Understanding the Evidence-Based Policy Making (EBPM) Discourse in the Making of the Master Plan of National Research (RIRN) Indonesia 2017-2045[†]

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Abstract

The government of Indonesia has initiated the Master Plan of National Research (RIRN) 2017-2045 as a policy umbrella of national research activity. The initiative has been in place since 2015, yet the process required a long period of coordination. And with the extensive movement of evidence-based policymaking (EBPM), there has been a call of expectation towards policymakers to accurately use scientific evidence in their policymaking process. However, the complexity of policymaking process renders the ideal notion of EBPM questionable. This research attempts to understand how the EBPM as an idea can shape the interactions of actors in the policymaking process by using the discursive institutionalism as the analytical framework. By conducting ten interviews with actors involved in the making of RIRN and close examination of the policy documents for content analysis, this research describes the institutional features of EBPM discourse in Indonesia, which are reflected in the interactions of policy actors in the policymaking process of RIRN. This research also offers descriptive and learning narratives on the role of discourse in the policymaking process.

Keywords
Evidence-based, policymaking, discourse, research policy, Indonesia

1. INTRODUCTION

Considered as one of the largest economies in the South-East Asia with huge populations, the government of Indonesia (GoI) has acknowledged the "not-so-good" achievement of Indonesia in term of competitiveness and innovation.[1] The initiatives to strengthen the science, technology, and innovation (STI) sector were in place, yet the existing policies were not sufficiently effective to promote Indonesia's STI sector especially based on scientific research. In 2015, the Indonesian Ministry of Research, Technology, and Higher Education (Ristekdikti) announced the National Research Master Plan (Rencana Induk Riset Nasional; RIRN) 2017-2045, an official guidance to integrate future activities of science and technology (S&T) in the long-term. Ristekdikti and related government agencies such as the Indonesian Institute of Science (*Lembaga Ilmu Pengetahuan Indonesia*; LIPI) had waited the RIRN to become a Presidential Decree (*Peraturan Presiden*; Perpres), a regulation with higher authority.[2]

In the meanwhile, there are extensive movements in emerging countries to use evidence in policymaking process (EBPM). As the Overseas Development Institute (ODI) notes, the improvement of development performance in developing countries can be achieved through better utilization of evidence in policy and practice (Sutcliffe and Court, 2005). The idea is attractive as it assumes the policymaking process to be rational; and with such rationality, the process would be efficient and the policy outcome would be effective. Ideally, amidst criticisms against policy and political actors, the EBPM is a call of expectation towards them by advocating a rigorous and accurate use of scientific evidence in the policymaking process. However, the complexity of policymaking process renders the idea of EBPM questionable on its assumptions (Cairney, 2016; Parkhurst, 2017). In this regard, the fact that the RIRN process took around three years since the beginning of its preparation in 2015 reminds us that policy is a product of social relations, and the RIRN does not exist alone without the complexity of interactions.

This research study attempts to find an explanation on these interactions and seek the underlying idea of actors' interactions. For the foregoing purpose, the study starts with literature review of general EBPM studies and STI policies in Indonesia. Next, the analytical framework and methodology of this study is reviewed. This is followed by the empirical component of the study: the EBPM discourse in Indonesia and its manifestation in the RIRN making process. The next part is the discussion of the findings under the analytical framework of discursive institutionalism. The conclusion part summarizes the overall study including its policy and theoretical implications.

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[1]   According to the Global Competitiveness Index 2015-2016, Indonesia was ranked in 37th (World Economic Forum, 2015).

[2]   Recently, the government has issued this regulation under Perpres No. 83/2018 which is beyond the scope of this paper as the research and analysis were conducted before the release. However, some relevant notes regarding the document are present as additional information.

2. LITERATURE REVIEW: EBPM IN STI POLICY

Evidence for public policy has been known as the fundamental basis of policy since the Cold War era. The science battle with the Soviet Union in the late 1950s marked the United States (US) government's intensification of scientific approach in the policy formulation (Fischer, 2003). The battle between the two countries increased the role of social scientists and researchers; policy expertise became a growth industry for think tanks, university research institutes, and management consulting firms. The term "evidence" in this era was not literally mentioned, but it occupied an important position in policy science. In fact, the source of innovation and policy formulation for the society was centralized and organized around knowledge (Bell, 1973).

The term "EBPM" started to formally appear in the early 2000s when the UK Government under the Labor party published the White Paper called *Modernising Government*. The White Paper made clear that policy decisions should be based on sound evidence and policy should be made in the philosophical mind of "what works" (Nutley and Webb, 2000). The evidence-based policy's mission was to choose an intervention on the basis that it has a reasonable chance of repeating successful outcomes achieved elsewhere (Pawson, 2006, p. 22). As such, public policy was a matter of options and evidence was necessary to make the right rational choice. This type of rationality approach towards public policy implied a mission to rescue "public policy from the irrationalities and indignities of politics" (Stone, 2002, p. 7).

The political and institutional issue, however, still characterizes the practice of EBPM. The notion of "evidence matters" used by the advocates of EBPM generated an expectation that policy decisions need to "follow from rigorous and accurate scientific evidence" (Parkhurst, 2017, p4). However, this linear thinking attracted criticisms from the policy and political studies. According to the critics, the policymaking process has a complex dynamics and it would be naïve to view the linkage between scientific evidence and policy decision as something direct and unproblematic. In this regard, Lewis (2003) noted that the assumption of rationality in the EBPM is a "technocratic wish, located in a political world" (p. 259), implying that placing an emphasis on the politics of policymaking is particularly important instead of focusing merely on the evidence. Taking a view of realism, Pawson (2006) also noted that the policymaking process is unpredictable and not linear; the causal relationship between evidence and public policy outcomes is irregular and intervention works selectively (p. 22-23). Cairney (2016) also emphasized the limitation of evidence in the policymaking process as evidence cannot solve a matter of perception and ambiguity. In a more pragmatic position, Parkhurst (2017) revisited this critical tone by exploring the political aspect of evidence and policymaking, and then offered the governance approach in using evidence during the policymaking process. In short, the EBPM as a concept has evolved around the discussion between the use of evidence and the practical reality in which politics take place.

In the context of STI sector, this discussion of EBPM allowed two types of distinctive focuses in literature. On one hand, some studies focused on the role of science and scientific governance to improve the practice of EBPM (Choi et al., 2005; Holmes and Clark, 2008; Likens, 2010; Accordi-

no, 2013; and Saltelli and Giampietro, 2017). On the other hand, some studies applied the EBPM framework to review and analyze STI policies. In this regard, a study by Lee et al. (2015) provided a conceptual framework for better understanding of EBPM through the comparative case studies of the wind energy sector. This study showed the process of knowledge formation and different approaches and adoptions of EBPM between Spain and Britain in the emergence of wind energy industry. Similarly, Asmara and Handoyo (2015) examined the implementation of EBPM in the standardization policy of agriculture tools-and-machinery in Indonesia. This study made a comparative analysis by using the knowledge co-production and regulatory impact assessment including by exposing the vested interests that existed in the policymaking process.

From the existing literature, studies on the EBPM are usually concerned with the concepts of evidence, knowledge, and uncertainty in policymaking. Most literatures attempt to understand how the EBPM works within the political context of policymaking. However, the discussion of EBPM as an idea, which was shared by policymakers and policy actors, did not take place. The EBPM is a well-debated topic, but the term and idea itself were disengaged from policy review or policy analysis studies based on an assumption that the idea of EBPM was "given". Additionally, there is a lack of discursive narrative on the STI policy review. Technicality always drives the establishment of STI policy and somehow it is ignored that STI also involves naming and framing (see Kallerud, 2010; Schauz, 2014; Flink and Kaldewey, 2017). In the foregoing context, this study attempts to fill this knowledge gap by treating the EBPM as an *idea* within a *reality*, an effort to put back an idea into the discussion of STI policy.

3. FRAMEWORK AND METHODOLOGY

The objective of this study was to examine how and to what extent the policy actors embraced the EBPM and manifested it through their interactions. The main research question was: *how did the policy actors' understanding of the EBPM in Indonesia shape the making of RIRN*? To achieve the objective, this study scrutinized the EBPM discourse in Indonesia from the perspective of policy actors and the making process of RIRN. In this regard, this part 3 explains the analytical framework and methodology used in this research.

3.1. Analytical Framework

The study of ideas and discourses is well-known across various fields of social sciences, especially under the discursive approaches of public policy studies. This approach is associated with the constructivist and qualitative perspectives, and it is attentive to actors' subjectivity including the mobilization of their knowledge, interpretations of meanings, and particular context in which those meanings evolve (Durnova and Zittoun, 2013). The analysis also focuses on the 'frame conflict' in which the different interpretive actors value different elements (Fischer, 2003). Schmidt (2008, 2011) then further developed this approach into an analytical framework, namely the *discursive institutionalism* (DI).

This framework regards discourse as a general term that encompasses two elements: (a) the substantive content of ideas in which text and structure are in place, and (b) the interactive process in which contextual actors convey ideas (Schmidt, 2008, p. 309). In the foregoing context, there are three levels of ideas: *policies, programs, and philosophies*, which reflect the level of generality. Under the DI, "policies" refer to the specific policy solutions proposed by actors, "programs" encompass a more general idea including the norms and methods to be applied, and "philosophy" refers to underlying assumptions that are rarely contested. Schmidt (2008) then placed these ideas within the two contrasting institutional contexts. The first case concerned "simple" polities where the governing activity is channeled through a single authority. This kind of polity allows more elaboration on the communicative discourse to the general public than the coordinative discourse among policy actors. The second case concerned "compound" polities where the governing activity is disbursed among multiple authorities. Coordinative discourse among policy actors in this type of polity is essential regarding agreement and legitimation of such policy.

As a part of the ideational tradition in political analysis, the DI takes a view that ideas and discourses have a causal influence in making policy changes (McCann, 2014). "Discourse, just as with any other factor, sometimes matters and sometimes does not in the explanation of policy change. The question is '*when* does it matter'" (Schmidt, 2011, p. 62, original emphasis). Additionally, Hope and Raudla (2012) argued that the DI can also be re-modelled to explain policy stasis with a simple proposition: if discourse can make policy change to happen, sometimes, it *cannot* make such policy change. They extend the question by also asking *how much* (ibid, p. 404).

It is notable that the existing policy studies that use the DI framework often focused on the generality of policy change (see McCann, 2014; Wahlström and Sundberg, 2018). However, they left out the details of the policymaking process in which the influence of particular idea can become obscure during the relevant interactions. Idea can evidently matter in a temporal context of policy, but it is not often clear as to *how* it matters. Therefore, this study attempted to fill this analytical gap by using the DI to explain the relational element of policy and its ideas. This study preferred to focus on the policy process in which certain ideas take place rather than the policy ideas *per se*. This study also emphasized the discursive interactions *in* policymaking process with an assumption that the "discursive abilities" of policy actors are sometimes implicit in the coordinative discourse. In this regard, the purpose of study was to expose the mechanism of idea-to-action by exercising a specific discourse of policymaking within its practice. By focusing on this analytical aspect of DI, this study zoomed into the existing discourse that might not have *literally* appeared in the text or direct communication but subtly existed in the inter actions of policy actors.

3.2. Research Design and Methodology

This study used a critical narrative analysis, a methodology that combines a critical discourse analysis and a narrative analysis (Souto-Manning, 2014). A critical discourse analysis deals with the power of institutional and societal differences regarding language, and a narrative analysis offers a way to systemize experience. The first initial process is to notice both the commonality and differ-

ences of behavior (i.e., language use of particular term), and plotting the information that consists of actions, events, and happenings into stories as the outcome of analysis (Polkinghorne, 1995). Then, the stories are situated within the context of institutional realms. By unfolding the conversational narratives and asserting the institutional context, a critical narrative of analysis allows this study "to challenge the commonly accepted (and often monolithic) definitions … and reframing social interactions as places for norms to be challenged and changed" (Souto-Manning, 2014, p. 163). From this standpoint, this research attempted to integrate policy actors' understanding of the EBPM discourse in Indonesia and the content of RIRN policy through their personal experience in making the RIRN.

The study employed qualitative data collection of interviews and content analysis. The data were collected through desk-study and fieldwork in Jakarta, Indonesia in January-February 2018. The investigation started by conducting ten interviews with prominent representatives (policymakers, experts, and practitioners) who are from eight respective institutions involved in the making of RIRN and who are concerned with the policymaking practice in Indonesia (Table 1).

TABLE 1. List and Profile of Interview Respondents

Institution	Profile
Ministry of Research, Technology, and Higher Education (1)	People in the structure of policymaking with direct influence to the RIRN
Indonesian Institute of Science (2)	
Ministry of National Development Planning (1)	
Coordinating Ministry for Human and Cultural Development (1)	
Indonesian Academy of Science (1)	People in the non- structure of policymaking but involved in the making of RIRN having indirect influence
R&D Department of Ministry (1)	
Policy Advisors from Universities (2)	
Knowledge Sector Initiative (1)	

I carried out semi-structured interviews, lasting 60-90 minutes each, and conducted in Indonesian language. During such interviews, while the questions were determined in advance, I also improvised the interview questions to explore the answers necessary for the quality objectives of this study and used a check-list of necessary information required to maintain the quality of the question frame. The interviews were recorded, transcribed, and decoded to be compatible with the requisite research standards.

This study also used content data from policy documents to examine how the ideas and interactions result in policy content through close reading of three documents: the draft Presidential Decree on National Research Master Plan 2017-2045, the academic version of RIRN, and a material presentation from Ristekdikti on the RIRN. The integration of these three documents was conducted to review the whole substance of RIRN, followed by the cross-analysis of the interviews with the documentary content and examining the position of each content under the spectrum of EBPM discourse. The resulting overall discussion is presented in Section 5 of this study.

There are several limitations in this study because of its engagement with the subjective narratives of policy actors. First, the primary data cannot be generalized; it is temporal and specific within the discourse and the interactional exercise. Second, this study is limited to the construction of a direct causality between ideas and policy as the process itself is complex, and like any other factors, discourse sometimes matters and sometimes does not (Schmidt, 2011). Nonetheless, this study offers lessons on thinking about STI policymaking. Instead of providing a technical insight of STI policy, this study highlights the structural context of policymaking that affects the improvement of STI policy in Indonesia and questions the underlying assumption of EBPM through the practice.

4. FINDINGS

This part 4 presents the findings of the study by explicating the data from the interviews and policy document. It starts with the findings on the general understanding of actors regarding the EBPM, their interactions with evidence in the making of RIRN, and the institutional process of RIRN. Lastly, the study provides an overview of the RIRN including its position in Indonesia's STI sector and a description about the content as the final findings.

4.1. General Understanding of EBPM

During the interviews, I used three main categories to expose the respondents' understanding of EBPM: how they identify what is evidence, how they identify the use of evidence, and the "origin" of EBPM in Indonesia. From these main categories, I could draw a range of answers, which provides insights about the EBPM as an idea.

On the first main category of what is evidence, the answers expanded into two types: (a) evidence as empirical data and (b) evidence as the synthesis of empirical data, theoretical analysis, and context. The respondents who referred to evidence as empirical data usually emphasized the process of data collection through statistics, modelling, and questionnaire. The data was then used as the basic information to think about a particular problem and its direct solution. The second type of respondents referred to evidence as a scientific product beyond the data that was collected for policymaking and for which the word "study" was used. For this group of respondents, the role of particular theoretical approach and context was important in the process of policymaking because it was not only able to describe the current condition for baselining, but also provided tools to design and plan the policy concerned on the long run.

Both types of evidence were not always mutually exclusive of each other. The respondents sometimes discussed each type interchangeably to one another and commonly described it with examples based on their own experiences. However, there was a tendency of prioritization in which the respondents who are in the structural position of RIRN policymaking inclined to the first type, manifested through their high utilization of a set of quantitative data (i.e., statistical numbers). The rationale for such inclination was simple: tangibility and pragmatism. As long as the gross numbers

made sense and appeared to be feasible, it was sufficient to be categorized as evidence. On the other hand, the respondents with a less direct influence on the making of RIRN gave more weight to the second type of evidence in which a rigorous study of S&T (also innovation) system including its political and cultural aspect was deemed necessary for the planning process. Under the second type, there was a normative sense of evidence as the foundation of a "good policy."

The second category was the understanding of the use of evidence. All respondents viewed the EBPM as a *sine qua non*, emphasizing its undoubted necessity. Yet, there were different treatments to different types of evidence. For the statistical data, the respondents were commonly concerned with the data's consistency, accuracy, and availability, which require a process of consolidation between departments. Some mentioned the validity of resources, implying that the statistical numbers could be different depending on the focus of variable. For the more nuanced data—such as technical comments and inputs from the working groups, which consist of expertise from ministries, other government agencies, and academics—the concern was about the strategy to accommodate and negotiate the evidence because each person and/or institution usually brought their own type of data. Furthermore, the question of using evidence was related with the political aspect, which was also categorized into two types of thinking. On one side, politics was considered as inevitable. They believed that no matter how scientific and accurate the data is, politics would meddle around the process of making or using such data. Thus, the key was not to get the best evidence but obtain the useful evidence to achieve the "ultimate goal." On the other side, the respondents with a normative sense of evidence criticized politics in the policymaking process, noting that policy would not be at its best design and implementation when politics intervene. It does not necessarily mean that they dis-acknowledged politics, but they viewed politics dubiously.

Continuing the explication of actors' understanding, the third and final category was the "origin" of EBPM in Indonesia. During the interviews, this question raised inquiries from the respondents because the temporal sense of practicing policy was not a usual consideration for most respondents. Thus, the answers were often vague and speculative. Some said that there was no definite origin because Indonesia has not yet fully implemented the EBPM. The EBPM is an aspiration, something that still needs to be worked on. Another said that the EBPM practice in Indonesia has been conducted since the era of Soeharto (the "New Order" era, 1966-1998), the era of economic development under the authoritarian regime. The latter answer was particularly intriguing because it implied the historical legacy of the New Order, which was signified by intensified projects of economic technocracy (see Shiraishi, 2014). For the respondents concerned, this era became a juncture of EBPM in Indonesia due to a series of technical development plans and the growing bureaucracy of ministerial research department during the period. Although the clarity of continuation and/or discontinuation of the practice after the fall of the regime in 1998 was not sufficiently articulated, the rhetoric of EBPM within the technocratic model of governance stays until now (see Datta et al., 2018). The further details about this finding are set forth in the discussion section of this study.

The understanding of policy actors about evidence explained above reflects the current debate between policymakers and researchers regarding the EBPM. The more empirical tone of evidence

would present what policymakers need, whereas the more comprehensive tone of evidence would present what researchers and other EBPM advocates do (see Cairney, 2016; Parkhurst, 2017). This part of finding provides us with an insight that the Indonesian policy actors apparently shared the notions that are similar with the general discourse of EBPM. The intersection between the good and useful evidence implies a process of navigating and negotiating ideas, which is explicated in the next section.

4.2. Interaction with Evidence: The Experience of Policy Actors in RIRN Making

Finding out the knowledge about how policy actors understand the EBPM as an idea is a starting point to assess the discursive position of EBPM. Yet, it would be necessary to examine deeper as to what extent such understanding of an idea is manifested in the real social interactions. Deriving from the interviews, the policy actors viewed the EBPM as a common idea and embraced the idea of "EBPM" in their colloquial language. In this regard, there was a particular relationship between the policy actors and the evidence that comes from their subjective experience. In the foregoing context, this part specifically explains the experience of policy actors' interactions with the evidence during the making of RIRN, which provides an exposure to the policymaking process as a network of ideas.

In the making of RIRN, there were two main types of evidence. First, there was the background evidence to position the current condition of research and S&T sector in Indonesia. It was a top-down baseline through desk-study and sourcing of quantitative data and statistic. The data included the position of national research based on research output, technological contribution to economic growth, and S&T resources (human and budget). The sources of this data were the government database and external statistical data. They used charts and graphics of international publication and patent numbers in comparison with other Asian countries, the OECD's growth accounting (to measure the total factor productivity), the export value of high-technology manufacturing, research personnel, and research budget and expenditure. The rationale behind the selection of the information is not clearly argued, but this background data is not disputable. Additionally, they also evaluated the previous policy documents and coordination flow map across the government agencies to assess the position of S&T sector in the national policy scheme.[3] In this regard, Ristekdikti and the LIPI acknowledged the overlapping policies, the unclear direction in the S&T sector, and the necessity of more structured and legally binding regulation. This acknowledgement shows a qualitative sense of improvement and learning from policymakers.

The second type of evidence was the target evidence including the indicators and priorities of RIRN. Evidence for this element required both top-down and bottom-up approach. It involved broader sources of data and allowed multiple interpretations on the methodology. On the top-

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[3] The documents used in RIRN: Law No 18/2002 (on the National System of S&T Research, Development, and Application), White Book of Research, Development, and Application of S&T (Buku Putih Teknologi), National Strategic Policy (Kebijakan Strategis Nasional Iptek – Jakstranas Iptek), and National Research Agenda (Agenda Riset Nasional – ARN).

down, the process was a mix of quantitative and qualitative approach. The statistics and economic modelling set the measurable, quantitative targets and indicators. Then, Ristekdikti and the LIPI, together with other research related government institutions, conducted a series of working group discussions and consultations to establish the national priorities including setting up the thematic and macro research groups. On the bottom-up side, the process was highly qualitative. Each R&D department of ministries, non-ministerial research institutes, and universities was obliged to fill in a questionnaire on research priorities and outputs to be reported to Ristekdikti.

While the background is less contentious, the target "evidence" raised multiple concerns, if not oppositions. There was a concern that the quantitative indicators are cherry-picked, ignoring more systemic principles in measuring the sector (Interview, January 10 and 11, 2018). For example, the RIRN excluded other indicators of innovation system (e.g., patents) even though it inserted several elements of National Innovation System Indicators of OECD (i.e., R&D personnel, publication numbers, and gross budget allocation and expenditure). On the other hand, it was intentional for the RIRN to simply meet the "minimal requirements" of OECD indicators (i.e., human personnel and budget) as the other indicators were optional (Interview, January 10, 2018). This concern dealt with data accuracy and availability since the other measurement elements of OECD indicators were either difficult to calculate because of the lack of the necessary data or consisted of too small numbers thus it was unrealistic to achieve it (Interview, January 09, 2018). The respondents with direct involvement in this process admitted such problem, acknowledging that it was indeed a challenge to select appropriate indicators and integrate the data.

Another concern was related to the heavily physical indicators. By using the multifactor productivity/total factor productivity (MFP/TFP),[4] the RIRN attempts to measure research in the context of production process. However, some policy actors argued that the problem of research in Indonesia is about the quality and misguided STI system instead of the quantity (Interview, January 10 and 11, 2018). The RIRN still views research as an end-result and not a process. Thus, it is a mere "nice-to-have" policy, which requires further discussion for the implementation. This concern is connected to the discussion of "triple helix system," in which its advocates consider that the RIRN is disengaged from such systemic approach (Interview, January 10-12, 2018).

One can notice this different approach by comparing the RIRN with the *White Paper: Science, Technology, and Higher Education for Indonesia 2045*. The White Paper itself uses the triple-helix scheme and consolidates the socio-economic and cultural factors (e.g., leadership, language, innovation culture, and social capital among others) to provide policy scenarios and recommendations. The Indonesian Academy of Science (*Akademi Ilmu Pengetahuan Indonesia*; AIPI) published the White Paper pursuant to a request from the Secretary General of Ristekdikti, and in the introduction, the president of AIPI wrote, "*White Paper...* is expected to be input and basis in the making of

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[4]   The multifactor productivity (MFP), also known as the total factor productivity (TFP), is a measurement of economic performance that compares the output of productions (goods and services) to the amount of production inputs (yield, capital, and labor). It reflects the overall efficiency of production process (see OECD, no year).

master plan of science, technology, and higher education by Ristekdikti" (AIPI, 2017, p. ix). However, from the interviews, it was doubtful to state whether the RIRN made a reference to the White Paper. The policymakers thought that the content of White Paper is "nice", but they hardly found it useful. One respondent confirmed that "there is no intensive interaction between the White Paper and the RIRN, if we want to talk about triple-helix" (Interview, January 11, 2018). This lack of content engagement created unfamiliarity in the translations of operational language.

From the bottom-up side, the problem of RIRN was the budget allocation data (Interview, January 25, 2018). The concern was not necessarily about the numbers or model, but how the numbers aligned with the whole regulation of annual government budget plan. In this case, the "evidence" used in the RIRN needed to comply with another "evidence" of sectoral planning policy. In this regard, there was a concern on how much the RIRN would affect the relevant budget flow because the R&D department in each ministry worked under the ministries' budget allocations and priorities. As such, the RIRN data generated skepticism especially on the future implementation of budget consolidation.

These "top-down" and "bottom-up" interactions between policy actors and evidence re-stress a notion that the EBPM in practice is never a one-way, linear process. The process of negotiating, comparing, and accommodating multiple ideas and proposals for policy coverage requires back-and-forth interactions, which often create tension. This tension is not necessarily political (i.e., based on power and interest). Instead, it shows the quotidian conflict of communication faced by policy actors on a day-to-day basis. This interactional feature of RIRN making, nonetheless, is amplified by the institutional feature, which I will describe in the next section.

4.3. The Institutional Process of Making RIRN

The manifestation of idea in the interaction does not exist in a vacuum. It has an institutional feature that makes possible for certain ideas and actions to take place, which are shaped by (and eventually will in turn shape) the rules of the game. This part provides narrative explanations based on the interviews about the institutional process of making the RIRN to expose the advancement of interaction between actors and evidence that cross-cut with actors' understanding of the EBPM and their experiences. The complexity is intensified as policy actors deal with the bigger aspect of policymaking: positional power.

When the new government took place in 2015, the Coordinating Ministry of Human and Culture Development gave mandate to Ristekdikti to devise a grand design of science and technology. Together with related departments such as the LIPI, Ristekdikti then led the coordination to discuss the type of "grand design" to be formulated. As the term "grand design" stresses the existence of big frame, the RIRN makers decided to pursue the "master plan" for a reason of technicality (Interview, 10 January 2018). The decision of setting the RIRN for 2045 was to be consistent with the passing of 100 years since the Indonesian independence, and similarly with other national development policies "sovereignty" and "competitiveness" were included in the generic opening of policy

document.

Ristekdikti, then, managed the coordination meetings with the relevant ministries (the Ministry of Law and Human Rights, Ministry of Finance, and Bappenas) regarding the legalization process of RIRN to be a Presidential Decree. These four ministries would sign the regulation, followed by the Coordinating Ministry of Human and Culture Development, and then finally the President would sign the document. The process did not happen as smoothly as expected. There was a disagreement on the budget allocation as a part of the targets and indicators, which had been set previously. Arguably, the target of budget allocation would make the government budget plan "less flexible" and difficult to be intervened in the future (Interview, January 10, 2018). As the government resource (in this case, the annual fiscal budget) is limited, using a numeral language of percentage or amount would have created a certain political intervention. The political priority is dependent on the President and ruling parties, and thus subsequently, the budget allocation needs to follow and adjust to the relevant political agenda.

Responding to this argument of budget flexibility, the ministries conducted another series of meetings to clarify the rationale behind the data of budget allocation. Those meetings finally reached a consensus to change the clause of Presidential Decree draft. Instead of using an actual number of percentage for the increased research budget, the amended clause stated that the budget allocation would be increasing "gradually until 2045 within the ceiling of budget allocation of ministries/agencies/regional government" ("*secara bertahap sampai dengan tahun 2045 dalam pagu alokasi bagian anggaran kementerian/lembaga/pemerintah daerah*") (Government of Indonesia, 2018, p. 6).[5]

This coordinating process seems to have been be filled with full of hurdles, but some actors considered this process as "the art of budgeting politics" which is inevitable in policymaking (Interview, January 09 and 17, 2018). In the formal practice of budgeting, Bappenas with the Ministry of Finance have a cooperative responsibility to monitor the substance of each policy planning regarding the budgetary consequence. The intention of RIRN was to "lock" research allocation so it cannot be intervened with another political agenda, which potentially distort the long-term target of STI policy. However, with the change of language used in the clause, the rigidity and stability of "locking" the budget became less evident and discouraging. In response to the state budget plan 2018 (*Rencana Anggaran Pendapatan dan Belanja Negara*; RAPBN), a high-ranked official of Ristekdikti lukewarmly stated in the media: "The allocation was still less than expected, but we cannot force the government if there is no money" (Viva, 2017). This statement confirmed that the negotiation process of budget in policymaking rendered obscure the importance of EBPM idea.

Given that those concerns were not openly-shared between institutions and such disagreement stayed under the table, policymakers in each government institution then reached out to their own

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[5] The recently issued Perpres No. 83/2018 does not even mention the budget allocation, implying that the budget issue is highly contentious and lack of certainty.

"partners" to exchange their interests. The exchange between actors is awkward when their relationships are not sufficiently on an equal footing, but it is less awkward when they share similar structural positions. For example, Ristekdikti and Bappenas are both ministries with relatively equal positions so they are more comfortable in working together to coordinate and negotiate for the RIRN editorial clause. The LIPI, even though under the hierarchy of Ristekdikti, also has a bargaining power (e.g., data, prominent researchers, and sources) to negotiate with Ristekdikti regarding the content of RIRN. However, non-structural government agencies like the AIPI and other party (i.e., donor) cannot easily do the same. They can offer evidence and consultations but they still need friendly associations or mediators to enable communications and exchange of interest with those structural government agencies.

Concluding from this institutional process of making the RIRN, the idea of EBPM started to turn obscure when it dealt with the budget issue. The findings are in line with Purwaningrum's study (2016) that some macro-challenges in Indonesia's knowledge society are the coordination between ministries (i.e., silo mentality and "ego-structural") as well as the budget and policy consolidations within the research department. Moreover, the institutional position of each actor and agency also determines their quality of interactions. This point highlights a fact that even though the EBPM did matter in the making of RIRN, it had a limited influence due to the systemic problem of budget allocation and institutional position of agency in Indonesia.

4.4. RIRN: Policy and Content Overview

A planning policy in the research sector has been discussed for decades. From the early establishment of national research institution under Ristekdikti in early 2000s (i.e., National Research Council), the government of Indonesia has attempted to build a national plan through the Strategic Plan for National Science and Technology (*Kebijakan Strategis Iptek Nasional*; Jakstranas). For every five years until 2014, Ristekdikti regularly published Jakstranas as guidance to develop the STI sector including managing governmental institutions working in the S&T area. Jakstranas, however, lacked legitimacy because the highest responsibility was held by the Minister of Ristekdikti. The complexity revolved around the overlapping hierarchies. For example, each ministry had a research and development division (BALITBANG) with budget allocation and responsibility coming from the relevant ministry. When Ristekdikti issued regulations regarding research, BALITBANG was usually lukewarm in coordination because its bureaucratic accountability was owed to its own minister instead of Ristekdikti.

Such problem of implementation motivated the new government in 2015 to envision a bigger umbrella for the national research plan. The purpose was to integrate the direction of research sector under the national development plan. The initiative to promote it as a Presidential Decree was also a part of a deemed solution to confer legitimacy to the policy plan. In this sense, the RIRN was expected to align the long-term research needs and contribute to the economic growth. In this regard, the implementation of RIRN could potentially transform the research sector in Indonesia and guide the transition of S&T advancement (e.g., priority's transition from applied to basic research).

The RIRN has potential to change the landscape of STI in Indonesia. However, one needs to look deeper into its content and view it as a product of relational activities. Therefore, this final part of the study describes the detailed contents of RIRN policy in order to analyze the material outcomes of ideas and interactions, which are already described in the previous sections of this study. By integrating the following three documents: (1) the draft of Presidential Decree RIRN (Government of Indonesia, 2018); (2) the academic book of RIRN (Ristekdikti, 2017a); and (3) the presentation material of Ristekdikti (Ristekdikti, 2017b), this section serves a purpose for further discussions in mapping the content within the spectrum of empirical/political features of policy.

There are six main elements in the content of RIRN policy. The first element concerns the vision, mission, and purpose of RIRN. The RIRN portrays a vision in its slogan "*Indonesia Berdaya Saing dan Berdaulat Berbasis Ilmu Pengetahuan dan Teknologi*" (Competitive and Sovereign Indonesia Based on Science and Technology) which establishes the instrumental function of scientific research as the "*motor utama*" (main engine) of increasing competitiveness and "*titik awal*" (initial point) of self-sufficient Indonesia. This vision places research within the economic machine (by using the term "motor") in which the government has limited resources. The government desires to "optimize" the current science and technology resources by focusing on human and budget capacities. The RIRN itself has a specific function and purpose: as a "bridge" to connect the long-term development and the annual operation plan to "harmonize" national research and "re-integrate" higher education with research activities.

The second element concerns the target indicators. The policy uses quantitative measurements to reach the purpose of RIRN by referring to South-Korea in 2014-2015 as the ideal benchmarks of 2040 Indonesia. For the human resource input, the RIRN targets 8,600 research personnel per one million population and 100% ratio of research candidates (number of graduate students per number of undergraduate students) in 2045. For the human resource output, the RIRN uses the productivity measurement of the total number of global index research publications (22 publications per 100 research personnel in 2045).[6] On the budget feature, the RIRN refers to two input measurements: (a) increase of budget allocation from the private sector against the government (3:1 in 2045), and (b) the "gradually increasing" ratio of budget allocation on research within the budget ceiling of each department. Regarding the budget, this study found a difference between the academic document of RIRN and the Presidential Decree draft. The academic document mentioned a ratio number of budget allocation against the GDP (1.26% in 2045), but the draft used the "gradually increasing" phrase, which provides a sense of flexibility. Finally, the final outcome of RIRN is the MFP of 70% in 2045.

The third element concerns the transition scenario of "macro research groups." The macro research group refers to the research spectrum based on three aspects: added value, leverage power, and complexity level. From these aspects, the RIRN classifies six macro groups: (a) applied-research

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[6]   RIRN makes reference of the research personnel target to the developed country where the graduate students ratio against undergraduate students is nearly 1:1, and the publication target refers to SCImago data.

based on natural resources, (b) advanced-research based on natural resources, (c) applied manufacturing research, (d) advanced manufacturing research, (e) high-technology research, and (f) frontier research. Within five years, different priorities would be conferred to each group. For example, macro group (a) has the first priority for the current period (2017-2019) and macro group (b) would be conferred the first priority for the next period (2020-2024), and so forth. For 2040-2045, macro group (f) would be conferred the first priority of national research activity. This transitional scenario is the key reference to plan the national research priorities (i.e., by sector) in each of the five-year periods.

The fourth element concerns the RIRN strategy through policy derivatives. For each item of input, output, and outcome, the RIRN notes a number of policy initiatives. The input comprises two elements: human resource and budget allocation. For human resource, the macro policy strategies include strengthening human capital through scholarships, incentives, and human mobility between research institutions. For budget allocation, the strategy is improving budget allocation though private funding, evaluating and revitalizing research grant system, and incentives for research collaboration and infrastructure. For the output indicators, the RIRN sets a scheme of dis/incentives for research institutions and actors as well as evaluating the regulation of intellectual property, providing special funds for research dissemination, and refreshing the environment of research fellows/visits or diaspora. Finally, for the outcome, the RIRN notes certain actions such as establishing the technology incubation centers, incentives for venture capital, and implementation of royalty system.

The fifth element concerns the relationship of RIRN and the country's development policy. Together with other policy documents, the RIRN is to support the Master Plan of National Industry Development 2015-2035 (*Rencana Induk Pembangunan Industri Nasional*; RIPIN), the National Energy Policy (*Kebijakan Energi Nasional*; KEN), and the (future) Master Plan of Creative Economy Development (*Rencana Induk Pengembangan Ekonomi Kreatif*; RINDEKRAF). The transitional scenario of macro research group is expected to be the input (i.e., guidelines) for the making of Mid-Term National Development Planning (RPJMN), which has been in place across national, sectoral, and regional policy planning for planning budget, strategy, and operational work.

Finally, the RIRN covers eight main research fields: food, energy, health and medicine, transportation, engineering products, defense and security, maritime, and socio-humanities. In the academic document, the discussion of each field included research topics, resources of funding support (e.g., responsible ministry), related institutions, targets, and linkage to the RIPIN.

From the six elements examined above, one can note that the overall content of RIRN policy contains both empirical and political features. The generic contents such as vision and mission including the nationalistic agenda behind the policy are political because they are based on the will of the government to improve the STI sector. Other contents like target indicators can be categorized as empirical because they use stronger basis of data to establish the goals. Admittedly, the categorization of political/empirical is not mutually exclusive to each other as a particular content can have both features. As examined above, the content of RIRN is dependent on the process of its formula-

tion that involved ideas and interactions of the actors.

5. DISCUSSION

In this part, the discussion takes the findings from the policy documents and interviews and frames it under the three elements of DI: (a) the institutional background polity of Indonesia where the RIRN takes place, (b) the level and type of EBPM idea, and (c) the interactions. This part discusses these three elements based on the interviews and supported by secondary sources to enrich the analysis. Moreover, this part also provides interpretations and arguments on how idea and interaction shaped the policy content.

5.1. EBPM in Indonesian Polity

The DI mentions the institutional background that allows policy actors to move and interact with each other. However, in the context of Indonesia, the strict distinction of "simple" and "compound" polities seems not entirely applicable as the framework suggests. Indonesia can be categorized as a "simple" polity because it has a strong cabinet and restrained judiciary. Yet, Indonesia also has a decentralized bureaucracy with power distribution among party organizations, which means it has the features of a "compound" polity as well. The institutional characteristic of policymaking discourse then becomes highly relative to each issue. When an issue has a strong political consequence (e.g., affecting election and/or coalition), the discourse is more likely to be under the model of simple polity in which the cabinet/ruling group can impose their policy narrative to the public. Popular issues such as national sovereignty, energy subsidy, transparency, and food security are elaborative in the public discourse and the narrative has a purpose of gaining political legitimacy (see WSJ, no year; Znoj, 2007; Neilson and Wright, 2017). On the other hand, when the issue is more technical and operational such as fiscal and planning policy, Indonesia can be said to be a "compound" polity because it involves multiple independent actors including donor and research community with a relative balance of power to shape the policy narrative (see Hanida et al., 2015; and Sutmuller and Setiono, 2011). In this regard, as a generic policymaking discourse, the "EBPM" becomes ubiquitous in this model of polity.

From the previous section of general understanding, the EBPM was partially understood in relation to the technocratic era of New Order. It is intriguing to analyze how this understanding arose. The "EBPM" discourse in Indonesia has taken place under the issue of "knowledge" and the broader role of intellectuals and researchers in policymaking. The ruling era of New Order with its technocratic and authoritarian signifier attracted discussions on the relationship between intellectuals and the authority. For example, MacDougal (1976) performed a study of the understanding of Indonesian economists about modernization, which function as an ideology and shaped the technocratic model of the regime. Shiraishi (2014) also noted the instrumental character of economic technocrats during the Soeharto era (especially in the 1980s), arguing that they were effective in persuading Soeharto to adopt the economic development policies. In a more critical tone, Dhakidae (2003)

traced the patron-client relations between intellectuals and the authority where loyalty and personal relationship to the regime were significant in policymaking. In this period of history of Indonesia, the idea of evidence-based policy was ambiguous since the characteristic of relationship between researchers/intellectuals and the authority was exclusive and based on personal association. These findings do not suggest that the government did not use evidence in the policymaking process; however, the question of *whose* evidence became important.

When the financial crisis struck Indonesia in 1997 and the then-current regime fell in 1998, it marked the democratization and decentralization in which the civil society could, arguably, play a more active role (Mietzner, 2009; and Rosser, 2016). For example, in the economic sector, non-government organizations (NGOs) now could be involved in the broader discussion of poverty and could even challenge the data interpretation from the government and multilateral donors (Fanggidae, 2012). However, policymaking in the post-New Order era remained the same despite the fact that the country became more democratic (Hadiz and Robinson, 2005; and Tornquist et al., 2004). The New Order's actors still dominated the overall scene of policymaking as they found ways in formulating new coalitions (Hadiz, 2003). Given that after more than one decade of democracy, the policymaking process in Indonesia still shares cultural features of policymaking in the New Order era including the importance of friendly association and personal networks, this argument still remains relevant (Datta et al., 2011; and Purwaningrum, 2016).

The practical legacy of New Order policymaking in Indonesia attracted another actor to amplify the discourse of "EBPM" in more literal sense than before. Since 2013, the Australian Aid (Australian Department of Foreign Affairs and Trade; DFAT) has funded the Knowledge Sector Initiative (KSI), a designated joint program with the Ministry of National Development Planning (Bappenas) to improve the quality of policymaking in Indonesia. The KSI program has four elements: improving knowledge production, building demand and the capacity of policymakers to use knowledge, mediating knowledge (research communication), and promoting the enabling environment for use of knowledge (KSI, no year). It started with commissioning diagnostic studies to map the role of research-related organizations and policymaking process in Indonesia, and then continued with a series of working papers. Additionally, the KSI also built partnerships with 16 existing research institutes and CSOs in Indonesia as well as universities (e.g., Australian National University) and international organization such as the Overseas Development Institute (ODI). Just recently (28 February 2018), the KSI also facilitated a national seminar titled "Research in Indonesia: Opportunities and Challenges" in which the discussions around the "EBPM" and policy research activity openly took place among research institutes. The documents and activities of KSI cover three main issues: (a) the overview of Indonesia's knowledge sector, e.g., current position and contextual background; (b) the political-economic issue of policymaking; and (c) the regulatory and organizational issue of research activity. The above cases show that the KSI allows the EBPM discourse to flourish among policymakers and researchers.

There is indeed a shift of thinking regarding the relationship between evidence and policymaking from the "patron-client network between intellectuals and policymakers" to the "governance of evi-

dence." However, a political aspect is not entirely absent from the thinking as it is embedded in the institutional background of Indonesia. The institutional process of making the RIRN, the so-called political problems (e.g., debate on budget and ego-sectoral issue) described in the findings section of this study, shows the ambivalence of, not only in the practice of EBPM, but also in its initial idea. Although displayed in different ways, the practical legacy of New Order in using evidence continues, creating significant barriers in the everyday communication between actors and agencies. Yet at the same time, policy actors embrace the ideal features of EBPM, viewing the EBPM as a must and a signifier of a good government. This contingency of policy practice shows that the EBPM idea in the polity of Indonesia is simultaneously stagnant and dynamic, dependable on specific issues and organizational features.

5.2. EBPM as Programs

Under the DI, ideas are found at three levels: policies, programs, and philosophies (see Framework section). In the making of RIRN, the EBPM idea is at the level of programs where there is no literal imposition of "using evidence," but the idea itself was reflected in the interaction between actors. From the findings, one can see that the EBPM principle, especially in regard to the use of evidence, was present as an idea at the programmatic level. It becomes the norms and methods to be applied in the general policymaking, and it also depicts the particular characters of EBPM discourse in Indonesia: the tension on what to consider as evidence. There is an underlying assumption that the RIRN must be based on evidence, thus necessary attempts were made to fulfill such assumption. Although the practice of EBPM is somewhat unclear and some are doubtful about the efficacy of the concept, it has remained relevant for all policy actors as they still share similar aspirations regarding the EBPM.

5.3. EBPM as Coordinative Discourse

On the interactional aspect, the EBPM within the DI framework is a coordinative discourse that occurs in the sphere of policy. The coordinative discourse consists of "the individuals and groups at the center of policy construction who are involved in the creation, elaboration, and justification of policy and programmatic ideals" (Schmidt, 2008, p. 310). As explained in the findings, there were two methods of formulating the RIRN, which was portrayed in the academic version of RIRN document as a linear process. The top-down process started with setting the baseline, working group discussion, and devising a research topics matrix from the previous research policy documents. Similarly, the bottom up process started with setting the baseline, stakeholders' discussion, and using a research matrix based on questionnaires from research-related organizations (e.g., universities, ministerial R&D department, and non-ministerial research institutes). From both processes, policymakers integrated the outcomes into the policy formulation.

From the discussion, however, one could see that the process has been tangled. Indeed, there are substantial rationales behind the tangled process of the RIRN such as a lack of legally binding policy towards national research activity, overlapping S&T policies, and the needs to re-manage

research activities and institutions. Yet, those rationales also need a context about the hierarchy of governmental department. The budgetary issue is the most obvious problem in this interaction, and the negotiation among policy actors regarding the research allocation seems to underplay other issues in the RIRN. In this sense, the EBPM as a coordinative discourse has a limited role because the idealism of EBPM cannot be fully implemented due to rich nuance of policymaking and everyday bureaucracy of budget politics.

### 5.4. Policy Content as the Result of EBPM Idea and Interaction in Making RIRN

Table 2 summarizes the findings of this research, and as we can see that the action and interaction between the RIRN actors reflect the manifestation of EBPM discourse. The EBPM, however, becomes less relevant when it is confronted by the budget issue.

TABLE 2. EBPM Discourse in RIRN Making

EBPM Discourse in Indonesia	EBPM as Program and Coordinative Discourse
Related to the historical legacy of New Order era especially on the personal relationship between researchers/intellectuals and policymakers.	• Close interaction between structural agencies including the top-down mandate and horizontal coordination • Non-structural agencies were less influential to structural agencies; and require friendly association and/or mediator
The institutional background of Indonesia makes the idea of EBPM embedded in the political context.	• Limited function of coordinative discourse regarding politics of budget
Different perceptions of what is considered as evidence between policymakers and researchers.	Policymakers • Sourcing, compiling, and exercising data numbers for background • Comparing the previous policy documents and finding regulation gaps • Generating base-line and modelling to set policy indicators • Selective (i.e., no major/structural proposal) • Challenged for being too "physical" Policy researchers/advisors and non-structural agencies • Treating empirical data with grand and strong theoretical base • Comprehensive (i.e., looking at a broader structure of national STI system, usually referred as the "triple-helix system") • Challenged for being less practical

Deriving from the result of institutional and ideational relations in Table 2, this study interpreted the content of policy into the spectrum line of empirical and political content (Figure 1). The position of each content is different according to its process of formulation. Policy contents, which are positioned in the middle of the spectrum, tend to be more contentious than the others on the left and right sides. Vision, mission, and purpose content are less debatable because although they are political, they are at the same time too generic to raise a challenge. The other targets and indicators are the most empirical contents with substantive challenges against the more systemic STI policy platform. It confirms the tension and interactional dynamics between scientific evidence for policymaking and the political aspect of decision making.

FIGURE 1. The Content of RIRN in the Spectrum of Policymaking Process
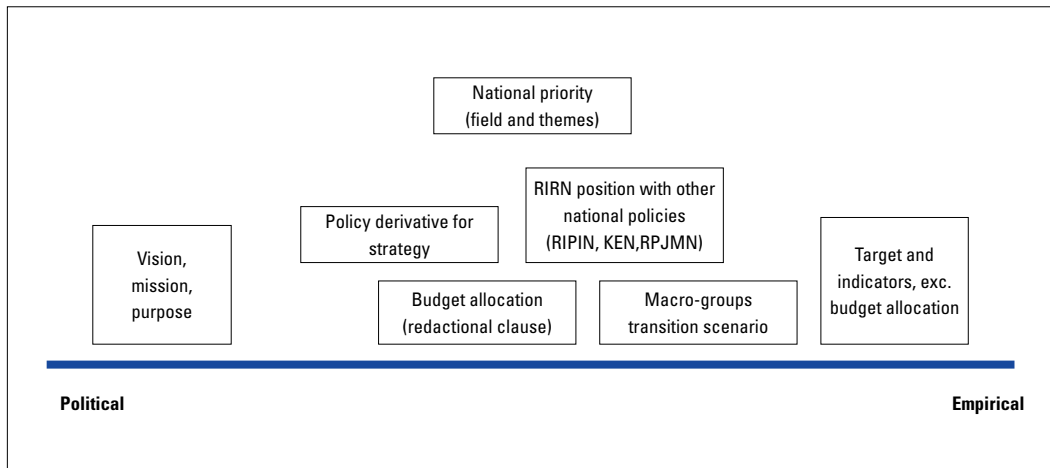
This narrative of RIRN making process represents the image of policymaking problem in Indonesia. From the interviews and desk-study, it hardly found particular characteristics of policymaking in the STI sector compared to another sector. The characteristics of RIRN making process are mostly similar with the policymaking insights found in the KSI's diagnostic studies and working papers. For example, Datta et al. (2018) explained that the continuity (i.e., long-term) of change of policy is contested with emergent changes as the interests of stakeholders are not unitary. In this regard, the evolvement of the discussion between the use of knowledge and policymaking since the New Order era has shaped the current discussion of EBPM. As a programmatic idea, the EBPM becomes the norms and methods, which underlie the making of RIRN. But as a coordinative discourse, the EBPM became less relevant when it was confronted with the budget issue and the association of policymakers. Overall, the EBPM discourse has been stretched into recognition that the appeal to evidence can be "decidedly political" (Parkhurst, 2017). The policy actors of RIRN embraced the EBPM in a pragmatic approach; recognizing the values in the pursuit of better policy and yet also being aware of the competition between multiple goals.

6. CONCLUSION AND IMPLICATIONS

This study offered a discursive perspective in understanding the STI policy in Indonesia by applying the discourse of EBPM in the making of RIRN. By using the DI, the study explored the characteristic of the discourse in Indonesia polity and its application from different levels and types of ideas. The EBPM discourse in Indonesia is related to the historical legacy of New Order era and embedded in the political context. The discourse also embarked different perceptions of what is considered as evidence between policymakers and researchers. These features of EBPM discourse were reflected on the RIRN actors' approach towards evidence and its institutional process. It resulted in the content of RIRN, which can be mapped within the spectrum of evidential and political

factors, implying the visibility of idea and interaction in the policy product.

The discussion of discourse and institution in the making of RIRN answers the question of how a particular STI policy is shaped by a specific idea of policymaking. As discussed, there is no strong distinction between the makings of STI policy compared to other sectors; the problem of budget/resource and communication comes first when policymakers initiate the establishment of such generic policy. The RIRN does not have exceptional features in its making. Nonetheless, within the trajectory of Indonesia's STI policy, the RIRN serves its purpose as an umbrella for following technical policies involving many decentered agencies.

In light of the foregoing, there are at least two policy implications based on the findings and discussions. First, Ristekdikti and the LIPI as the leading institutions need to amplify the existence of RIRN by suggesting more specific and technical indicators and instructions for the relevant agencies such as universities, enterprises, and research institutes. Second, as the budget becomes the main issue in the making of RIRN, policy actors involved in the issue need to revisit many alternative models of research finance that are not highly dependent on the government budget. As Indonesia is also improving its National Innovation System, the government should be attentive towards models of fund collaboration including developing a venture system of finance as well as strengthening the role of industrial and business players.[7]

Additionally, this study found that the idea of EBPM is limited in its practicality. The analysis of the level of ideas and interactions showed the limitation of EBPM: although it became the underlying assumption in making the RIRN, the EBPM could not be fully manifested as a coordinative discourse. However, the EBPM can still be useful as an aspiration in which policy actors can make use to negotiate the distribution of resources. In other words, the limitation of implementing the EBPM does not mean its total irrelevancy. The EBPM idea does not guarantee full use of evidence; yet as this study showed, it provides a sense of necessity to use evidence during the coordination process. The implication of this finding is that in the general STI sector, the repetition of EBPM as a rhetoric among policy actors might serve a role of reminder about the continuous efforts in improving the quality of data resources and policy studies.

Finally, in terms of analytical framework, the DI has provided a useful tool to view the EBPM in the polity of Indonesia, its ideational level, and its type of communication. It can explain the ways policy actors embrace an idea and then translate it into a colloquial language of inter action. From the findings, we can view the "EBPM" idea in the process of making the RIRN. However, to have a clear explanation about interaction, the explanation about institutional background cannot be simplified into the typology of polity. As the DI seems to make a distinction between the "simple" and "compound" polities, it becomes limited when providing an ideational scheme for a mixed-up poli-

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7 See Wonglimpiyarat (2011) for the comparative study cases of Malaysia and Thailand in developing the financing system of national innovation.

ty like Indonesia. This notion provides a lesson that a discussion on discourse in STI policy requires a coherent understanding on the institution and also a careful approach to exercise such idea or paradigm. In particular, exercising a more specific idea in framing the discourse of STI in Indonesia such as "competitiveness," "triple-helix system," or "knowledge economy" can be advantageous to view the trajectory of STI sector in Indonesia and to assess its advancement.

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