science and Technology Manpower Development Program (STMDP, 1988-1995, loan from Japan, 400 awardees), and the Science and Technology for Industrial Development (Staid, 1990-2003, loan from Japan and the World Bank, 2445 awardees across three waves). Ikawati (2006) and Mohsin (2018) argued that these programs relied considerably on the political patronage of then-State Minister of Research and Technology B.J. Habibie, who would become Vice President and for a short while President of Indonesia, as well as on the financial capabilities of the New Order regime. Hence, these programs mostly ceased to function when the regime fell. A decade after these programs ended, some alumni decided to organize themselves into an association called IABIE (Mohsin, 2018).

On the other hand, several programs which meant to train planners and other top level bureaucrats survived in some forms beyond 1998 (see e.g. Murti, 2020 on the scholarship program(s) managed by the National Development Planning Agency—Bappenas). JICA

(2001) reported that international scholarship programs co-funded with the World Bank for civil servants were run through Bappenas, the Ministry of Finance, Science and Technology Development and Utilization Agency (BPPT), and the Directorate General of Higher Education at the Ministry of Education. The number of people who undertook (and completed) doctoral and master's degree reportedly fell short of initial plan due to the lack of pre-qualified civil servants.

Former head of BPPT education and training center Dewi Odjar Ratna Kumala once observed that many returnees of the science and engineering scholarships failed to properly apply and utilize what they learned abroad, either due to appointment in work units not relevant to their specialization (Ikawati, 2006), or due to lack of facilities and funding in Indonesian institutions. This concern essentially echoed assessment reports by the World Bank (1994) and JICA (2001), which argued that while short-term prevention of prevent brain drain is desirable, the concern should not just stop there but ought to also include how the individuals who returned from their study abroad could be beneficial to government and the country—all with an assumption that these individuals were given opportunity to study abroad for them to enter some form of public service following their study. Scholarship programs of the New Order period outlined above, in addition to the one organized by the Ford Foundation mentioned earlier, can be seen as examples of "development projects" supported by foreign assistance, in the sense that these were "time-bound" endeavors (Cusworth and Franks, 1993a), at least from the funders' perspective (see e.g. World Bank, 1994 and JICA, 2001).

The fall of Suharto's New Order regime as well as the financial crisis of 1997-98 marked the end of several government scholarship programs (Mohsin, 2018). As mentioned above, several public servant training programs like that under Bappenas CPDET (Murti, 2020) and the Directorate General of Higher Education (Perna et al, 2014, Kemenristekdikti, 2016) survived and continued to operate. Around the beginning of LPDP scholarship program, the post-graduate scholarship for university lecturers under the DGHE was for a time put under LPDP management, but as mentioned in the previous chapter, got separated again after several years due to the difficulties of mid-career lecturers to pass LPDP selection.

3. Technocratic legacy and LPDP scholarship

Contextualizing "leaders" and "professionals" in LPDP scholarship's objective

In its official documents, LPDP stated that its scholarship program is meant to create "leaders and professionals" to act as catalysts for economic growth in Indonesia (see e.g. LPDP, 2014). Looking at LPDP official publications and statements by relevant public officials, the definition of "leaders" here can be assumed to be not just political leaders (cf. Mercier, 2016), but instead a looser definition which may include leadership and managerial position in the private sector and the civil society. In a way, the LPDP international scholarship program—and to an extent its domestic scholarship as well—is an attempt to expand the base of technocratic class in Indonesia, beyond the core bureaucracy and the civil service to also include leaders in the society.

The rhetoric of nurturing a new generation of elites to serve as leaders in the Indonesian society can be linked with the development of education attainment in the country. With the relative-massification of higher education already starting to happen (Wicaksono and Friawan, 2011), simply having a higher education degree may be deemed to be no longer enough to set individuals apart from the rest of the Indonesian society. An example of this sentiment can be seen in the comment made by former Finance Minister Bambang Brodjonegoro, who said in 2015 that LPDP will help Indonesia creates a "golden generation" of competitive human resources in 2045, when 75% of the population is expected to hold a higher education degree (Tamindael, 2015).

This sentiment can be contextualized with the influence of technocracy in Indonesia. Strictly-speaking, the Indonesian technocracy usually refers only to a few dozen men and women holding strategic positions in running the government. However, during the latter part of the New Order Indonesia, the government institutions ran by the leading technocrats were also among the main beneficiaries of government-organized international scholarship programs. While Shiraishi (2014) described the first generation of Indonesian technocrats as having "small number" and with expertise that "set them apart from the great majority of civilian bureaucrats and military officers who ran the New Order state," at the end of Suharto's rule

in the 1990s, bureaucrats and government employees with foreign post-graduate degrees numbered in the thousands (JICA, 2001, World Bank, 1994).

This generation of bureaucrats and government employees can in a sense be called a wider technocracy of Indonesia, and many of whom are currently serving in various positions within or are working close to the government—possibly together with people who studied abroad with non-governmental resources and people who obtained their post-graduate degree domestically. Although more study is still needed to see a more complete picture, this chapter presents the idea that the worldview and personal experience of Indonesia's wider technocracy helped to shape the LPDP scholarship program, especially—though not necessarily limited to—the emphasis given to the international scholarship. It ought to also note here that nearing the end of New Order regime, the affiliation of the members of the Indonesian technocracy are no longer as clear-cut as it was before, as exemplified with the assignment of several engineers to posts previously reserved for economists in 1993 and the ascension of technologue Ginandjar Kartasasmita as the head of Bappenas in 1998 (Amir, 2007), and as would be presented directly below, some there are career bureaucrats with economics background serving in ministries not-directly related to economic affairs.

Among the most relevant samples of this population of wider technocracy are the original members of LPDP Supervisory Board, who were at the time Secretary Generals or heads of planning bureaus of the ministries involved with the endowment fund.

Name	**Affiliation (Ministry)**	**Foreign Education**
Ainum Na'im	Education and Culture (Secretary General); entered the ministry in 1985; also a professor	Doctoral degree in business administration from Temple University, Philadelphia
Kiagus Ahmad Badaruddin	Finance (Secretary General); entered the ministry in 1977	Master degree in economic policy from University of Illinois
Bahrul Hayat	Religious Affairs (Secretary General); previously at the Ministry of Education and Culture, entered civil service in 1986; also a professor	Ph.D. in education from University of Chicago
Sumiyati	Finance (Head of Planning and Finance Bureau); entered the ministry in 1982	Bachelor and master degree from University of Central Queensland
Ananto Kesuma Seta	Education and Culture (Head of Planning and International Cooperation Bureau); entered the ministry in 1985	Doctoral degree in agriculture from the University of Kentucky

Table 14 Original members of LPDP Board of Supervisors; Source: LPDP 2013 Annual Report.

A more distant, but not less relevant illustration is how most recent education and finance ministers are holders of foreign degree. Of twenty nine individuals serving as the Minister of Finance between 1945 and 2022, twenty of them (60.89%) either have experience of studying abroad have foreign degree. For those who served as Minister of Education (or related titles, given how frequently the relevant ministry has been remixed and/or renamed), the figure is twenty three individuals out of thirty three (69.7%). Since 1998, the percentage rose sharply. Nine out of eleven Ministers of Finance (81.8%) have post-graduate degree from abroad, while another one attended non-degree courses abroad. For the Ministers of Education, eight out of nine (88.9%) have foreign degree, and the other one attended non-degree courses abroad. A note here, as a caveat, is that not all of the individuals above went to study abroad funded by the Indonesian government.

Name	Term	Foreign education
Fuad Bawazier	1998	University of Maryland
Bambang Subianto	1998-1999	KU Leuven
Bambang Sudibyo	1999-2000	University of North Carolina, University of Kentucky
Prijadi Praptosudihardjo	2000-2001	n.a.
Rizal Ramli	2001	Sophia University (Tokyo), Boston University
Boediono	2001-2004	Monash University, University of Pennsylvania
Jusuf Anwar	2004-2005	Vanderbilt University
Sri Mulyani Indrawati	2005-2010, 2016~present	University of Illinois Urbana-Champaign
Agus Martowardojo	2010-2013	n.a. (non-degree programs abroad)
Chatib Basri	2014-2015	Australian National University
Bambang Brodjonegoro	2014-2016	University of Illinois Urbana-Champaign

Table 15 Indonesian Ministers of Finance since 1998. Compiled by author.

Name	Term	Foreign education
Wiranto Arismunandar	1998	Purdue University, Stanford University
Juwono Sudarsono	1998-1999	UC Berkeley, London School of Economics
Yahya Muhaimin	1999-2001	Massachusetts Institute of Technology
Abdul Malik Fadjar	2001-2004	Florida State University
Bambang Sudibyo	2004-2009	University of North Carolina, University of Kentucky
Mohammad Nuh	2009-2014	USTL Montpellier
Anies Baswedan	2014-2016	University of Maryland, Northern Illinois University
Muhadjir Effendy	2016-2019	n.a. (non-degree programs abroad)
Nadiem Makarim	2019~present	Brown University, Harvard Business School

Table 16 Indonesian Ministers of Education (and equivalent positions) since 1998. Compiled by author.

Among the top technocrats currently active in the government, a figure who went to study abroad using a government scholarship, and was subsequently involved in the creation of LPDP is Minister of Finance Sri Mulyani Indrawati. At a QnA session during LPDP awardees pre-departure event, answering to a question on the obligation to return to Indonesia after studying abroad using LPDP scholarships, Sri Mulyani told the audience that she herself was once a beneficiary of a government scholarship and was bound with the 2n+1 rule (i.e., that of working in Indonesia for two times her study abroad duration plus one year), abiding with the rule before going to work abroad and urged the awardees to do the same (LPDP Kementerian Keuangan, 2021). At the same occasion, responding to a question on having a family while studying abroad, she also narrated how she and her husband managed to have a child while studying abroad on a scholarship, with Sri Mulyani herself finishing her doctorate while caring for a baby without the help of hired nannies. Instead of simply answering the question as a policy maker, she instead also related her own experience of being on a similar position with the would-be LPDP scholars.

Another anecdotal example came years before LPDP came to be. In 2006, while commenting on how many awardees of late-New Order science and engineering government scholarship programs ended up working outside the government in a breach of their pre-departure

commitment, former head of BPPT education and training center Dewi Odjar Ratna Kumala voiced her opinion that the government should not spend too much resource to discipline those who decided not to work for their designated institutions. She not only reasoned that tracking the returnees who violated their obligation to work at designated institutions and demand repayment would be unproductive due to the difficulties and associated legal costs, but also added that as long as these returnees are working for domestic companies in Indonesia, the government is "not losing any national assets, as they are still applying their expertise for the sake of the nation," and noted that such transfer of knowledge outside of the public sector was how China and India managed to reach a "brain gain" from their citizens who studied abroad (Ikawati, 2006).

This statement showed a sense of sympathy with the cohorts who went to study abroad and were bound with a contract to work in the bureaucracy or government institutions back in Indonesia, but could not fit in well there. Although it is not known whether this official was involved in the making of the current scholarship program, this is perhaps the earliest statement by a relevant public official that described the spirit of "return (to Indonesia) and do something by yourselves" of the LPDP programs.

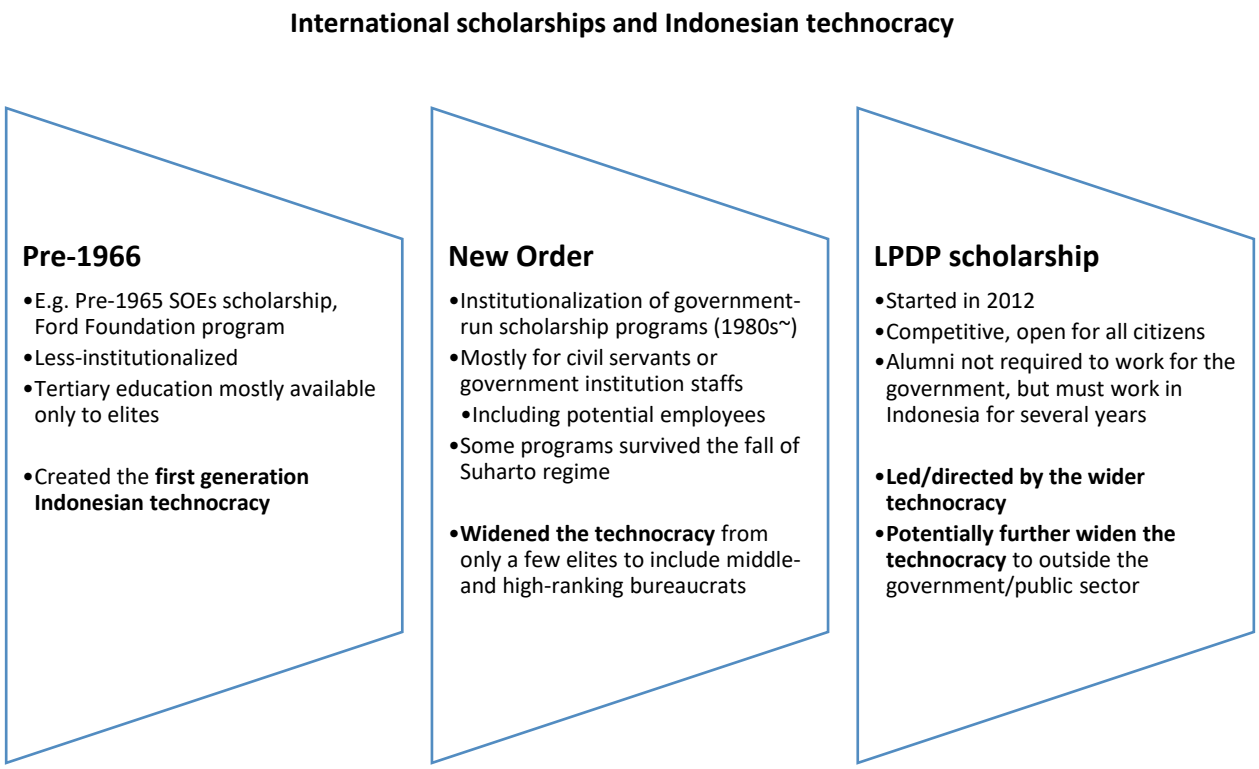

Figure 8 The relation, in chronological order, between international (study abroad) scholarship programs and technocracy in Indonesia.

Return and do something by yourselves: Expectations toward LPDP scholarship awardees

Unlike previously available Indonesian government scholarship programs, LPDP alumni are not bound to work at government bodies nor at higher education institutions. This marked a shift in the focus and purpose of international (and post-graduate) scholarship programs sponsored by the government, from educating a few select individuals who are expected to work closely within or alongside the government, into creating a wider base of patriotic elites, i.e. highly educated individuals readily available for employment anywhere within the domestic economy. This new focus conforms to the government's strategic plan to increase the availability of human resource in research and innovation sector, to improve the quality of human resource not just in the public sector but also in the industry, and to conduct expertise sharing between government institutions and the private sector as part of the so-called public-private partnership (Bappenas, 2014a, 2014b). President Joko Widodo himself

said in 2017 that LPDP scholarship program is a part of Indonesia's investment (Stefanie, 2017). Implicit in this, is the trust put by the policy-makers that the awardees, equipped with foreign degree combined with their potential and loyalty to the nation would contribute to the growth and development of Indonesian economy.

While awardees of the scholarship are not required to work at specific institutions, they must return to (or, in case of domestic post-graduate scholarship, stay in) Indonesia after completing their study and work in the country for twice the length of their scholarship-sponsored study plus one (colloquially called 2n+1) years, although this requirement was only made explicit around 2016—five years after the programs started. This obligation to return to Indonesia, which is not backed with pre-departure guarantee such as property mortgage (cf. Perna et al, 2015 on Kazakhstan government's scholarship program) triggered quite a bit of public discourse, including a high profile case when an alumni with human rights activist background who worked on Papuan[50] issues refused to return and work in Indonesia following her study in Australia and was ordered to reimburse the Indonesian government for her scholarship (CNN Indonesia, 2020).

Very recently, the official Twitter account of LPDP Awardees posted that LPDP scholarship awardees need to return to Indonesia after their graduation (i.e., not staying/going to work abroad right away) in order for them "to be directly in touch" with the Indonesian society, and help "color the governance, conducts, and the way of thinking" of the society (Vivian, 2023). Former Vice-President Jusuf Kalla stated in 2019 that by studying abroad the awardees can get experience and the benefit of comparison, which would help connecting the Indonesian society with a better chance for economic development (Tempo, 2019). These statements implied that the scholarship awardees are expected to help import not only technology and scientific knowledge (cf. Campbell and Neff, 2020), but also a broader, less tangible forms of knowledge and experience that could be beneficial for the Indonesian society—the utilization of which is left for the individuals to decide.

[50] A region rich with natural and mineral resources, economically underdeveloped despite the presence of multinational mining companies, and with a relatively active separatist movement—hence a quite sensitive issue especially among nationalists.

Such sentiment of trust placed in the awardees that they would know how to contribute the best to the country have been observed in statements by public officials regarding LPDP scholarship program, sometimes coupled with the rhetoric that these scholarship awardees are elites within the Indonesian society and/or are bound to a moral commitment toward country and its people. Then-Director of LPDP endowment fund Eko Prasetyo stated that the scholarships are meant for applicants with "a clear plan for serving the country; a personal plan" (Koran Tempo, 2017). Former Vice-President Jusuf Kalla said in 2017 that the government expect the scholarship awardees "to (re-)enter (Indonesia) and innovate, and not to be dependent on the government" (Tempo, 2017). He stressed that alumni of the scholarship are not bound to a work-contract, adding that they "should not hope to become civil servants," but at the same time they are morally indebted to the country and the people. A similar statement was made by Finance Minister Sri Mulyani Indrawati who reminded that ultimately the scholarship came "from the sweat of Indonesian people" (Kompas.com, 2017). On another occasion, Sri Mulyani also reminded the scholarship awardees that they are "small privileged elites" within the Indonesian society (LPDP Kementerian Keuangan, 2022), and quoting the late-American President John F. Kennedy, she told another batch of LPDP scholarship awardees to not ask what the country can give, but instead what they can do for the country (LPDP Kementerian Keuangan, 2021).

4. Conclusion

Through analysis of official documents and statements by relevant public officials, this chapter has demonstrated that there is an expectation placed on the shoulders of LPDP scholarship awardees that they would figure out their own ways to contribute to the development of Indonesia. While the scholarship as a form of organized skilled migration is definitely not the only cards in Indonesian government's hand to rely on in order to drive the country's development (cf. Skeldon, 2008), it is clear that the government and people running it place a hope—a bet—on the agency of the awardees. Such optimism might come, among others, from the fact that the current economic and development bureaucracy of Indonesia was built by the core technocrats of the previous era, and to some extent is still

maintained by the wider technocracy—i.e., people who might see themselves (and/or are perceived by the larger part of the society) as relatively successful examples of organized skilled migration. Although it must be noted, as has been argued often in the literature, that it is hard to predict successful contributions from skilled migration (see e.g. Kuznetsov, 2013), the next chapter would demonstrate how the scholarship program taken as a whole can be seen as a mechanism not only to give people advanced education and the opportunity to study abroad, but also to select who are deemed eligible for such privileges and to some extent to safeguard against the risks associated with skilled migration as a national development strategy (cf. Skeldon, 2022, Bamberger, 2022).

Shifting the obligation from working at specific institutions like the New Order Era scholarships into just working anywhere in Indonesia served to address the problem of scholarship alumni (returnees) failing to optimally utilize their hard-won knowledge and skills in Indonesia—essentially creating some degree of brain waste (cf. Faist, 2008)—by lifting the structural limitation in form of rigid workplace structure and bureaucracy (cf. for example World Bank, 1994 and JICA, 2001). The experience of high ranking government officials and bureaucrats involved with the making of the scholarship program, whether of studying abroad themselves or of working/getting acquainted with people who did so, probably informed the decision to provide the scholarship without specifying where the awardees are expected to work at following their graduation.

The next chapter would present early findings in regard to alumni of LPDP scholarship program, and how a sample of LPDP scholarship awardees in turn saw themselves, their positions, and their roles vis-à-vis their home country and the expectations placed on their shoulders.

Chapter 6

LPDP scholarship awardees as future leaders of national development

This chapter focuses on awardees of LPDP scholarship, especially their career path and perception on the objectives of the scholarship, the expectations placed upon them by the scholarship management and the government, and their own roles and contribution toward their home country. The discussion in this chapter, taken with the context provided in the previous chapters, would contribute in answering the sub-question of "How do the scholarship awardee's career path and perception compare to government's aim in regard to the program's implementation and by extension the economic development plan?." Such discussion is crucial in understanding the scholarship and by extension LPDP in general, given its rhetorical emphasis the scholarship awardees being "leaders" as well as catalysts for national economic growth and development.

Based on official statistics and interview with several awardees of the scholarship, this chapter would first provide an overview on the output of the scholarship program in term of where they are going to after finishing their study with LPDP scholarship both in the sense of career path and geographic domicile, toward which a snippets from the interview would provide some contextualization. The discussion would then continue with the perception of the awardees toward the scholarship program, especially on the expectation to contribute toward their home country and on the compulsory return policy which was made explicit by the government—retroactively—several years after the beginning of LPDP scholarship program.

Nine awardees of LPDP scholarship—listed below—were interviewed for this chapter. Eight of them were awardees of international scholarship program, and one was awarded a domestic scholarship for his master's degree but went on to study abroad for his doctoral using another source of funding after his graduation. The sampling was obtained by snowballing the first few informants, including one who ended up not getting interviewed but introduced another person. As a background context, it should be noted that all of the

interviews were conducted relatively shortly after the high profile case of Veronica Koman (mentioned in chapter 5), a human rights activist who refused to work in Indonesia after her study with LPDP scholarship and was asked to reimburse the Indonesian government for her scholarship money. It is possible that the case might have influenced how the awardees responded to their interview.

Name	Gender	Level of study and destination
Angela	Prefers not to identify	Master, Japan
Bambang	Male	Master, Japan
Cahya	Female	Master, Japan
Desi	Female	Master, Australia
Eka	Male	Master, England
Fluffy	Female	Doctoral, Japan
Gita	Female	Master, Japan
Heru	Male	Master, domestic post-graduate scholarship
Iqbal	Male	Doctoral, England

Table 17 List of LPDP scholarship awardees interviewed. All are pseudonyms.

1. An early look at the output of LPDP scholarship

This section would focus on two aspects of the scholarship program's output, the alumni's career path (i.e., how many of them went to the public and private sector) and domicile (i.e., their geographic distribution). Unfortunately, at the time of the research there was insufficient information on further sectoral breakdown of the alumni's career path, thus limiting the possible scope of the analysis.

Alumni career path

Although from the beginning it put emphasis on its awardees' obligation to "contribute to the country," around 2016-2017 the government explicitly made it compulsory for the awardees to return to (or stay in) Indonesia upon their graduation—with possibility for temporary permit for internship or other short-term stay abroad—and "serve" in Indonesia

for double the scholarship period plus one additional year, a formula colloquially called 2n+1, previously the common arrangement for study-leave of civil servants.

The breakdown of alumni career status as reported to the LPDP management in alumni survey(s) per-June 2021 is as follows.

	Overall		Master degree		Doctoral and others	
	Domestic	Study Abroad	Domestic	Study Abroad	Domestic	Study Abroad
Sample size	6251	6882	5319	6263	932	619
Higher education institution	2494	1522	1805	1052	689	470
Private sector	665	2176	637	2138	28	38
Gov't agency and civil servant	870	813	693	705	177	108
Primary-Secodary education institution	596	249	574	238	22	11
State/regional gov't-owned enterprise	55	263	53	260	2	3
NGO	40	206	39	202	1	4
Enterpreneur and self-employed	75	157	72	151	3	6
Military and police	6	67	5	61	1	6
Continuing study without LPDP support	34	125	34	124	0	1
Continuing study with LPDP support	13	45	13	42	0	3
Doing internship	0	7	0	5	0	2
Unconfirmed	2888		1394	1285	n.a.	n.a.

Table 18 Career status of scholarship alumni, Information request to LPDP, per-June 2021

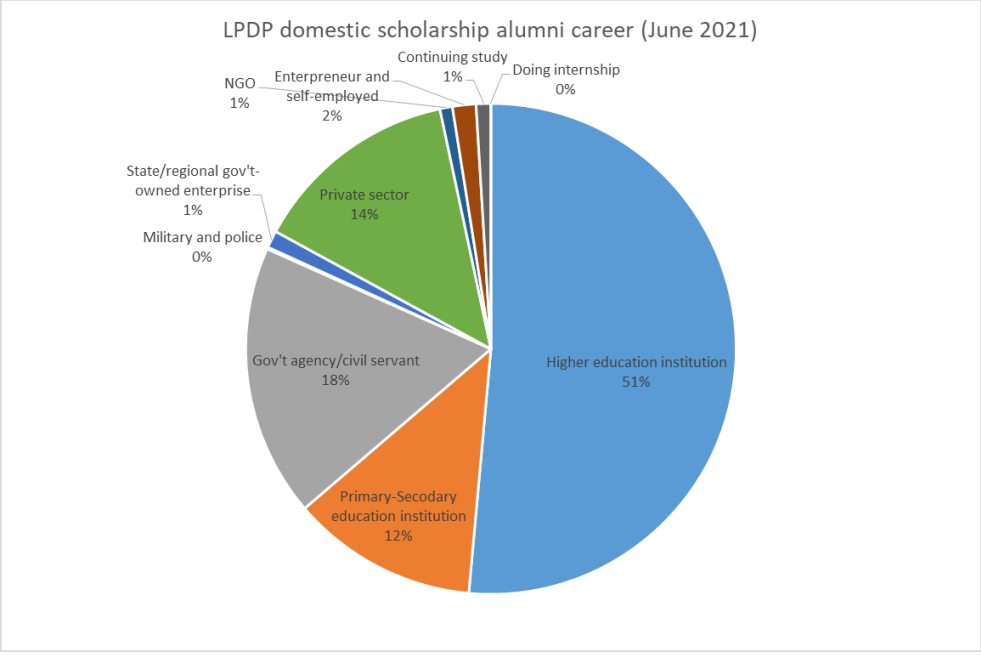

Figure 9 Proportion of LPDP domestic scholarship alumni's career (categorization provided by the LPDP management, excluding alumni who did not report their status). Source: Information request to LPDP, per-June 2021.

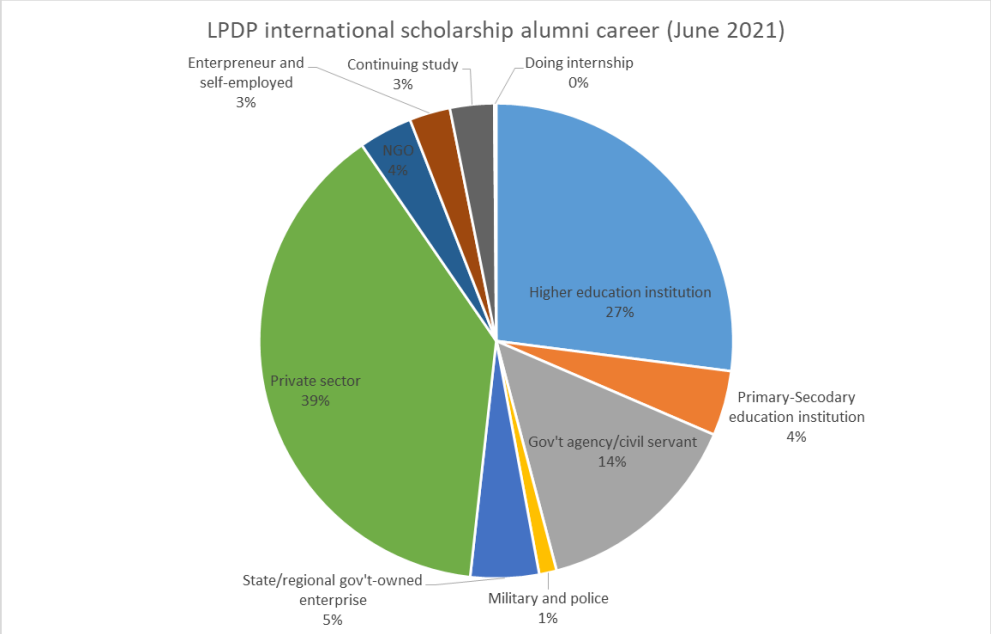

Figure 10 Proportion of LPDP international scholarship alumni's career (categorization provided by the LPDP management, excluding alumni who did not report their status). Source: Information request to LPDP, per-June 2021.

Alumni data per-2021 showed that the biggest group for international scholarship master's degree alumni (31.6%) went to work in the private sector outside education, however, the vast majority of doctoral degree alumni (75.9%) went to work at higher education institutions, and less than 1% went to non-education private sector. Higher education institution is a popular choice for both domestic and international scholarship alumni. The lack of doctoral degree graduates entering the private sector (outside education) might reflect the absorption capacity of Indonesian economic structure—e.g., the lack of suitable jobs in research and consulting for people with the qualification. Another possible explanation is that holders of master's degree interested in further continuing their education are still tend to be limited to those already employed either in educational institutions or the bureaucracy (cf. JICA, 2001 for a similar case happening with previous government scholarship programs).

On the other hand, especially for master degree scholarship, study abroad alumni are more inclined toward working at the private sector. Hence, the LPDP scholarship, especially for

master degree, differed with previous government scholarships catering for university lecturers and mid-career government workers in that it served to broadening base of international graduates with advanced degrees and supplying them to the private sector. Such output may reflect an extension of "subsidized learning," part of catch up strategies for developing countries (see e.g. Amsden 2001/2003, pp. 6-7 and Benhabib and Spiegel, 1994) more commonly associated with expanding the access of secondary and higher education (i.e. diploma and bachelor degree) (see e.g. Hanushek, 2013 and Barro and Lee, 2013). On the other hand, despite the apparent desire of the LPDP management to also produce entrepreneurs (LPDP, 2018),[51] not many of the alumni became ones or were self-employed. However, given that the program is still very recent, it is not impossible that more alumni could become entrepreneurs in the future after gaining working experience first.

A significant number of alumni have not reported their career status, and in the June 2021 data provided by the scholarship management, the number of alumni opting to continue their study is suspiciously low. Given that there is no reported number on alumni still looking for job, some of the unconfirmed may simply be in the course of job-hunting. Nonetheless, an interview with several LPDP scholars and alumni also raised a possibility that some alumni decided to continue their study without properly reporting their condition to the scholarship's management, due to strict rules on compulsory return and the difficulty (either perceived or actual) on getting approval for continuing studies, especially around the time when the compulsory return policy was either enacted or made explicit.

For example, Heru (male, domestic master's degree scholarship), who received the LPDP scholarship to pursue a master degree at a top university in Indonesia in 2014 when he was already working at a governmental research institution was sent a warning letter by the LPDP management when he was pursuing his doctoral degree in Japan with a non-LPDP scholarship and was already granted an official leave by his institution, that his being abroad was a breach of contract. Despite working for a government institution and already receiving

[51] The LPDP management also held several online talk shows revolving around the theme of entrepreneurship, dubbed "How to sell yourself," which have been uploaded to YouTube at least since July 2021.

an official study leave, he was asked for additional documents including an explanation letter signed by a government minister.

However, it is quite likely that the stance and strictness of LPDP management in regard postponing the compulsory return fluctuated. Gita (female, master's degree in Japan) signed her contract with LPDP to pursue a master degree at a university in southern Japan in 2016, also said that her contract did not mention the compulsory return rule but she knew that it was enacted or made explicit during her study. Gita was not confident that she would be granted another scholarship by LPDP to continue to doctoral program, and decided to apply only for the permission not to return immediately and look for another funding, which she obtained. Gita said that initially, for the permission to postpone her return she was asked to write an application which included three essays. However, she said that in the middle of her application process she was notified that her application has been granted.

Regional distribution of the alumni

Most awardees interviewed for this research, including those who were critical toward the compulsory return policy or LPDP policy concerning alumni career management in general, seem to have some degree of commitment in contributing to Indonesia, either based on nationalism, feeling of indebtedness toward the country, or other personal feelings. Iqbal (male, doctoral degree in England) who went to a university in southern England in 2018, said that although he believes that LPDP alumni should be given more freedom in continuing their study or to take up relevant and useful internship positions abroad, he also expects LPDP scholars to bear in mind that the scholarship is meant for people willing to contribute specifically to Indonesia. Iqbal said that he applied for the scholarship because he felt that the program's vision and objectives fitted him well, adding that he planned to build his career in Indonesia. Another awardee, Angela (pseudonym, prefers not to identify gender) who went to get a master degree at a university in southern Japan with LPDP scholarship in 2015 after working at an international organization's office in Jakarta continued to pursue a doctoral degree at the same university without LPDP scholarship and without properly notifying the LPDP management, stated that they plan to return and work in Indonesia after

finishing their doctorate, having been persuaded by a friend to do so for the sake of contributing to the Indonesian society.

While some level of expectation to return to one's hometown upon graduating seems to be set during the selection process, the enforcement of anti-brain drain measure (compulsory return) applies only at the national level, hence it does not seem to matter where in Indonesia the alumni decide to go after returning to the country. Combined with factors like the availability of suitable employment and other personal motivations, this allowed for a domestic reallocation of human resource/capital.

Although the sample size is considerably smaller, there is an indication that the scholarship program may promote urbanization or concentration of highly educated human resource in development centers. There is a tendency of alumni getting redistributed geographically into more urbanized areas and development centers, as well as provinces hosting Indonesia's top universities,[52] as presented in Table 19 below. For a context beyond notes provided with the table, Jawa Barat is also home to ITB and UI, two of the top 3 universities (although UI's main campus is located near provincial border with Jakarta), while Yogyakarta is home to UGM, another one of the top 3 universities along with UNY, another institution in the list of top 20 institutions producing LPDP scholarship awardees.

[52] As a caveat, the gap in the sample size between the LPDP awardees' domicile before and after their study does reduce the level of confidence of any inference made from this data.

Province	Awardees (percent)	Alumni (percent)	Notes
Jawa Barat	23.47	27.51	B, C
DKI Jakarta	20.45	27.16	A, C
Jawa Timur	10.69	9.01	C
Jawa Tengah	7.76	5.54	C
Banten	6.92	7.30	B, C
DI Yogyakarta	5.74	6.59	C
Sulawesi Selatan	3.02	2.50	Y
Sumatera Utara	2.22	1.48	D, Y
Sumatera Barat	1.95	1.05	D, Y
Aceh	1.87	0.90	D, Y
Nusa Tenggara Barat	1.84	1.79	Z
Nusa Tenggara Timur	1.75	0.62	Z
Bali	1.50	1.95	C
Riau	1.16	0.39	D
Papua	1.13	0.20	Z
Lampung	1.08	0.86	D, Y
Sumatera Selatan	0.91	0.55	D, Y
Kalimantan Timur	0.85	1.09	E, Y
Kalimantan Barat	0.79	0.66	Y
Maluku	0.54	0.04	Z
Kepulauan Riau	0.49	0.27	D
Sulawesi Tenggara	0.48	0.70	Y
Papua Barat	0.46	0.12	Z
Bengkulu	0.45	0.12	Y
Sulawesi Tengah	0.45	0.20	Z
Jambi	0.44	0.35	D
Kalimantan Selatan	0.38	0.00	Y
Sulawesi Utara	0.31	0.12	
Maluku Utara	0.26	0.12	Z
Sulawesi Barat	0.20	0.12	Y
Kepulauan Bangka Belitung	0.18	0.31	D
Gorontalo	0.11	0.20	Y
Kalimantan Tengah	0.08	0.12	Y
Kalimantan Utara	0.08	0.08	Y

Table 19 Domicile of alumni according to LPDP management's alumni survey, data per-June 2021 (%Awardees n=7986;
%Alumni n=2563; Blue shows provinces where percentage of alumni after graduation is greater or equal to percentage of alumni before their study with LPDP scholarship; red shows the otherwise. The gap in sample size between pre-departure and post-study means that this might not reflect the actual condition. Notes:
A: Capital of Indonesia.
B: Contains parts of the Jabodetabek capital metropolitan area.
C: Part of Jawa-Bali region of development, considered to be the most economically advanced region, designated as the center of national economic activities (Bappenas, 2010-2014 Medium Term National Development Plan)
D: Part of Sumatera region of development, considered to be next to Jawa-Bali region in term of economic development (Bappenas, 2010-2014 Medium Term National Development Plan), close to an international shipping route.
E: Planned location of new Indonesian capital city.
Y: Contains at least one municipality eligible for LPDP affirmative action program (2018 list).
Z: Contains five or more municipalities eligible for LPDP affirmative action program (2018 list).

An awardee mentioned earlier, Gita, planned to work in Indonesia upon graduating from her doctoral program, but most probably not in her hometown of Pemalang in Jawa Tengah Province due to the lack of suitable formal employment there. She stated that while she prefers teaching or research career, she would be fine with any job where she can properly utilize her knowledge. Nonetheless, she said that even if there were no regulation on compulsory return and service period, she felt bound and morally indebted to Indonesia for receiving the scholarship. On the other hand, she said that she does not necessarily hold the same feeling toward Japan as she believed that her funding for doctoral degree is akin to salary she gets for contributing in research projects at her university.

Among awardees who are already working at the time of interview, Desi (female, master's degree in Australia), a native of Makassar who went to Australia using LPDP scholarship in 2016, said that although she originally planned to return to her hometown (itself a provincial capital, and can be said also a center of development in central Indonesia) to run a non-governmental organization working on heritage preservation, she ended up taking up the offer to teach at her alma mater university in Bandung, provincial capital of Jawa Barat Province. Desi believed that with for her field of expertise, taking up a teaching position at a university would allow her to better contribute to her hometown compared to physically returning there to found an organization.

Another reference on the availability of suitable career could be seen in the case of Eka (male, master's degree in England), a Jakarta native working as a risk engineer at a major national insurance company in Jakarta, who pursued his master degree at a university in northern England using LPDP scholarship in 2016. He narrated the difficulty in finding a "suitable" employment upon returning to Indonesia because positions which fully utilize his expertise in fire engineering have become common only in countries like the UK, USA, China, Japan, and the Middle East, and not yet in Indonesia. He narrated how another prospective position in Indonesia was "too general" for him to fully utilize his knowledge, and on the other hand how his current colleagues mostly came from mechanical engineering, civil engineering, or chemistry background—fields of study more common in Indonesian universities.

LPDP scholarship as a re-allocation of human resource at the national level

Although affirmative action programs exist within the LPDP scholarship, these served more as a mean to improve the equitability at the input-side (i.e. broadening candidates' base), and less for the output-side (i.e. to distribute the produced human resource/human capital to the less-developed region). This phenomenon might be in line with the Indonesian government's approach to the intra-national (regional) economic development vision which makes use of development centers—at municipal level, i.e., cities—where capitals are expected to accumulate and lead the development of a group of provinces in a geographically delineated division of labor (Bappenas, 2014b). However, if[53] the finding on the alumni domicile reflected the actual situation, the government may need to make a future arrangement to ensure enough alumni go to the relevant centers of development.

For some LPDP awardees, the commitment to contribute to Indonesia binds them only at the national level, and not necessarily so at regional level. This serves a double purpose of preventing leakage of human capital abroad (at least temporarily), and facilitating the transfer of human resource/capital into development centers across the country. This may have an important future significance for TFP studies as previous finding showed that simply increasing the overall quality of human capital may not in itself improve the economy (Hanushek, 2013), and that where the highly educated human capital ends up on the economic structure might also matter, as shown for example in one case study on India where too many educated cohorts entering government service, mostly as low level bureaucrats, as a potential cause of human capital level not properly contributing to economic growth (Schundeln and Playforth, 2014).

[53] "If" is used due to the low sample size and that only alumni distribution data at provincial, instead of municipal, level was available.

2. Perception of LPDP scholarship awardees

Ready and willing to "serve the country"

Perhaps due to the term and condition for applying as well as the filtering which happened during the selection process, virtually all LPDP scholarship awardees interviewed here exhibited some degree of desire and willingness to contribute to the Indonesian society. In the literature of skilled migration and diaspora, this willingness is seen as an "intrinsic motivation" for the individuals with experience of moving or studying abroad to contribute to the society back home (see e.g. Kuznetsov, 2013).

An awardee mentioned earlier, Iqbal, said that he applied for LPDP scholarship because he found its visions and objectives fitted him well, adding that he had always wanted to build his career in Indonesia, adding that the LPDP scholarship is among the few relatively viable option for Indonesian students to get a doctoral degree in England. Iqbal also pointed out the filtering potential of the scholarship program:

> *LPDP scholarship awardees are no different from awardees of other scholarship programs. If there is any difference, maybe it is that LPDP seems to specifically focus on applicants willing to contribute to Indonesia.*

Another account came from Eka, who voiced his hope for a clearer expectation in the contract signed by the scholarship awardees. He stated that especially in the earlier batches, the awardees were bound by their contract to "serve the country" without a proper explanation of what is expected from them. This implied his acceptance of the commitment to contribute to the country and his perception that his colleagues may feel the same.

A more personal illustration regarding the willingness to give back to Indonesia is given by Gita:

> *Even if there were no binding regulations, I felt that I am morally indebted to Indonesia, but I don't feel as the same toward Japan because [the funding that I now get to use] is akin to [the salary in] a job contract.*

Another illustration is provided by Angela (prefer not to identify gender, master's degree in Japan; when interviewed they were doing their doctoral study in Japan using another source of funding) who, unlike Gita, did not tell the LPDP management that they left Indonesia just

a short while after returning from their LPDP-funded master's degree study to pursue a doctoral degree due to the concern that they would not be granted the permission to leave. They said that that they were conflicted about whether to pursue a career abroad, but a friend in Indonesia convinced them about their duty to return and serve the country, and decided to return to Indonesia after obtaining their doctoral degree.

As the applicants were asked about their plan to contribute to Indonesia after finishing their study, virtually all of them have some image on how they would see themselves in the future. Among the awardees interviewed for this research, some said that they want to contribute by being an expert in their field of specialization, some stated that they want to get a teaching position at a university—including a mid-career regional government bureaucrat, and one wanting to work with the civil society by setting up an NGO.

Nuanced views on the obligation to return to Indonesia after graduation

While pretty much all interviewed awardees showed the motivation to contribute to Indonesia, their views on the roles that LPDP scholarship awardees should play are nuanced and relatively varied. Moreover, the notion of "better contributing from abroad" as has been observed in the literature (see e.g. Oldac, 2022) is found in several forms among the interviewed awardees.

Cahya (female, master's degree in Japan) supported the compulsory return rule for LPDP scholarship awardees:

> *As LPDP spent financial resources (to send its scholarship awardees abroad), I think it is quite fair for it to create a rule so that the country would get something in return. This is considering that not just a few awardees might opt to look for job and stay abroad, hence their rate of contribution to Indonesia would be relatively diminished.*

Being a mid-career civil servant, Cahya noted that the rule that binds LPDP scholarship awardees in general is less-strict that the one that binds her as a civil serving taking a study leave, in which there is practically no leeway for post-graduation activities. She also suggested that the management should facilitate job placement/dispatching or provide internship opportunities for the scholarship alumni.

Fluffy (female, doctoral degree in Japan) believed that LPDP awardees are bound by the scholarship's rules, but also believed that the sudden announcement and enforcement of the compulsory return policy could give uneasiness especially for awardees who have not yet had a job offer upon their return.

A similar voice was given by Bambang (male, master's degree in Japan). He said that he already knew from the start that the awardees would be required to return and work in Indonesia upon their graduation, and at the time of the interview was in the process of applying for a civil servant position at the Energy and Mineral Resources Agency of his home region's provincial government while working as a freelance consultant. He believed that the LPDP policies regarding the awardees career path "is not yet good" and that the management should consider an integrated career support system which could "bridge the awardees with jobs that enable them to contribute to the country in a more real way." His statement on contributing to Indonesia "in a more real way" probably referred to post-return programs organized partly by the scholarship management, where the scholarship alumni were invited to give motivational talks to school students.

Gita voiced the same concern with Bambang. Although when interviewed she already had a career plan of her own, she argued that the current alumni/talent management system is not yet optimal. She explained that there is no structured career development program, and related programs organized by the awardee alumni association still tended toward one-off social service activities instead of a proper career development support.

Desi (female, master's degree in Australia) said that she does not have problem with programs and regulations of LPDP, as she was sure that the rule is actually flexible as long as the awardees themselves stick with a career path relevant to the needs of Indonesian society. She added that in the current pandemic many things have changed and reconditioned, a fact that she believed would encourage the awardees to think of new solutions in their respective fields of study. However, she also argued that LPDP should be "more realistic" in implementing its policies, given how the opportunity to study abroad could broaden one's vision of what kind of "contribution" is possible:

> *Does it mean that the international scholarship awardees who are now working abroad are not making any contribution to Indonesia and their home region? Everyone has their own roles, including LPDP alumni who graduated from various countries. In my opinion, as long as the goal is to develop Indonesia into a better country, people wanting to play their own roles according to their own expertise is not something bad. Once again, as long as the aim is to drive the nation into a success, why not?*

Some interviewees implied that while they are not against the compulsory return policy, they believe that the timing to go back to Indonesia should be more flexible. Iqbal, who landed a teaching position at a university in Indonesia before embarking for his doctoral studies, believed that although in the end all awardees ought to return to Indonesia, they should be given more agency to decide on the timing:

> *The obligation to return should be considered in a case by case basis—each awardees has their own conditions, some of them may not be able to return to Indonesia yet….For example, for those who studied astronomy, if they managed to land a position at NASA, a period of internship there would be a learning experience on its own….It is when the alumni are just staying abroad without a clear justification, that the scholarship management should act more sternly.*

On the other hand, Iqbal also said that he believe that LPDP scholarship returnees should not be given preferential treatment like automatically granting them positions as a civil servant, as it would be unfair for others with similar qualifications. He added that optional supports like setting up a career consultation center or entrepreneurship workshops would be acceptable.

Another similar opinion on the timing to return to Indonesia came from Eka, who specialized in fire safety engineering and risk management, said that his field of specialization still has a rather limited presence in Indonesia, and that scholarship awardees studying in specialized fields ought to be given more opportunity to do internship abroad.

> *For such specific careers with limited employability in Indonesia, I think it would be better if the alumni are permitted to work abroad (for some time), before they come back and serve the country. There is nothing to lose with (a scholarship graduate) getting some work experience….So it is just about the employability of specialists versus generalists. In that regard, I think LPDP has tried to provide an opportunity of doing internship for a year, but I think it is not enough if one is working at a specialist firm.*

LPDP scholarship awardees as patriotic elites to lead the society

Interview with the awardees showed that the LPDP scholarship has so far been able to secure at least a factor which can be beneficial to facilitate contribution by the awardees, namely their intrinsic motivation to contribute. Although the motivation to contribute, by itself, is not sufficient to enable contribution (Kuznetsov, 2013), it is worth to note that such motivation is not something that can be taken for granted. In a study focusing on young adults from Turkey who went to study abroad without a scholarship from the Turkish government, Oldac (2022) found a common theme among the students that returning to the home country after studying abroad does not necessarily indicate a willingness to contribute to their home country's national development. This unwillingness to contribute may stem from antipathy towards the country and/or its government, or simply as an expression of apathetical view that the country has not provided something worth giving back to.

In LPDP scholarship case, other than the obvious benefit given to the awardees in form of scholarship money and opportunity to study abroad, the application/selection system also acts as a filter, cutting-off those who are deemed not patriotic enough from obtaining the scholarship (cf. Matthews, 2007 on a similar observation with Turkish government scholarship, and Moss, 2016 on how government scholarship was used by Libya to exert control over its citizens abroad). Furthermore, both inside and outside the formal framework, high ranking government figures often remind the awardees of their duty and the expectations placed upon them. Hence, it is not strange that the awardees interviewed for this research are generally willing to contribute to Indonesia.

Another aspect which ought to be considered is that even outside the rhetoric forwarded by public figures, the awardees of LPDP scholarship are indeed the elites in term of academic achievement and perhaps performance in their workplace or social environment, as seen in their academic background and the finding that at least some of them either have managed to obtain—or see themselves as capable of obtaining—other sources of funding for their advanced studies, and some had previously worked in relatively prestigious institutions. There is a solid ground to believe that they are cut above the average (cf. Liu-Farrer, 2009 for example, for an illustration of the "typical" recent Chinese skilled migrants in Japan), and

hence the government would have all the incentives to secure their motivation to contribute to the development back home.

3. Conclusion

There are some differences in the LPDP scholarship alumni's career between the domestic and study abroad program, with the study abroad program notably contributed more to the private sector. Other than the theoretical creation and accumulation of human capital to the TFP pool, this can also be seen as a way to subsidize the private sector by providing more educated human resource in the labor market, ready to use, by extension to prepare the ground for future policies related to catch up industrialization and innovation (see e.g. Avnimelech and Teubal, 2008 cf. Romer, 1990 and Katz, 2006). In Indonesian context, this can be seen as an extension of the government's policy direction which consider the private sector and the industry to be an integral part of national economic development (see e.g. Sato, 2019) through an arrangement of "public-private partnership" (PPP), and the realization that most of investment, at the present and in the future, is expected to go to the private sector (see e.g. Bappenas, 2014b). The compulsory return policy (or compulsory stay in case of domestic scholarship) which binds LPDP scholarship awardees at the national level could also serve as a mechanism for re-allocating human resources to development centers across the country. However, the lack of more detailed information at the moment prevents further analysis on this aspect of the program.

Applicants of LPDP scholarship are also required to have some image on how they would contribute to the country after their study as part of the application and selection process. From the interview, it is clear that the awardees are generally motivated to contribute to their home country's cause after finishing their study. At the same time, however, their opinions are split on whether returning to Indonesia directly or very shortly after finishing their study is really a necessary part of their contribution. The opportunity to study abroad gives people not just knowledge and skills particular to their fields of study/specialization, but also introduce them to the globalized world, and through the global labor market,[54] their

[54] …and/or international division of labor, the world-system, et cetera.

position within it. In the word of former-Vice President Jusuf Kalla, the opportunity gives them the benefit "of comparison" (Tempo, 2019). Equipped with the knowledge and experience that they obtained abroad, some of the awardees support the compulsory return policy, citing the concern over their cohorts getting attracted to work abroad and thus not contributing/giving back enough to Indonesia. Some questioned the limitation placed upon them to choose to work outside the country which might for some cases be the better, or at least just as good, way to contribute to the home country (cf. for example Oldac, 2022). Some just asked for more agency to choose the timing, citing better opportunity to learn on-hand abroad—a position similar to the one held by former-President B.J. Habibie who stated that the working experience is crucial for engineers, even those with advanced degrees (see Makka, 2017 pp. 143-144).

The case of Gita and Desi as narrated earlier also reflected how rhetorical goals of education according to the Indonesian government like developing "noble mind" of the citizens and their sense of "patriotism" (Bappenas, 2007) can go hand in hand with overtly economic goals of getting internationally competitive. For short-term practicality, filtering scholarship candidates based on perceived sense of patriotism serves as a pragmatic anti-brain drain measure given the potential mobility and agency of highly-educated individuals (see e.g. Artuc et al., 2015), and at least for doctoral degree awardees this relatively short time-frame could be crucial as Gaule (2014) suggested that migration-related decision for academic scientists might be determined in the early stages of their career, and that progression of both career and private life while staying abroad correlates with the lower willingness of skilled migrants to return to their home country (Sbalchiero and Tuzzi, 2017). That said, the suspiciously low reported number of LPDP alumni continuing their studies could suggest that this anti-brain drain measure might not necessarily be enough.

Chapter 7

Summary and conclusion

This final chapter begins with a summary of chapter 3 through chapter 6, before presenting the answer to each of this dissertation's sub-questions and finally providing a conclusion by answering the main research question. It closes with a policy recommendation and suggestions for future research.

1. Summary of previous chapters

Chapter 1 provided an introduction to this dissertation, and Chapter 2 introduced relevant literatures focusing on (1) scholarship programs in the context of international education studies, (2) academic mobility, and (3) approaches to national economic development focusing on those espoused by the Indonesian government like TFP, competitiveness, and international catch-up.

Chapter 3 has demonstrated that LPDP and its scholarship program reflect the increasing integration of Indonesian government policies in education and research, and between "science and technological capabilities" and economic/industrial development that can be traced back to the New Order Era. This incentivized the government to put on more resources on higher education, yet such reallocation of resource could not be carried easily in the post-1998 political landscape. Hence, LPDP as an endowment fund came about as a mechanism to allow a smaller number of stakeholders the access to "education budget" separate from the regular budgetary mechanism, essentially a developmental-state-like exceptionalism.

Chapter 4 demonstrated how LPDP as an endowment fund tied up government's policy on education with that of economic objectives through human resource and human capital development. Furthermore, the chapter argued that the enduring centrality of the post-

graduate scholarship as part of the endowment fund's programs throughout the changes in its policy direction and mandates signals the government's willingness to bet on the long term with the scholarship, both to extend the scope of subsidized learning and to develop the country's private sector. It also showed the shift of Indonesian government's approach to elite creation, from specifically targeting relatively few individuals who were already on their way toward leadership and/or technocratic expert positions (cf. Bresnan, 2006), into a relatively mass-produced elites to be diffused throughout the national economy.

Chapter 5 argued that technocratic legacy within the Indonesian government and bureaucracy, e.g. the experience of high ranking government officials and bureaucrats of either studying abroad themselves or of working/getting acquainted with people who did so, contributed to the design and objectives of LPDP scholarship program, including the emphasis given to the international scholarship. It also contributed in shaping the expectation placed on the shoulders of LPDP scholarship awardees that they would figure out their own ways to contribute to the development of Indonesia. Shifting the obligation from working at specific institutions like the New Order Era scholarships into just working anywhere in Indonesia served to address the problem of scholarship alumni (returnees) failing to optimally utilize their hard-won knowledge and skills by lifting the structural limitation in form of rigid workplace structure and bureaucracy. These observations demonstrated how past experience of studying abroad accumulated in the government and bureaucracy and informed the decision to modify the structural mechanism related to the utilization of government-sponsored scholarship program for national development agenda (cf. Skeldon, 2008, Faist, 2008, Bamberger, 2022).

Chapter 6, picking up from the previous chapter, in addition to early findings which showed an indication that the compulsory return policy serve as a mechanism for re-allocating human resources to development centers across the country, showed how the scholarship ties up ideological factor like patriotism with practical economic objectives such as provision of highly skilled human resource and prevention of brain drain. While having nuanced views on the obligation to return and work in Indonesia after finishing their study, the awardees interviewed for this chapters are generally motivated to contribute toward development in Indonesia. Other than illustrating the effort to create and/or nurture intrinsic motivation as

a factor crucial to encourage contribution by the scholarship awardees toward national development (cf. Kuznetsov, 2013), this chapter also provided potential inputs for further calibrating economic measurements like TFP and competitiveness through the example of human resource reallocation enabled by the scholarship program (cf. Benhabib and Spiegel, 1994, Hanushek, 2013).

2. Answering the sub-research questions

The answers to the sub-questions would serve as a mean to tie up findings and conclusions of the previous chapters with the main agenda of this research.

a. Why and how the Indonesian government developed the LPDP scholarship?

Chapter 3 and 4 argued that LPDP and its scholarship program reflect the growing integration between education, research, and economic development policy, as well as the technocratic tendency within the Indonesian government. LPDP as an endowment fund is created as a response to the hurdles, especially in the context of post-1998 budget bureaucracy, in reallocating resources into higher education sector which historically has been an outlier within the national education system. Chapter 5 added to the discussion an observation of how the shared experience of high ranking government officials and bureaucrats in regard to studying abroad and shared perception on the ability of highly educated experts to make special contributions for the country—i.e. the technocratic legacy—helped shaped the scholarship program. Backed by the aforementioned special budget mechanism, the scholarship can be seen as an effort to broaden the technocratic base beyond the government and the bureaucracy, to include leaders in the private sector as well.

b. What are the constraints faced by the government in implementing the program?

Especially for the scholarship, findings in chapter 6 showed that the vast majority of doctoral scholarship alumni still went to higher education institutions, showing the apparent limit of absorptive capacity of the non-education private sector for human resource with advanced education. The same chapter also showed how the current alumni management system was, at the time of this research, still dependent on voluntary reporting by the awardees/alumni,

resulting in the relatively lacking alumni data. Another finding worth noting is, as shown in chapter 4, although the application is theoretically open to all citizens, factors like previous education still affect the access to the scholarship. Shifting the focus to LPDP as an endowment fund, chapter 4 showed that although LPDP has been carved out of the regular national annual budget, there are still political factors affecting its policies and programs.

c. How do the scholarship awardees' career path and perception compare to the government's aim in regard to the program's implementation, and by extension to the economic development plan?

Keeping in mind the aforementioned finding on the apparent limit of absorptive capacity of the non-education private sector for human resource with advanced education, LPDP international scholarship does manage to provide highly educated human resource for not only the government and bureaucracy, but also the private sector in Indonesia. Findings in chapter 6 also showed that the awardees interviewed for this research are aware of the expectations placed upon them. Although they are split in their views on the obligation to return directly or very shortly after finishing their studies, they showed the willingness to contribute to the development in Indonesia.

3. Conclusion

With the answer to the three sub-questions established, it is time to come back to the main research question of "How the government scholarship program under LPDP scheme serves as an instrument for human resource/capital development in Indonesia in relation to the country's effort to catch-up with the world-economy." The LPDP international scholarship program (and to an extent its domestic counterpart as well) can be seen as an organized skilled-migration designed to provide highly trained human resource with the motivation to contribute toward national development, and can be employed not only by the government but also in the private sector in Indonesia.

This program, backed with an alternative budget mechanism, can be seen to reflect a technocratic tendency within the government. The legacy of this technocratic tendency also

informed the expectations set upon the scholarship awardees, that they would return to Indonesia and figure out the best way to contribute (or payback) to the country, creating a class of "leaders and professionals" loyal and motivated to contribute to the national development. While there is a relatively high degree of freedom (agency) given to the awardees, they are at the same time is restricted by the anachronistic brain leakage control mechanism originally intended for scholarship programs meant to secure human resources for specific government institutions.

As a policy product of the Indonesian government, LPDP scholarship displayed an interesting set of values, assumptions, and to some extent ideologies (see Olssen, Codd, and O'Neill, 2004 p. 72). It is posited both as a policy of education (and human resource) and of (mainly economic) development, a product and legacy of the wider technocracy of Indonesia, of men and women who (or were raised/taught by people who) grew up in post-colonial society (see e.g. Bresnan, 2006), educated in (especially but not necessarily limited to) the West. Its method of funding and execution shows a developmental state-like tendency—the insight on which could contribute to furthering the discussion on the role of technocracy in a relatively democratic society (cf. Khoo, Tadem, and Shiraishi, 2014, Sato, 2019, cf. Mietzner, 2020a) which perceives itself as being still in development and needing to catch up.

As mentioned early on, its assumptions include the crucial role of human capital and TFP in improving the country's economic prospect in the future. It deals, however, not with the public provision/subsidizing of primary-secondary education (cf. Phillips and Schweisfurth, 2006 p. 70) or even tertiary education (in the narrow sense of diploma, bachelor, and equivalent degrees, cf. for example Barro and Lee, 2013, see also Indrawati and Kuncoro, 2021), but the upper-end of training and education for a relatively few number of individuals—although on the scale larger than ever before in the country's context.

Especially for LPDP international scholarship, there is also the dimension of international mobility—of people, knowledge, and ideas. The program, being an organized circular migration (cf. for example Faist, 2008), serves not only to gain knowledge and ideas from abroad. In the transnational structure of mobility that is presumed by LPDP, the scholarship awardees are obviously not set up to be the "wanted but unwelcome" migrant workers (cf.

Faist, 2010, Xiang, 2013), but instead a class of individuals equipped with transnational experience and competence yet loyal and ready to serve their home country (LPDP Kementerian Keuangan, 2021). The explicit expectation to serve (Indonesian: *mengabdi*)—including, *but not simply* to contribute—is quite similar with the language employed for example by the Chinese government (*huiguo/weiguo fuwu*, see e.g. Faist, 2010, Liu and van Dongen, 2016), can be seen to also imply the Indonesian government's confidence in the capability of its overall national education system to create citizens conditioned to serve the interests of the nation (see e.g. Green, 1997 p. 35)—along with the confidence placed in the selection system for the scholarship.

Another conceptualization that can be inferred from LPDP scholarship is that it acknowledges the potential gains from the mobility of people, knowledge, and ideas for Indonesia as a developing country, yet at the same time also represents a form of resistance by a nation state against the transnational world. With its ultimate goal (international competitiveness and economic catch up) being readily compatible with mainstream discussions in the field of International Relations (see e.g. Walt, 1998, Grugel, Riggirozzi, and Thirkell-White, 2008), it also represents an attempt by Indonesia to manage a set of "transnational actors" (see e.g. Nye and Keohane, 1971) and utilize them while navigating the international structure (see e.g. Buzan, 1993) using both theories learned from the West and knowledge and experience passed through (still understandable few) generations of leaders, thinkers, and institutions like government service and bureaucracy. Combined with the domestic aspects of the making of LPDP and its scholarship, it also represents how day to day politics and economic policy-making in Indonesia have become intertwined with the country's international relations without necessarily passing through the institution of diplomacy. These insights could help inform the development of International Relations (and international political economy) theories especially catered for developing and/or non-Western countries (see e.g. Chen, 2011) going forward.

All things said, it is important to remember that this program is still young, and the ongoing pandemic can be seen as a buffer (or maybe watershed) period for future studies. Being an endowment fund, unless there is a significant intervention or external shock, the LPDP is likely to remain for a while. This along with the enduring centrality of the scholarship among

LPDP programs implies the government's willingness to bet on expanding the access to post-graduate education as a component of national economic development planning.

4. Limitation, policy recommendation, and suggestions for future research

Ultimately, as a public policy product, LPDP both as an endowment fund and a scholarship scheme ought to be reviewed. It will take time—if possible at all—to accurately measure the net benefit (or loss) of this program. As with other policies related to the TFP and economic catch up, isolating the effect of each single variables and measuring the impacts require separate endeavors—none are attempted in this dissertation. That said, this dissertation encourages a proper inclusion (i.e. theorization) of the roles of post-graduate degree holders (cf. Indrawati and Kuncoro, 2021) and/or migratory experience (cf. Mercier, 2016) into TFP estimation, not least because the Indonesian government has adopted the approach in its policy planning—although in the Indonesian context, the government has indeed conceptualized the exceptional role of higher education, both in the conventional academic/policy definition and in figurative definition (i.e. someone with a higher level of education).

As has been mentioned earlier, the limitation on both raw data on post-graduate degree holders' presence in the labor force in Indonesia and the lack of aggregative studies covering post-graduate degree holders make it difficult at this point to comment on the economic and societal impact of the scholarship program. Furthermore, it should be noted that as far as the human capital framework is concerned, the specific ways to measure the contribution of post-graduate degree holders not yet been established, and that the returns (i.e. profit) from elite education projects (e.g. post-graduate scholarship) may need to be measured differently from standard human capital models as it would be harder to quantify. An illustration of the latter was given by the former representative of the Ford Foundation in Indonesia, who argued that while the 1950s-1960s training project for Indonesian economists "failed to build a department" in the University of Indonesia—at least immediately, it succeeded instead in building a network of policy-making intellectuals

(Bresnan, 2006), who would become the early generation of Indonesian technocrats and left a lasting impact in the national economic and development policy for the decades to come.

Given the current rate of new post-graduate students in Indonesia—in 2019 those entering master degree programs account for about 10% of college freshmen, and those entering doctoral degree program about 1% (Kemenristekdikti, 2019), there is some ground for LPDP's vision that its scholarship alumni, i.e. post-graduate degree holders would enter the economy and attain some form of leadership position. Still, to facilitate the reviewing of LPDP scholarship, on the government-side there is a need to specify the concrete objective of the program and measure its success. Aside of using the number of intellectual properties generated like has already been used in the academia, quantitative evaluation can be done for example through the number of alumni occupying leadership positions, perhaps echelon levels in the context of government service or middle-high managerial positions at the private sector. The problem with this approach is that it would be more difficult to include self-employed professionals or those whose service and contribution cannot be easily seen through organizational structures—e.g. lawyers and medical doctors. Qualitative evaluation on the contribution by the scholarship alumni should also be done periodically to record the impact they had on their workplaces and their society—and/or environment. These methods ought not to be used exclusively, but in tandem and with the purpose of getting better and better understanding.

For the academia—possibly in collaboration with the government, further endeavors to better understand the impact of this policy would include, among others, studies on how the alumni of this (and other post-graduate and/or study abroad scholarship programs) contribute to their workplace, especially but not necessarily limited to their role in facilitating knowledge absorption/transfer or innovation, aggregative studies on the contribution of post-graduate degree holders and/or foreign graduates to economic growth in Indonesia (or developing countries in general) and how it in turn contribute to the effort to catch up, and more robust studies concerning the beneficiaries of the programs. A more open approach to information disclosure by the management and related government bodies would definitely benefit future research on this endowment fund and its programs, which in turn could contribute in the betterment of said policies.

Finally, as mentioned in the introduction, this dissertation left out several important and interesting topics directly concerned with LPDP which also connect to various aspects of Indonesian politics, economy, and society—in part due, but not necessarily limited, to the fact that the main body of materials for this dissertation covers only up to the year 2021. Discussion on how LPDP also highlight the dynamic of religion in Indonesian politics and society, a more in-depth political analysis on the making of LPDP including disputes and maneuverings in the parliament, lobbies by certain ministries, and roles of ministries and other governmental institutions are open for academic endeavors across disciplines.

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