

Evaluation of the Impact of RO(S)I 2024 on Empowerment of Alumni of the Indonesian Government Scholarship: Investigation of Innovation Mindset and New Business Formation

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ARTICLE INFO	ABSTRACT
Received: 20 Nov 2024	<p>The GoI scholarship program is one of the Indonesian government's strategic initiatives to produce superior human resources contributing to national and global development. This study aims to evaluate the impact of the RO(S)I 2024 program on the empowerment of the Republic of Indonesia government scholarship recipients' alums, focusing on innovation mindset change and increased new business formation. Using quantitative and qualitative approaches, data was collected through surveys and in-depth interviews with alums of the scholarship program participants. With Return on Investment (ROI) calculations on each aspect of impact. The analysis showed that the Economic ROI was 2.25, the Social ROI was 1.59, and the Mindset ROI was 1.15, resulting in a Final ROI 4.99. This finding indicates that LPDP alums have a significant role in economic growth, improving social welfare, and forming an innovative mindset that impacts global competitiveness. Although the domestic contribution is considerable, the impact of alums abroad still has room for improvement, especially in business connections, research collaboration, and educational diplomacy. Therefore, further strategies are needed to strengthen alumni engagement in developing Indonesia's innovation ecosystem and expand their global impact.</p> <p>Keywords: RO(S)I 2024, government scholarships, innovation, entrepreneurship, alum empowerment</p>
Revised: 26 Dec 2024	
Accepted: 14 Jan 2025	

INTRODUCTION

Based on the mandate of Article 31 Paragraph (4) of the 1945 Constitution, the Indonesian government is required to allocate at least 20% of the State Budget (APBN) for the education sector, which is very important for the development of education in the country (Fikri & Sulfany, 2024). 2010, this commitment was strengthened by Law No. 2 of 2010, which amended the APBN and established the National Education Development Fund (DPPN) (Christianingrum, 2022). DPPN is designed as an endowment fund mechanism managed by the Public Service Agency (BLU) to ensure sustainable financial support for education initiatives (Alfarizi & Kurnia Sari, 2024). This legislative framework not only facilitates the allocation of funds but also increases the effectiveness of the allocation of the education budget, thus playing an important role in shaping the Indonesian education landscape (Rustiningrum & Digdowiseiso, 2023). The Education Fund Management Institute (LPDP) plays a vital role in improving Indonesia's human resources through its scholarship program, which supports outstanding students in pursuing higher education (Putra et al., 2024). This initiative is crucial to fostering a sustainable education ecosystem, which requires collaboration between various stakeholders to ensure accessibility and quality in education (Rochmansjah, 2024).

Furthermore, the 2024 Return of Scholars Initiative (RO(S)I) program is specifically designed to empower LPDP alums, enabling them to contribute effectively in strategic sectors such as education,

healthcare, and technology (Khonsa et al., 2024). By harnessing the skills and expertise of these scholars, LPDP not only fosters individual growth but also drives broader economic and social development in Indonesia (Pradesa et al., 2024). This holistic approach underscores LPDP's commitment to building a competitive workforce capable of addressing the country's challenges and driving innovation (Zahrudin et al., 2024). To measure the long-term impact of educational investment, the government, through LPDP, launched the Return of (Social) Investment (RO(S)I) program in 2024. This program facilitates and monitors government scholarship alums's social, innovative, and entrepreneurial contributions. One of the main focuses of RO(S)I 2024 is to encourage the formation of an innovative mindset among alums and to increase their ability and courage in pioneering new businesses, especially those with social impact.

The RO (S) I 2024 program empowers LPDP alums to contribute significantly to national development by facilitating the transfer of knowledge, skills, and professional networks they have acquired. This knowledge transfer process is critical, allowing alums to share their experiences and insights, thereby increasing the overall impact on national development goals (North et al., 2022). The LPDP Alumni Management Division is key in this initiative, focusing on managing and evaluating program implementation to ensure that alums are effectively supported post-education (Ribeiro et al., 2024). The program encourages collaboration and innovation among alums by fostering a strong professional network, which is crucial to sustainable development (Rohlmann & Wömpener, 2009). Ultimately, successfully integrating these elements of empowerment, knowledge transfer, and networking will enable LPDP alums to make fundamental contributions to their communities and the nation. However, to date, systematic evaluation of the effectiveness of RO(S)I in enhancing alum empowerment is still limited. Few empirical studies have explored the extent to which this program can truly internalize innovation values and encourage alums to create entrepreneurial-based solutions. Amidst global challenges and digital transformation, an innovative mindset and entrepreneurial capacity are key to creating sustainable societal impacts.

Evaluation of the RO(S)I 2024 program is essential to understand its effectiveness in empowering LPDP alums and enhancing their professional and academic contributions. By systematically assessing program outcomes, we can identify how much the initiative has enhanced alum capacity and societal participation (Donnelly & Austen, 2022). This evaluation will focus on key areas such as alum empowerment, which involves enabling graduates to realize their potential and positively impact their fields (Halvorsen, 2024). In addition, the program's role in fostering professional development is critical, as it equips alumni with the skills and knowledge necessary for successful career transitions ("Impacto Social Do PPGINF-UFPR," 2022). Furthermore, measuring alums's academic contributions will provide insight into the program's overall success in promoting scholarly engagement (Gigliotti et al., 2025). Thus, a comprehensive evaluation will illuminate the program's impact and inform future improvements.

LITERATURE REVIEW

Alumni Empowerment Concept

Alum empowerment is essential to enhance graduates' capacity, participation, and contribution in various sectors. This process involves providing access to resources, opportunities, and decision-making power, which aligns with Zimmermann's (1995) definition of empowerment (Bhattacharya, 2024). For LPDP alums, capacity development is essential as it develops the skills and knowledge necessary for effective participation in national development (Wagan et al., 2025). In addition, professional networks play a vital role by connecting alums with peers and industry leaders, facilitating collaboration and knowledge sharing (Kolliyi & Dhayanand, 2024). Ultimately, empowering alumni enhances their individual competencies and enables them to enhance their skills for broader national development goals, thereby driving economic and social progress (Mulyana & Linando, 2024). By

focusing on these aspects, LPDP can ensure its alums are well-equipped to make meaningful contributions to society (Basha et al., 2024).

Declining Returns to Education ROI Model

The declining returns to education ROI model highlights the complex interactions between education, economic outcomes, and labour market dynamics. Central to the model is the Human Capital Theory, which posits that education increases an individual's productivity and earning potential, thereby influencing economic returns (Tran, 2020). However, the model also incorporates Signaling Theory, suggesting that education signals employers about an individual's abilities, which can influence their perceived value in the labour market (Doan et al., 2018). Additionally, the Screening Hypothesis suggests that education serves as a mechanism for employers to identify talented individuals, further complicating the relationship between education and economic returns (Purnastuti et al., 2013). Finally, the Education Production Function provides a framework for understanding how different educational inputs impact outcomes, emphasizing the need for effective policy design to optimize these investments (Chanda, 2005). Collectively, these concepts illustrate the multifaceted nature of the economic returns to education and the importance of aligning education policy with labour market needs. Here is the equation formula for ROI used

Economic ROI Formula (Declining Returns to Education):

$$\text{Economic ROI (Declining Returns)} = \frac{\text{Total income increase (Adjusted for Declining Returns)} + \text{Sectoral Employment Impact}}{\text{Total educational costs}}$$

Full Discounting and Mincer Earnings ROI Model

The Mincer Earnings ROI Model uses Full Discounting to assess the present value of future income derived from investments in human resources, such as education and training. Full Discounting is essential to accurately estimate these future benefits, allowing for a comprehensive understanding of the returns on those investments (Lemieux, 2006). The Mincer equation, a key component of this model, argues that log income is a linear function of schooling, thus linking educational attainment directly to wage outcomes (Heckman et al., 2005). This relationship is based on Human Capital Theory, which asserts that investment in education increases individual productivity and economic growth (Hartog, 2011). Gary Becker, the architect of this theory, emphasizes the importance of education as a critical factor in economic development (Bhatti, 2012). Thus, the integration of Full Discounting in the Mincer model provides a robust framework for evaluating the economic returns of educational investments (Heckman et al., 2006).

Economic ROI Formula (Full Discounting and Mincer Earnings):

$$\text{Economic ROI (Declining Returns)} = \frac{\text{NPV of Future Income (Mincer Earnings Function)} + \text{IRR from Full Discounting Method}}{\text{Total educational costs}}$$

METHOD

This study aims to measure and analyze the Return On Scholarship Investment (ROSI), LPDP program, specifically economic and social impacts and mindset changes on scholarship recipients; this study uses a mixed method (Methods), which combines qualitative and quantitative methods to provide a comprehensive picture, regarding the impact of the LPDP program on scholarship recipients. This approach combines quantitative and qualitative analysis to evaluate the economic, social, and mindset dimensions of the Return on Scholarship Investment (RO (S) I). The sample of respondents in this study was taken as many as 14. Quantitative Approach: Quantitative data is used to calculate RO (S) I through statistical and economic analysis. This data includes income before and after receiving a scholarship and other contributions from alumni. Qualitative approach This approach aims to understand social change and mindset through in-depth interviews and case studies of LPDP alums. The focus is on individual experiences and the program's impact on their lives.

RESULTS & DISCUSSION

1. Descriptive Analysis

1.1. Respondent profile

Population Profile is the Demographics of LPDP Alumni who graduated in 2015, 2018 and 2023.



Figure 1. LPDP Alumni

Figure 1 shows that 2258 LPDP alumni participated in this study, consisting of 2051 Masters and 207 Doctoral alumni. Specifically, the response rate for each batch was i) the Master's program Class of 2015 with 140 people, the Class of 2018 with 791 people and the Class of 2023 with 1120 people, ii) the Doctoral program Class of 2018 with 50 people and the Class of 2023 with 157 people.

1. Impact of Return On Scholarship Investment (ROSI) Globally

1.1. Economic Impact

Here is the calculation of the RO(S)I model of Economic Impact

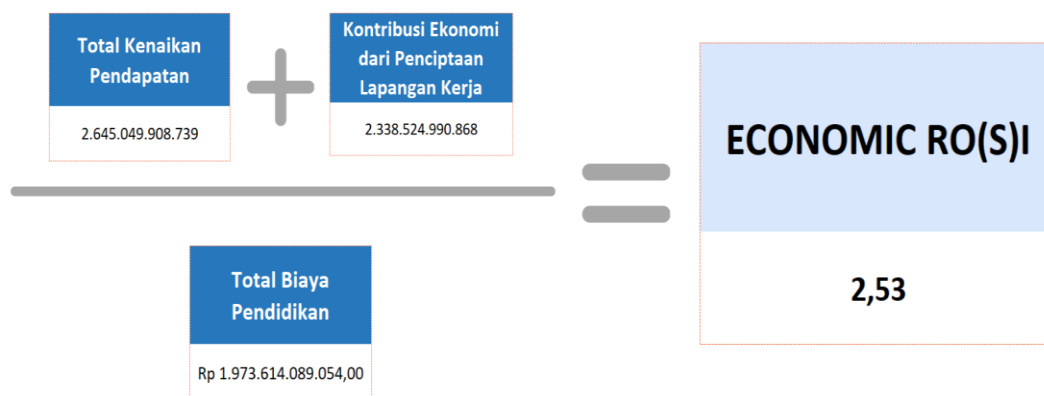


Figure 2. LPDP Economic Impact

Interpretation

The interpretation of the number 2.53 states that for every Rp 1 invested by LPDP in education, the economic impact generated reaches Rp 2.53. This shows that investment in education through LPDP generates economic benefits more than twice as much as the costs incurred. Thus, the LPDP scholarship program has a significant economic impact in increasing alum income and their contribution to the national economy.

1.1. Social Impact

Here is the calculation of the RO(S)I model of Social Impact:

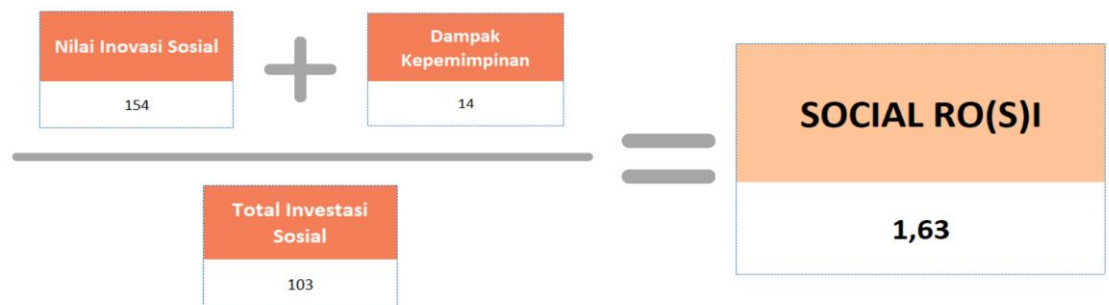


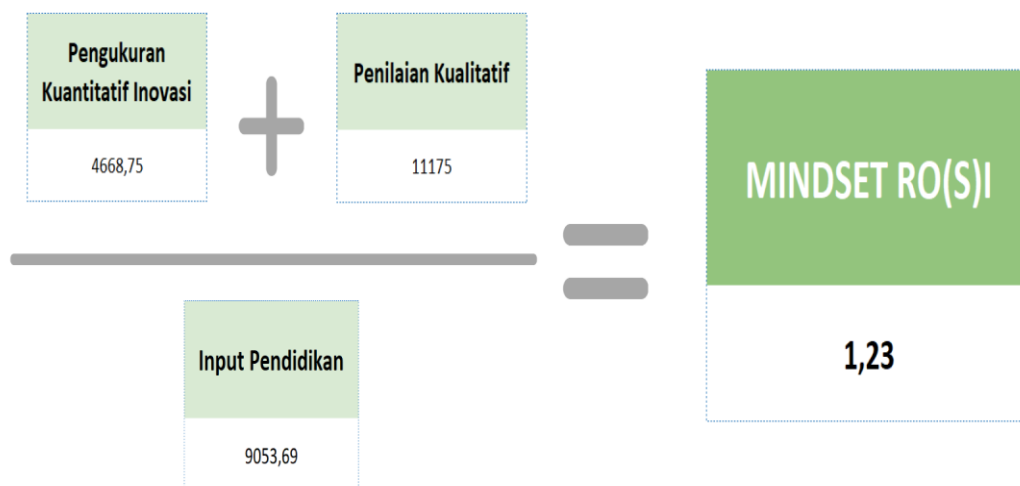
Figure 3. Social Impact

Interpretation

The interpretation of the number 1.63 states that for every Rp 1 invested in social programs, the social impact generated reaches Rp 1.63. This shows that LPDP's alums' social development and leadership investment provide greater social benefits than the costs incurred. So, the LPDP Program contributes economically and has significant social impacts through alums' social innovation and leadership. With a Social RO(S)I value of 1.63, LPDP's investment in alums social development shows positive results, although it can still be improved further.

1.1. Mindset Impact

Here is the calculation of the RO(S)I model from Mindset Impact:

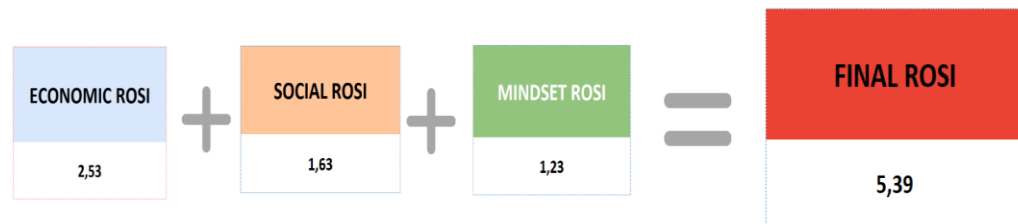


Interpretation

The interpretation of the number 1.23 states that for every Rp 1 invested in education, the impact generated in alum mindset and innovation changes is Rp 1.23. Thus, LPDP's investment in developing alum mindsets positively impacts a Mindset RO (S) I of 1.23. This shows that the LPDP education program positively influences alums' innovative mindsets and leadership, although there is still room for improvement to provide a more significant impact.

1.1. Model Combination

Here is the calculation of the model combination:

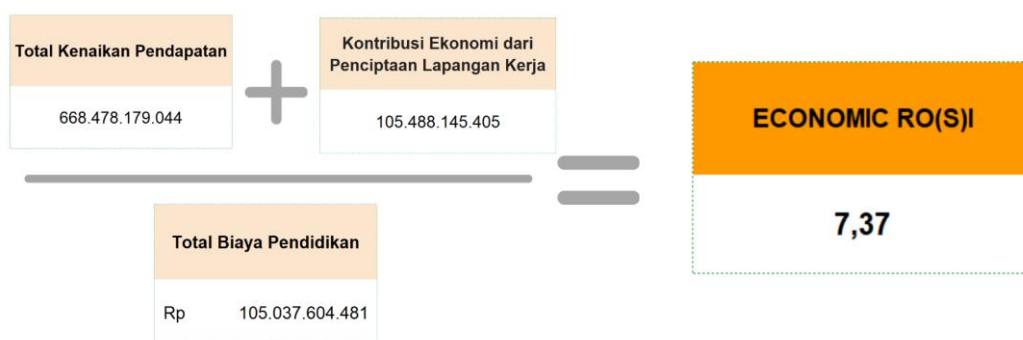


Interpretation

The value of 5.39 shows that overall, every Rp 1 invested in LPDP education produces a social, economic, and mindset impact of Rp 5.39. So, LPDP education investment has a significant impact with a Final RO(S)I of 5.39 times the initial investment. This shows that the LPDP program has substantial benefits in encouraging economic growth, social impact, and changes in mindset oriented towards innovation and leadership.

1. Results of Domestic RO(S)I Impact

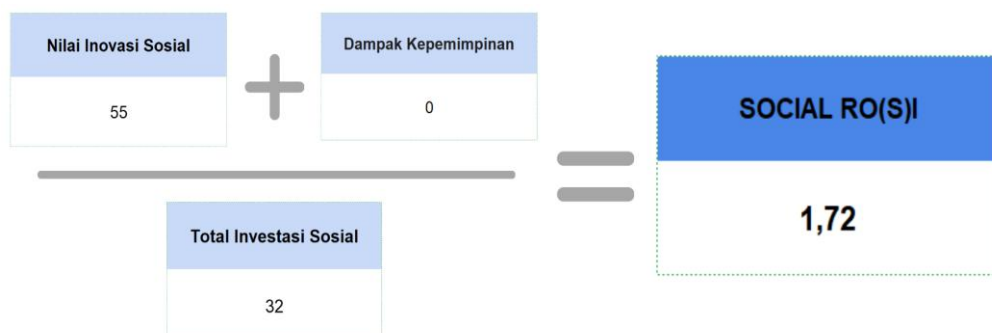
1.1. Economic Impact



Interpretation

Every Rp1 invested in education generates an economic impact of Rp7.37. This shows that LPDP investment provides enormous economic benefits for Indonesia, increasing income and creating jobs. The LPDP program has a significant economic impact domestically, with an Economic RO(S)I reaching 7.37 times. This means that investment in education through LPDP has proven to be very economically beneficial, increasing individual income and strengthening the national economy through job creation.

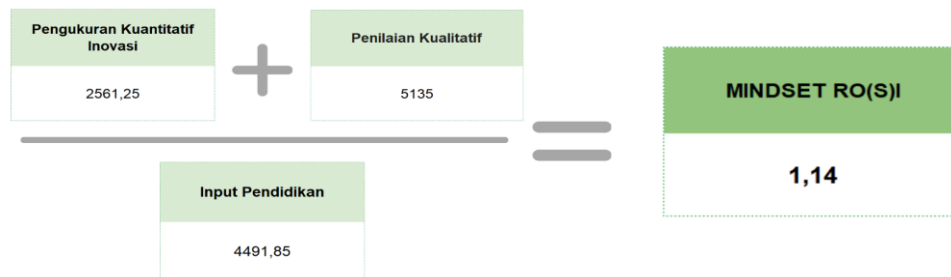
1.1. Social Impact



Interpretation

Every Rp 1 invested in the social aspect produces a social impact of 1.72 times. This shows that the LPDP program has a positive social impact, although it can still be improved, especially in leadership. The LPDP program has a good social impact, with a Social RO(S)I 1.72. However, there are challenges in the leadership aspect, which can be an area of improvement so that LPDP alumni not only innovate in the social aspect but also actively contribute as leaders in various sectors of society.

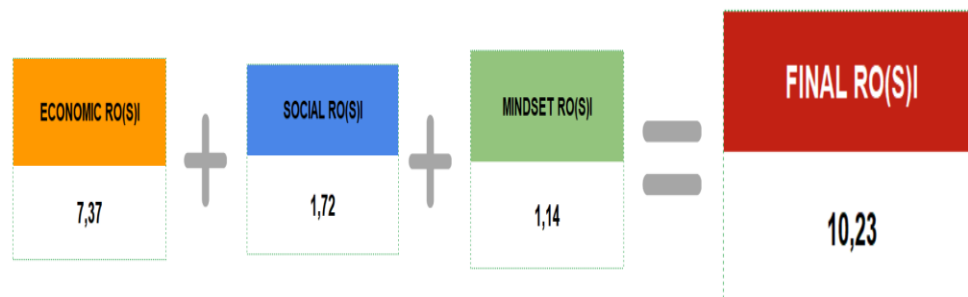
1.2. Impact of Mindset



Interpretation

Every Rp1 invested in education results in a 1.14-fold impact on mindset change. This shows that the LPDP program positively impacts the mindset of scholarship recipients, although not as significantly as other aspects, such as the economy. So, the LPDP Program positively impacts mindset change with a Mindset RO(S)I of 1.14. This means that investment in education through LPDP has increased innovation and academic assessment. However, this figure is relatively lower than economic or social impacts, so it can still be improved by encouraging more research-based innovation and broader academic involvement.

1.2. Model Combination



Interpretation

Overall, the LPDP program has a total impact of 10.23 times the investment provided. This means that every Rp 1 invested in this program produces benefits worth Rp 10.23 in economic growth, social welfare, and changes in mindset. The LPDP program effectively has an economic impact (the most significant contribution). Social impact and mindset changes are also significant, although they can be further enhanced with policies encouraging innovation and social leadership. The final results show that investment in education through LPDP provides extraordinary returns, strengthening superior human resources that support Indonesia's growth.

2. Results of the Impact of Overseas ROSI

2.1. Economic Impact



Interpretation

Every Rp1 invested in overseas education generates Rp2.25 in economic value. This shows that investment in overseas education generates positive economic benefits, although not as large as the domestic impact (7.37 in the previous figure). This value also indicates that although alums gain considerable personal economic benefits, the economic impact back to Indonesia may still be limited. LPDP has a positive economic impact overseas, with increased income and contribution to job creation. However, RO(S)I is lower than domestically (2.25 vs. 7.37), which may be caused by brain drain (alumni working overseas) or the suboptimal utilization of human resources returning to Indonesia.

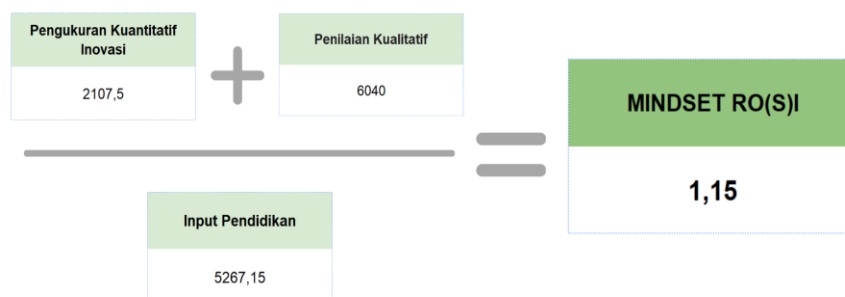
2.2. Social Impact



Interpretation

Every Rp 1 of social investment generates Rp 1.59 in social value. This figure shows that the social impact of LPDP alums abroad is quite significant but still lower than the social impact at home (1.72 in the previous figure). LPDP alums abroad contribute to social innovation and leadership, but their impact is smaller than at home. The lower Social RO(S)I (1.59 vs 1.72 at home) may indicate that some alumni contribute more in the countries where they work or study, with less involvement in the Indonesian community.

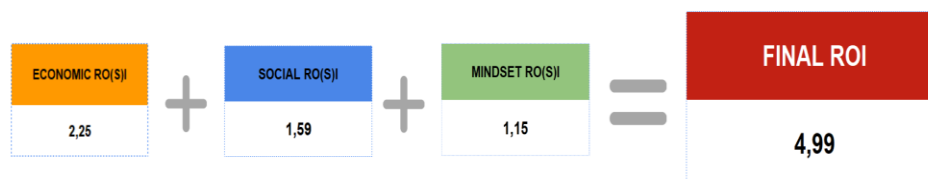
2.3. Impact of Mindset Patterns



Interpretation

Interpretation: Every Rp1 investment in education produces Rp1.15 in mindset change. This figure is smaller than that of Social RO(S)I (1.59) or Economic RO(S)I (2.25), which shows that mindset change takes longer to have a real impact. LPDP alums abroad experience an increase in mindset and innovation through the education they receive. Mindset change is more difficult to measure directly than economic or social impacts, so the RO(S)I value tends to be smaller.

2.4. Model Combination



Interpretation

Every Rp1 investment in the LPDP program produces a total impact of Rp4.99 in economic, social, and mindset benefits. This figure shows that the LPDP program is highly efficient in developing Indonesian human resources globally. LPDP has a significant positive impact abroad regarding economic, social, and mindset aspects. The most significant economic impact shows that LPDP alums have fundamentally contributed to the business world and their professional work.

Conclusion & Recommendation

Conclusion

The LPDP program has significantly impacted various aspects, both globally, domestically, and internationally. Based on the ROI (Return on Investment) analysis, the contribution of LPDP alums covers three main dimensions: economic, social, and mindset.

Regarding economic impact, LPDP alums play a significant role in creating business opportunities, innovation, and increasing global and domestic competitiveness. In Indonesia, many alumni contribute to developing the business sector, especially MSMEs, and play a role in national economic growth. Meanwhile, abroad, alums who work in multinational companies also bring investment and expand Indonesia's economic network in the international arena.

In terms of social impact, the contribution of alums is more felt domestically, especially in the education, social, and public policy sectors. Many alums are active in government, academics, and social organizations that aim to improve people's welfare. Although their contribution is quite significant at the global and international levels, there are still opportunities to expand the role of alums in international organizations and educational diplomacy.

Meanwhile, LPDP alums have demonstrated an innovative and adaptive mindset in terms of mindset and global insight. They deeply understand global trends and apply strategic thinking in various fields. However, for these benefits to be more optimal for Indonesia, further efforts are needed to facilitate alums abroad to share knowledge and experience with communities at home.

Recommendations

Based on these findings, several strategic recommendations can be made to increase the effectiveness of the LPDP program in the future.

First, optimizing the economic impact by increasing support for alumni who want to become entrepreneurs and expanding access to capital for those who want to invest in Indonesia. Second,

increasing social impact through facilitating collaborative projects between alumni and international institutions.

Third, strengthening the global mindset by building a stronger alum network to share knowledge and experience domestically.

Fourth, cooperation with the global industrial sector should be strengthened so that alums who have careers abroad remain connected to Indonesia's development.

Overall, the LPDP program has succeeded in producing superior human resources who are highly competitive. However, to further strengthen its impact, a more systematic strategy is needed in connecting alumni with the national innovation and development ecosystem. With these steps, LPDP can continue to contribute to producing future leaders who are not only successful individually, but also provide great benefits to the nation and the world..

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