Evaluation of the scholarship program by the education fund management institute in Indonesia

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ABSTRACT
The primary objective of this investigation is to conduct a comparative analysis between the target formulation and outcomes of the Education Fund Management Institute (LPDP) scholarship program and the targeting outcomes of program model. The research paradigm employed is post-positivism, utilizing qualitative methods to explore program development and assess its effectiveness. Two key conclusions emerge from this study: i) the prescribed structure of the LPDP scholarship program is considered insufficient, marked by a focus on outcomes and activities and ii) the LPDP scholarship program's performance has fallen short of anticipated standards, primarily attributable to a significant disparity between scholarship recipients and program graduates. In light of these findings, five recommendations are proposed for future enhancements to the LPDP scholarship program: i) undertake a comprehensive study to develop a vision for addressing the human resource needs in Indonesia, taking into account regional variations, industries, professions, and scientific disciplines; ii) incorporate scholarship initiatives targeting the foundational stratum; iii) foster collaboration with ministries and institutions engaged in comparable program management and industry sectors; iv) adjust the standard of living and payment mechanisms accordingly; and v) implement stringent consequences within the LPDP framework for scholarship recipients who fail to graduate within the stipulated timeframe.

Keywords:
Evaluation
Intergenerational equity LPDP
Public policy
Scholarship
TOP model

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1. INTRODUCTION
As articulated in the Preamble of the Republic of Indonesia Constitution of 1945, one of the significant directives bestowed upon the Indonesia Government is the cultivation of the nation’s intellectual and societal development. This mandate is further underscored in Article 31, paragraph (1) of the 1945 Constitution, wherein it explicitly asserts, “Every citizen possesses the entitlement to education” [1]. In accordance with the stipulations of Law Number 20 of 2003, the categorization of education levels comprises three distinct pathways: informal education, non-formal education, and formal education [2]. The formal educational pathway encompasses higher education, secondary education, and basic education. Furthermore, informal, and non-formal education levels represent supplementary educational avenues in addition to formal education. As per Article 11, paragraph (2) of Law Number 20 of 2003, both local and central governments

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are mandated to allocate education funding for all citizens aged seven to fifteen. This obligation implies the government's responsibility to ensure the seamless progression of education for every citizen, spanning from basic to secondary education. An inquiry arises regarding the assurance of educational continuity for citizens pursuing higher education. Addressing this concern, Law No. 12 of 2012 outlines the educational progression beyond secondary school, including: diploma, bachelor, master degree, professional qualifications, and specialist programs [3]. As per the statutory provisions, the government assumes the responsibility of allocating funds for higher education and is obligated to provide support to economically disadvantaged students, facilitating their successful completion of studies through mechanisms such as scholarships, educational assistance, or study loans. However, an examination of Table 1 reveals a factual disparity between the education gross enrollment rate (APK) targeted in the national medium-term development plan (RPJMN) and the actual realization at each level of education, from junior until higher education. Moreover, notably, the gross enrollment rate in higher education currently stands at approximately 30.85%. This discrepancy indicates an inherent disparity in access to higher education within the Indonesian community [4].

### Table 1. Discrepancy between the APK targets outlined in RPJMN and the actual realization at each education level [4]

<table>
<thead>
<tr>
<th>Educational level</th>
<th>Realization percentage</th>
<th>Target of percentage based on RPJMN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior high school</td>
<td>92.06%</td>
<td>92.46%</td>
</tr>
<tr>
<td>Senior high school/equivalent</td>
<td>84.53%</td>
<td>86.18%</td>
</tr>
<tr>
<td>Higher education</td>
<td>30.85%</td>
<td>33.47%</td>
</tr>
</tbody>
</table>

The data presented in the aforementioned table indicates a discernible disparity in accessing higher education. Since 2010, the government has instituted the National Education Development Fund (DPPN), as stipulated by Law Number 2 of 2010 regarding APBN-P 2010. This law designates DPPN as an educational budget specifically designated for the establishment of an endowment fund. The overarching goal of this fund is to make sure the sustained progression of education programs for the succeeding generations, embodying a commitment to intergenerational equity. The management of DPPN involves a revolving fund mechanism overseen by the general service agency (BLU) within the realm of education. The enduring essence of "guaranteeing the continuity of education programs for the next generation as a form of intergenerational accountability," or commonly known as intergenerational equity, persists in the definition of DPPN to date.

The institution responsible for the management of DPPN, referred to as the BLU, is the educational fund management institution (LPDP). Consequently, LPDP is tasked with implementing the policy and mandate of intergenerational equity. Nevertheless, upon scrutiny of the scholarship program, it becomes apparent that LPDP needs to align its practices more closely with this policy. This observation does not imply inadequacy in the program devised by LPDP; rather, it underscores the enormity of the mandate entrusted to LPDP.

Furthermore, the DPPN management concept operates as an endowment fund, permitting only the utilization of income generated from its management for financing the scholarship program. Conversely, LPDP is vested with the mission to “prepare Indonesia's future leaders and professionals through education financing” [5], [6]. Leadership constitutes one of the pivotal determinants within the discourse of education [7]–[11]. LPDP aspires to function as a catalyst for the development of highly proficient Indonesian human resources, contributing significantly to diverse national strategic sectors. During its numerous initiatives to disseminate information about its scholarship program, LPDP frequently references findings from McKinsey's studies [12], [13]. These studies indicate that Indonesia is projected to require a workforce of 113 million skilled and semi-skilled individuals is projected by the year 2030. As illustrated in Figure 1 based on the McKinsey study, it is expected that anticipated is a shortage of 9 million skilled and semi-skilled workers, with 2 million of them possessing skills at the higher education level [13], [14].

LPDP recognizes a challenge extending beyond intergenerational equity that demands resolution. This challenge pertains to the anticipated requirement for skilled Indonesian workers by the year 2030, as forecasted by McKinsey. Regrettably, an examination of the program of scholarship reveals that LPDP interprets the need for skilled workers exclusively within the context of individuals possessing formal education at the master's and doctoral levels. Very important to note that higher education encompasses a spectrum, commencing with diplomas and incorporating vocational education. Additionally, the cultivation of skilled workers is not limited to formal education but also encompasses training programs. Both vocational education and training are pivotal in fostering the development of skilled workers in Indonesia. The discourse on skilled workers entails a consideration of specific positions within a profession or the professions themselves. Consequently, addressing a shortage of skilled workers requires a focus on particular positions or professions. Unfortunately, LPDP, in formulating its scholarship program, has not delineated a clear direction for addressing the gap in skilled workers that aligns with the broader spectrum of needs. A scrutiny of the 2020-2024 LPDP Strategic Plan documents yielded there are no explicitly defined targets or performance indicators.
associated with the plan to address the shortage of skilled workers. It is worth noting that the concept of intergenerational equity applies across a spectrum of contexts, including political, social, economic, and environmental domains [15]–[18]. Miller et al. [19] articulate the concept of intergenerational equity as:

“In economic, psychological, and sociological contexts, intergenerational equity is a concept or idea of fairness or justice in relationships between children, youth, adults, and seniors, particularly in terms of treatment and interaction”

Conversely, The Brundtland Commission Report elucidates intergenerational equity as:

“Intergenerational equity entails meeting current needs without jeopardizing future generations’ ability to meet their own. It also refers to the degree of ‘social mobility’ between generations, either in absolute terms (whether children are richer or poorer, healthier or more educated than their parents) or in relative terms (whether children are higher or lower on the social ladder than their parents)” [20].

In accordance with the aforementioned definition, within the educational context, intergenerational equity can be construed as ensuring access to education for generations characterized by a disadvantaged socio-economic status. The overarching aim is that the education received facilitates an enhancement in their socio-economic status over time, enabling them to financially support the education of subsequent generations. Broadly speaking, educational scholarships can be categorized into 2 principal categories: need-based scholarships and merit-based scholarships.

Several prior studies have explored strategies for optimizing scholarship programs to promote intergenerational equity, notably within the context of extending contemporary corporate social responsibility models, [21], [22], the effectiveness of donor funds as a solution for intergenerational justice [23], [24], polycentric and resilient perspectives for sustainable development [25], [26], financial management within scholarship programs, [27], [28], nevertheless, there has been a dearth of prior research scrutinizing the assessment of the LPDP scholarship program in Indonesia, particularly within the framework of program evaluation. This constitutes the primary novelty of this research. The second innovation lies in the research's concentration on aspects of public policy and the utilization of the targeting outcomes of programs (TOP) model as an analytical tool, a dimension that previous researchers have not explored. Meanwhile, based on the aforementioned descriptions, it is evident that there is an absence of clearly defined targets related to economic social, environmental, or other conditions or issues that serve as the objectives for the completion or enhancement of the program of LPDP scholarship. Whether the aim is to ensure the continuity of intergenerational equity/education, as mandated by DPPN managers, or to address gaps in the demand for skilled workers or specific sector professions essential to Indonesia's mission, or perhaps a combination of both, such clarity is not discernible in the formulation of the program's targets. Consequently, this research is oriented towards evaluating the LPDP scholarship program with the central question, “How is the formulation of targets and performance outcomes within the LPDP scholarship program”.

Within the discourse of program evaluation, various evaluation methods possess distinct characteristics. One such model pertains to discrepancy analysis, which centers on assessing the degree of alignment between predetermined program standards and actual performance [29], [30]. The CIPP model is an evaluation framework implemented comprehensively as a systematic whole [31], [32]. The responsive
evaluation model prioritizes evaluation through a qualitative-naturalistic approach [33], [34], the goal-free evaluation approach involves evaluators or appraisers deriving real or tangible effects, as well as unintended effects, from diverse reports or records within the program [35], such as: the covariance-based structural equation modeling (CB-SEM) [36]–[38], and TADIPHE evaluation model [39]. Conversely, the TOP model evaluation is also present. As depicted in Figure 2, the TOP model evaluation comprises seven hierarchical levels situated on two sides [40]–[42], program development and performance initiatives are harmoniously integrated to identify precise target outcomes of a program and evaluate its accomplishments, comprising elements: SEE conditions; practice; KASA; reaction; participation; activities; and resources.

Figure 2. Framework of TOP model [43]

The framework above adopts a pragmatic yet comprehensive approach. In the context of program development and performance within levels 1 to 3 of the TOP model, the evaluation places emphasis on the program's outcomes. Conversely, levels 4 to 7 within the TOP model's program development and performance dimension redirect the focus toward evaluating program implementation and [44]. Phillips and Penna assert that the TOP model serves as a practical hierarchical evaluation framework designed to assess outcomes, monitor progress towards predefined targets, and substantiate the program's level of achievement. Moreover, the TOP model is a relatively underutilized evaluation model among scholars in Indonesia. Consequently, beyond addressing specific research inquiries, this research conduct to contribute to Indonesia's repository of knowledge regarding program evaluation models. Notably, the seven-level framework of the TOP model is employed to measure the indicators for both the target (program development) and performance (program performance) of the LPDP scholarship program. Within the framework of this study, two variables are considered, namely program development and performance. These two variables are integrated and possess precise dimensions. The program development variable pertains to the identification of needs, expected outcomes, or targets associated with each variable in the TOP model. Conversely, the program performance variable involves the identification of the actual outcomes, achievements, implementation, or what is termed as the performance of each variable in the TOP model concerning the established targets. The TOP model incorporates seven hierarchies or levels, serving as dimensions in this investigation.

2. RESEARCH METHOD

The research employs a post-positivism approach, utilizing qualitative methodology. The rationale for adopting the post-positivism approach is grounded in its capacity to facilitate a more profound comprehension of intricate social processes, supplanting the experimental approach within the positivism thought paradigm [45]–[47]. Conversely, by employing qualitative methods, researchers aim to conduct a thorough and comprehensive analysis [48]–[50], particularly with regard to the formulation of targets, denoted as program development, and the assessment of the realization or attainment of performance, referred to as program performance, occur within each dimension or level of the TOP model. Collection of the data is conducted through three distinct methods, encompassing study of documentation, observations, and interviews. Literature studies and documentation derive information from academic literature documents, reporting and planning books, laws, decisions, and regulations relevant to the scholarship program of LPDP and the objectives of evaluation. This encompasses annual reports, budgets, strategic and business plans, and performance reports from LPDP.
During the interview phase, informants were purposively selected to ensure inclusion of individuals with direct involvement, exposure, and sufficient competence and understanding of the research context, specifically the evaluation of the LPDP scholarship program. Informants are categorized into two groups: LPDP external and internal informants. The internal informants consist of five individuals from two directorates with roles and responsibilities related to the planning and implementation of the LPDP scholarship program, specifically the directorate of scholarships and directorate of service development and risk management. The identities of these internal informants are to be kept confidential. While external informants represent the industrial community, program beneficiaries, the scientific community, and relevant policy research institutions. Observations are conducted on the business processes or specific activities involved in managing the LPDP scholarship program, conducted both openly and covertly.

3. RESULTS AND DISCUSSION

3.1. Program of development

3.1.1. Level of economic, social, environmental, and other conditions

Upon scrutinizing the targets or performance indicators delineated in the LPDP strategic planning documents, the researchers assert that the formulation of program targets is limited to the output level. In this context, the measurement predominantly revolves around the response of LPDP scholarship recipients, as manifested through the satisfaction level indicator. Targets reflecting the program's alignment with the concept of intergenerational equity and LPDP's mission to nurture leaders and professionals have not been incorporated during the program formulation process. An additional point of interest is that the LPDP scholarship program exclusively caters to postgraduate levels (master's and doctoral). Consequently, the impact of the LPDP scholarship does not contribute to the elevation of the gross enrollment ratio in higher education (APK-PT) in Indonesia, considering the persistently low national APK-PT. Hence, it can be asserted that the LPDP scholarship program demonstrates a discernible elitist nature and lacks the essence of intergenerational equity. Consequently, the intergenerational transmission process, aiming to break the cycle of poverty through education across generations, is likely to face significant challenges. In the context of upper-middle-income countries, the researchers posit that surmounting the middle-income trap requires reaching a tipping point in the gross enrollment rate of higher education [51], [52]. The identified tipping point is represented by the average APK-PT of upper middle-income countries, which stands at 44.3%. Categorically, certain LPDP scholarship programs, such as Beasiswa Unggulan Dosen Indonesia (BUDI), can be construed as more segmented. The execution of BUDI appears to resemble a mandatory program or assignment. A similar observation is noted when examining the outcomes of the LPDP scholarship program concerning the industrial sector. This analysis revealed a lack of documented targets specifically tied to the industrial sector supported through the LPDP scholarship program.

3.1.2. Level of practice

As elucidated in Level 1, it is imperative for LPDP to establish a comprehensive and well-defined plan delineating the standards for intergenerational equity within the context of fulfilling the requirements for the development of Indonesian human resources. Presently, there exists ambiguity regarding the specific direction for LPDP scholarship recipients, particularly fresh graduates upon enrollment. In addressing this, LPDP should engage in mapping and elucidating national requirements for human resources in accordance with the national industrial development master plan (RIPIN). Within the RIPIN framework, priority and key industries slated for construction, fortification, and development by the year 2035 are explicitly outlined [53], these encompass the textile, pharmaceutical, food industry, medical device industries and cosmetic, as well as footwear, miscellaneous industries, leather, telematics and electronics industry, transportation equipment industry, and the industry of energy generation. Conversely, considering the evolution of global mega trends, particularly the Fourth Industrial Revolution, and in connection with the collaborative study involving the Institut Teknologi Sepuluh Nopember, University of Indonesia, RMIT University, and Indonesian Logistics Association, as outlined in "closing the gap: addressing Indonesia’s supply chain skills shortage," it is established that a minimum of three occupations within the logistics and supply chain sector in Indonesia are grappling with substantial skills gaps. These professions include operators, managers of logistics, managers of supply chain. Furthermore, regarding to the data from Asia-Pacific Economic Cooperation (APEC) [54], a substantial Sixty-two percent of businesses in Indonesia have been recognized as facing a shortage of proficient workers in the field of data science and analytics (DSA). These shortages are prevalent across diverse sectors including health, manufacturing, insurance and finance, cybersecurity, government services, and consumer and retail.

Meanwhile, as per the report titled new skills at work: managing skills challenges in ASEAN-5 [55], [56] multiple sectors are suggested for immediate attention in Indonesia concerning the fulfillment of skilled workers, namely tourism, financial, information and communication technology, and automotive. In addition, Khouroh et al. [57] and Hanggraeni et al. [58] recommended that Indonesia is gearing up to address the demand for skilled workers by leveraging the comparative advantages of respective regions. As part of this
strategy, they categorize these advantages into four groups: i) regions based on the excellence of agricultural; ii) regions based on advantages of natural resource; iii) regions based on excellence of industrial; and v) regions based on excellence of service.

3.1.3. Level of study program or field of science (KASA)

In its scholarship initiative, the LPDP delineates specific priority areas of study. Foremost among these fields are engineering, science, medicine, and health. LPDP posits that individuals attaining master's and doctoral degrees in these disciplines play a crucial role in enhancing Indonesia's competitiveness. Nevertheless, when questioned about the alignment between the priority study programs and the overarching mission of the scholarship program, LPDP currently lacks a comprehensive and coherent response. One might even argue that there is a notable incongruity between the two.

3.1.4. Level of reaction

The objective at the reaction level manifests in the degree of satisfaction with the LPDP scholarship program's services. This satisfaction is gauged exclusively through the evaluation of the scholarship recipients themselves. The variables under consideration predominantly revolve around the selection process and the disbursement of scholarship funds. This study contends that assessing the satisfaction level of LPDP scholarship recipients should be complemented by an evaluation of the satisfaction level within the institutions where these recipients contribute professionally. This approach is deemed essential as it enables an indirect examination of the impact of the LPDP scholarship program.

3.1.5. Level of participant

The objective at the participant level pertains to the quantity of scholarship recipients. This goal has been explicitly outlined in the budget document spanning and annual business plan from 2014 to 2017. However, it is noteworthy that the specified target encompasses the aggregation of LPDP scholarship recipients across all types of scholarship programs. As of now, researchers lack information regarding the target number of LPDP scholarship recipients for each specific program type.

3.1.6. Level of activity

The objectives at the activity level are evident in the timely execution of processes spanning from selection to disbursement, encompassing the appropriateness of strategies and procedures. This also includes the handling of specific cases, such as managing campus transfers and addressing instances of double funding, among other scenarios. These activity-level targets are consolidated into a singular objective, namely the aspiration for there have been no grievances reported by the recipients of the scholarship. This particular goal is identified as target 4th in the LPDP business strategic plan draft for the years 2011-2015, subsequently refined and articulated as the contentment of registrants and the satisfaction of scholarship recipients are integral components of the 2015-2019 LPDP business strategic plan [59]. Regrettably, the formalization of activity targets has not yet taken into account the efficiency aspect of coordinating the activities themselves.

3.1.7. Level of resource

The assessment of targets at the resource level is conducted by considering the sustainability of funds and the quantity and quality of human resources responsible for overseeing the LPDP scholarship program, also the support provided by information and communication technology. The focus on resource targets, or input targets, has been a consistent priority for LPDP since its inception. This encompasses considerations such as augmenting funds of non-DPPN and ensuring the presence of a comprehensive information and communication technology system, but unlike the explicit targets set for the quantity of human resources, the researcher did not uncover specific targets in this context, particularly pertaining to the quantitative objectives for human resources of LPDP.

3.2. Performance of program

3.2.1. Level of social, economic, environmental, and other conditions

Within the framework of LPDP scholarships, there exist five distinct categories of scholarships: Dissertation Scholarships, Thesis Scholarships, Medical Specialist Scholarships, Doctoral Scholarships, and Master's Scholarships. The primary indicators of performance for these 5 scholarship categories predominantly involve a comparative analysis among the total recipients of scholarships and the total which has successfully completed their respective programs.

Based on the data presented in Table 2, a comprehensive analysis reveals a significant disparity among recipients of scholarship, meanwhile the corresponding alumni figures from 2013 to 2021 [60]. While certain types of scholarships, such as scholarships of thesis (both foreign and domestic) scholarships of foreign dissertation, demonstrate relatively favorable outcomes, the same cannot be said for other categories,
where the gap is substantial and, in some instances, notably extensive. For instance, the proportion of scholarship alumni from scholarships of foreign doctoral constitutes only 31% of the total scholarship recipients, alumni from medical specialist scholarships represents merely 28% recipients of scholarship, also alumni proportion of scholarship from scholarships of domestic doctoral stands at only 22% of the total scholarship recipients.

The suboptimal performance observed in several types of scholarship programs significantly affects the overall outcome, resulting in a national’s total proportion of alumni scholarship amounting to only 43% of the entire pool of scholarship recipients. Similarly, the proportion of foreign scholarship alumni stands at 55% of the entire pool of scholarship recipients. The data highlights the ineffectiveness of the program, and its ramifications extend to program inefficiency, as inaccurate graduation timelines lead to additional costs for LPDP. Additionally, a thorough assessment of socio-economic and environmental factors can be carried out by analyzing the APK-PT in relation to household economic status [61].

As per findings presented in Table 3, it is evident that while there has been a continuous decrease quintile fifth, there has been a persistent rise in the values associated with quantiles 3 and 4 since 2019. This trend suggests that the scholarship initiatives implemented by LPDP have not effectively addressed the existing social disparity. Despite the ideal scenario of LPDP scholarship programs reaching individuals in the middle and lower economic strata, this objective remains unmet. Consequently, there is still an insufficient contribution to the gross enrollment rate in higher education within the lower-middle-class demographic.

### Table 2. A comparative analysis between LPDP scholarship recipients and scholarship alumni from 2013 to 2021 [60]

<table>
<thead>
<tr>
<th>Type of scholarship</th>
<th>National universities</th>
<th>Overseas universities</th>
<th>National universities</th>
<th>Overseas universities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magister</td>
<td>9,855</td>
<td>10,471</td>
<td>4,590</td>
<td>6,365</td>
</tr>
<tr>
<td>Doctoral</td>
<td>4,229</td>
<td>2,743</td>
<td>959</td>
<td>852</td>
</tr>
<tr>
<td>Medical specialist</td>
<td>595</td>
<td>-</td>
<td>169</td>
<td>-</td>
</tr>
<tr>
<td>Thesis</td>
<td>1,271</td>
<td>31</td>
<td>1,199</td>
<td>29</td>
</tr>
<tr>
<td>Dissertation</td>
<td>534</td>
<td>143</td>
<td>309</td>
<td>111</td>
</tr>
<tr>
<td>Total</td>
<td>16,484</td>
<td>13,388</td>
<td>7,226</td>
<td>7,357</td>
</tr>
</tbody>
</table>

### Table 3. Gross enrollment rate in higher education categorized by household economic status [61]

<table>
<thead>
<tr>
<th>Household economic status</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quintile 1 (very poor family)</td>
<td>11.44</td>
<td>16.13</td>
<td>15.96</td>
</tr>
<tr>
<td>Quintile 2</td>
<td>16.34</td>
<td>19.31</td>
<td>19.86</td>
</tr>
<tr>
<td>Quintile 3</td>
<td>21.88</td>
<td>24.27</td>
<td>24.98</td>
</tr>
<tr>
<td>Quintile 4</td>
<td>29.83</td>
<td>30.23</td>
<td>32.27</td>
</tr>
<tr>
<td>Quintile 5 (rich family)</td>
<td>62.14</td>
<td>56.87</td>
<td>55.67</td>
</tr>
</tbody>
</table>

### 3.2.2. Level of practice (contribution)

(As of December 2021) the total number of individuals who have successfully completed their studies as recipients of LPDP scholarships is recorded at 12,766, comprising 10,955 master's degree graduates and 1,811 doctoral graduates. However, LPDP faces a challenge in tracking whether its alumni have made contributions within the specified sector or field, which is the intended target. For alumni who were employed at the time of registration, there exists the opportunity to contribute back to their original institutions or companies. Consequently, individuals who were already employed at the time of registration possess a greater likelihood of suitability compared to those who registered as fresh graduates. It is important to note that the contemporary era is characterized by the advent of the Fourth Industrial Revolution, where industries are evolving towards creativity and intelligence, grounded in data, information, and communication technology.

Hence, the demand for skilled workers or professionals in the industry is oriented towards individuals with educational backgrounds in information and communication technology, computer science, and/or data science. According to source of data from informants (internal) at LPDP, among the 5,589 recipients of scholarships who have successfully completed their academic programs, only 257, or approximately 5%, engaged in educational programs pertaining to data science, computer science, and/or information and communication technology. Another noteworthy aspect is the management of returnees or scholarship recipients who have completed their studies (alumni). Among them, 19.3% had a fresh graduate status upon registration. As per the researcher's data analysis, approximately 924 individuals, or 88.9% of the alumni, are fresh graduates without employment, implying that they may require additional time to secure employment post-graduation. This underscores the potential for optimization in the management of LPDP scholarship recipients.
3.2.3. Level of study program or field of science

The primary study areas prioritized by the scholarship of LPDP engineering of encompass, health medicine, science. It 3 study programs of priority receive a larger allocation of the budget compared to others. Additionally, LPDP conducts supplementary assessments for candidates seeking scholarships who specialize in these 3 study programs of priority. However, the accomplishment of the targeted study program or scientific field by the scholarship recipient does not inherently indicate success, as it primarily contributes to an increase in the count of graduates with master's and doctoral degrees within the program. The challenge lies in discerning the correlation between the study program and the sector in which recipients of LPDP scholarships are involved make their contributions.

3.2.4. Level of reaction

The response of program beneficiaries to the operational aspects of the LPDP scholarship has been commendable, as evidenced by the level of satisfaction with the program. According to the findings from the 2021 LPDP service satisfaction survey, the satisfaction level among LPDP scholarship beneficiaries achieved a rating of 4.29 on a scale of 5 (with a target exceeding 4). The survey further delineated the average satisfaction indices for specific components: the registration process recorded an index of 4.25, the selection process attained a satisfaction index of 4.42, and the process of receiving benefits, including the distribution of scholarship funds, garnered a satisfaction index of 4.25 [62]. Nevertheless, the evaluation of the reaction, as indicated by the satisfaction level of the scholarship program, should not solely rely on the contentment of LPDP scholarship recipients. Instead, it necessitates inclusion of the satisfaction levels of institutions, such as those within the industry or government sector, where LPDP scholarship recipients contribute professionally.

3.2.5. Level of participant

According to examination of the annual budgetary business plan documents spanning (from 2013 to 2019), it is evident that LPDP consistently exceeded its scholarship recipient targets. However, a notable deviation occurred (in 2017), where there was a significant reduction in the number of scholarship recipients across almost all types of LPDP scholarship programs. In 2016, the total number of LPDP scholarship recipients amounted to 7,205 individuals. In contrast, the figure dropped to 2,171 in 2017, reflecting a 70% decline in LPDP scholarship recipients. Despite achieving the target number of LPDP scholarship recipients, there was a discernible disparity in distribution, as the recipients were heavily concentrated in Java. Provinces such as DI Yogyakarta, Central Java, East Java, West Java, Banten, and DKI Jakarta collectively constituted roughly 64.15% of the total scholarship recipients. Its concentration is further evident in the uneven distribution of LPDP socialization activities, with 35 out of 59 activities in 2017 (or 59%) concentrated in these 6 provinces.

3.2.6. Level of activity

As indicated by the outcomes of the satisfaction survey for scholarship services within the reaction dimension, the implementation of activities under the LPDP scholarship program has demonstrated commendable performance, particularly in areas pertaining to registration, selection, and fund distribution. Nonetheless, certain insights obtained from informants may not have been captured by the survey. Additional information concerning prolonged waiting times for responses regarding transfer management, as reported by internal informants within LPDP, indicates a formalized review process for requests related to campus transfers. The review procedure entails the engagement of external or independent entities, commonly comprising academics, who serve as reviewers. The extended duration of the review process by these external parties has resulted in delayed decisions regarding the approval of campus transfers.

Double funding is a prevalent occurrence among LPDP scholarship recipients who concurrently receive a superior scholarship from the Ministry of Education and Culture. This phenomenon arises due to the lack of integration in the system or database governing scholarships, specifically between LPDP and the Ministry of Education and Culture. Instances of double funding come to light when universities report receiving or disbursing tuition fees from two sources for a single student. In addition to the aforementioned issues, the researcher posits that there are observed inefficiencies in certain activities. For instance, the disbursement of the living cost component for domestic scholarships occurs in lump sums at the inception of three-month intervals. A more efficient approach would involve monthly disbursements, thus mitigating the substantial opportunity cost borne by LPDP. Another inefficiency lies in the uniform inclusion of a living allowance component within the scholarship provision, disregarding the location or place of residence of the scholarship beneficiary.

3.2.7. Level of resource

LPDP currently employs a total of 72 individuals across various levels and directorates. Examining the educational background composition, the majority of LPDP employees hold diplomas at the four-year or bachelor's level, followed by those with diplomas at the three-year level. Individuals with a master's degree constitute 30% of the workforce, and those with a bachelor's degree make up 3%.

While the educational composition is deemed satisfactory when considering LPDP as a work unit, it is recommended that, given its role as an institution offering scholarships at the master's and doctoral levels, efforts be made to augment the number of staff with doctoral and master's qualifications [61]. Regarding the funding source for the scholarship program, LPDP heavily relies on the Anggaran Pendapatan dan Belanja Negara (APBN) or the state budget. LPDP has not shown significant concerns about the sources of funds, as there is no established trajectory specifically associated with the attainment of outcomes.

In Indonesia, government regulations pertaining to education loans were established in 2012, specifically outlined in Article 76, paragraphs (1) and (2) of Law Number 12 of 2012 concerning Higher Education. This legislation clearly delineates the conceptualization of scholarships, encompassing both merit-based and need-based scholarships, as well as loans. Regrettably, the Indonesian government has only recently begun implementing the concept of merit-based scholarships or a combination of merit and need-based scholarships. Alongside human and financial resources, information technology (IT) systems represent a crucial determinant for the successful implementation of scholarship programs. On this matter, nearly all informants expressed a common concern, highlighting issues related to non-integrated applications and data, coupled with inadequate security measures.

3.3. Gap between LPDP scholarship program target and performance

Drawing upon the descriptive results of evaluation outlined in the preceding section, the researcher posits that a misalignment exists in the context of the LPDP scholarship program, there exists a relationship between the formulation of its objectives and the subsequent performance. These gaps may manifest as non-attainment of performance against set targets or inconsistencies between performance and target formulation, reflecting challenges in upholding the concept of intergenerational equity and adhering to the mission of the LPDP scholarship program. Additionally, the gap between the objectives set for the LPDP scholarship program and its actual performance, as evidenced by the evaluation results presented in Table 4, further underscores this misalignment.

Table 4. Discrepancy between the targeted objectives and the actual performance of the LPDP scholarship program as indicated by evaluation results

<table>
<thead>
<tr>
<th>TOP model level</th>
<th>Gap</th>
</tr>
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<tbody>
<tr>
<td>Social, economic, environmental, and other conditions</td>
<td>i. The gap between scholarship recipients and scholarship alumni from 2013 to 2021 is quite wide. Even though there are some types of scholarship which relatively good, such as thesis scholarships (both domestic and foreign) and foreign dissertation scholarships, but for other types of scholarships the gap is quite far, even tends to be very far.</td>
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<td></td>
<td>ii. LPDP scholarship programs which ideally can reach the middle- and lower-class realms still cannot be fulfilled and are still unable to contribute to the higher education gross enrolment which reaches the lower middle-class people.</td>
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<td></td>
<td>iii. Until 2021, LPDP scholarship recipients (from master and doctoral program), especially those with fresh graduate status when registering, reached 12,766 people. However, it is not known whether to fill the gap in the need for skilled workers or what profession they are directed to. On the other hand, skilled workers are not only formed through master’s or doctoral education but also through vocational/professional education or certification training which so far have not been a concern in the LPDP scholarship program.</td>
</tr>
<tr>
<td>Practice (contribution)</td>
<td>LPDP scholarship programs that are segmented such as BUDI and Specialist Doctor Scholarships can be recognized as leading to the fulfillment of competent lecturers or doctors. However, what about non-segmented scholarship programs, especially the Regular Scholarships where almost all of the recipients are fresh graduates? LPDP does not yet have a clear target formulation in this regard.</td>
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<tr>
<td>KASA</td>
<td>The increase in human resources managing the LPDP scholarship program is not proportional to the increase in LPDP scholarship recipients. Supposedly, the level of service satisfaction of the LPDP scholarship program also needs to be measured from the aspect of the institution or place where the recipient of the LPDP scholarship contributes (a career).</td>
</tr>
<tr>
<td>Reaction level</td>
<td>The performance achievement of the service satisfaction level of the LPDP scholarship program is very good because it always exceeds the target. The satisfaction level is measured based on the satisfaction level of the LPDP scholarship recipients. Supposedly, the level of service satisfaction of the LPDP scholarship program also needs to be measured from the aspect of the institution or place where the recipient of the LPDP scholarship contributes (a career).</td>
</tr>
<tr>
<td>Participant level</td>
<td>The targets set are national in nature. This means that there is no target for LPDP scholarship recipients based on their province of origin. This resulted in more than 60% of LPDP scholarship recipients coming from West Java, East Java, DKI Jakarta, Central Java, and DI Yogyakarta which six provinces on the island of Java.</td>
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<tr>
<td>Activity level</td>
<td>In the operationalization of its scholarship program, LPDP has not been efficient, especially opportunity cost, performance target. As a result, there are policies from the LPDP scholarship program that actually result in inefficiencies, such as the payment of the living cost component of domestic scholarship recipients which is paid in advance for three months at a time. Moreover, they do not pay attention to the residence domicile with the campus of study.</td>
</tr>
<tr>
<td>Resource level</td>
<td>i. The increase in human resources managing the LPDP scholarship program is not proportional to the increase in LPDP scholarship recipients.</td>
</tr>
<tr>
<td></td>
<td>ii. The source of funding for the LPDP scholarship program is very dependent on DPPN which is sourced from the APBN and there is no guarantee of its allocation every time. Therefore, the LPDP needs to formulate a target in the form of funding for the scholarship program which the sources are outside the APBN, such as sourced from industry in the form of grant funds or corporate social responsibility funds or from the community in the form of loans. The availability of IT is deemed insufficient as a target. After the availability, optimal functionality, integration, and data security should be the next important things. Unfortunately, this has not been the target.</td>
</tr>
</tbody>
</table>

*Evaluation of the scholarship program by the education fund management institute* (Fahdiansyah Putra)
4. CONCLUSION

Two key conclusions can be drawn from this study: i) The formulation of targets for the LPDP scholarship program is less than optimal. Currently, the targets set for the LPDP scholarship program tend to focus more on output and activities; and ii) The LPDP scholarship program's performance fails to meet expectations, evident in the substantial disparity among the number of scholarship program recipients and graduates. Furthermore, the program outcomes are not in accordance with the principle of intergenerational equity and the resulting performance outcomes necessary for achieving its mission. Meanwhile, five strategic points are presented as recommendations: i) LPDP should promptly initiate a visionary study for the Indonesia human capital development plan, outlining a trajectory until 2035 aligned with the RIPIN align it with prevailing global mega-trends, particularly the 4.0 evolution of industrial; ii) Beyond the doctoral and master levels, LPDP should expand its scholarship program to encompass the first stratum of higher education levels, both diploma and bachelor degree as a manifestation of the mandate of intergenerational equity. This expansion should be integrated with the Program Indonesia Pintar (PIP) and the development of a concept of education loans; iii) LPDP should collaborate with ministries/agencies overseeing similar programs, potentially negotiating to become the sole manager of national higher education scholarship programs. This approach aims to prevent program crowding, overlap, and inefficiencies. Collaboration with strategic industrial sectors is also advisable for program development and performance evaluation; iv) Policies governing the quantum and mechanism of disbursement for living allowance payments for recipients of LPDP scholarships, whether domestically or abroad, it is essential to consider opportunity costs; and v) LPDP should establish stringent repercussions for scholarship recipients who fail to complete their academic programs within the stipulated timeframe.

REFERENCES


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