

Human Resource Investment Strategy in Increasing Productivity of Economic Sectors in Indonesia

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ABSTRACT

Penelitian ini bertujuan untuk mendeskripsikan strategi investasi sumber daya manusia (SDM) dan dampaknya terhadap produktivitas sektor ekonomi di Indonesia, serta mengidentifikasi tantangan dan kesenjangan dalam implementasinya. Metode penelitian yang digunakan adalah deskriptif kualitatif dengan analisis data sekunder dari berbagai sumber resmi seperti Badan Pusat Statistik, kementerian terkait, dan lembaga internasional. Hasil penelitian menunjukkan bahwa strategi investasi SDM di Indonesia meliputi pengembangan pendidikan formal, pelatihan vokasi, peningkatan kompetensi digital, dan perbaikan layanan kesehatan. Dampak positif tercermin dari peningkatan Indeks Pembangunan Manusia (IPM), produktivitas tenaga kerja di sektor industri dan jasa, serta daya saing nasional yang lebih baik. Namun, terdapat sejumlah tantangan, antara lain ketimpangan akses antardaerah, ketidaksesuaian kompetensi dengan kebutuhan industri, terbatasnya peran sektor swasta, dan fragmentasi kebijakan. Penelitian ini merekomendasikan peningkatan pemerataan akses, penguatan kemitraan antara pendidikan dan industri, optimalisasi peran sektor swasta, dan integrasi sistem dan tata kelola berbasis data untuk meningkatkan efektivitas investasi SDM di Indonesia. Temuan ini diharapkan dapat menjadi acuan bagi para pembuat kebijakan dalam merancang kebijakan pengembangan SDM yang lebih inklusif dan produktif.

This study aims to describe the human resource (HR) investment strategy and its impact on the productivity of the economic sector in Indonesia, as well as to identify challenges and gaps in its implementation. The research method used is descriptive qualitative with secondary data analysis from various official sources such as the Central Statistics Agency, related ministries, and international institutions. The results of the study indicate that the HR investment strategy in Indonesia includes the development of formal education, vocational training, increasing digital competence, and improving health services. The positive impact is reflected in the increase in the Human Development Index (HDI), labor productivity in the industrial and service sectors, and better national competitiveness. However, there are a number of challenges, including inequality of access between regions, mismatch of competence with industry needs, limited role of the private sector, and policy fragmentation. This study recommends increasing equal access, strengthening partnerships between education and industry, optimizing the role of the private sector, and integrating data-based systems and governance to increase the effectiveness of HR investment in Indonesia. These findings are expected to be a reference for policy makers in designing more inclusive and productive HR development policies.



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INTRODUCTION

Human resource (HR) investment is a crucial element in driving inclusive and sustainable economic growth. Amidst the challenges of globalization, technological disruption, and post-pandemic economic transformation, the quality of HR determines a nation's competitiveness. Indonesia, as a developing country with a demographic bonus, has great potential in utilizing HR as a driving force for economic productivity.

However, various reports show that the contribution of Indonesian labor productivity is still relatively low compared to other ASEAN countries (World Bank, 2022). The low quality of education, mismatch of competencies with industry needs, and minimal access to vocational training are the main causes. On the other hand, the government has launched various strategies such as the Pre-Employment Card program, revitalization of vocational education, and digital-based workforce training. Various previous studies have highlighted the importance of HR investment in driving productivity. For example, Becker's (1993) study explains that improving skills through education and training will have a direct impact on workforce output. Research by Hanushek & Woessmann (2012) also emphasizes the strong relationship between education quality and long-term economic growth. In Indonesia, a study by Susanti et al. (2022) found that relevant job training can increase the income of informal sector workers by up to 20%. However, there is a gap that has not been studied in depth, namely how HR investment strategies are implemented sectorally in Indonesia and to what extent they are effective in increasing economic productivity, especially in regions such as North Sumatra which have diverse economic sectors. Therefore, this study aims to analyze HR investment strategies in three main sectors—manufacturing, services (tourism and education), and agriculture—and their implications for productivity in North Sumatra Province.

METHOD

This study uses a descriptive qualitative approach that aims to describe and analyze human resource (HR) investment strategies in increasing the productivity of the economic sector in Indonesia. This approach was chosen because it allows researchers to explore phenomena in depth based on secondary data without the need for direct interaction with informants or respondents.

Data Types and Sources

The data used in this study is secondary data, obtained from various official and relevant sources such as:

1. Government reports (Bappenas, Ministry of Manpower, Ministry of Education and Culture, Ministry of Finance)
2. Publication from the Central Statistics Agency (BPS)
3. Reports from international organizations (World Bank, OECD, ILO, and UNDP)
4. Scientific journal articles, books, and previous research results
5. Policy and regulatory documents related to HR investment

Data collection technique

Data collection was conducted through documentation studies, namely by tracing and analyzing written documents, both in printed and digital form. Researchers collected and reviewed various documents containing information about:

1. National strategy for human resource development
2. Budget for investment in education and job training
3. Workforce skills improvement programs (reskilling and upskilling)
4. The impact of human resource investment on the productivity of key sectors of the economy

Data Analysis Techniques

The collected data was analyzed using content analysis. The analysis steps were carried out as follows:

1. Data reduction: Filter and select data that is relevant to the research focus.
2. Categorization: Grouping information based on themes such as forms of HR investment, implementation strategies, and impacts on economic sectors.

3. Interpretation: Interpreting the relationship between HR investment strategies and increased productivity in the economic sector based on classified data.
4. Data presentation: Compile the analysis results in the form of a systematic and logical descriptive narrative.

Validity of Data

The validity of the data is maintained through source triangulation, namely by comparing and verifying data from various sources to ensure consistency of information. In addition, researchers also conduct extensive literature searches and transparent reference recording to increase the credibility of the research results.

RESULTS AND DISCUSSION

Human resource (HR) investment is a fundamental strategy in supporting long-term economic development. The Indonesian government has consistently made HR development a national priority, reflected in the 2020–2024 RPJMN and various sectoral policies. Based on the results of a documentation study of reports from Bappenas, the Ministry of Finance, the World Bank, and the OECD, HR investment strategies in Indonesia are classified into three main forms, namely investment in education, training and skills development, and health.

Form of Human Resource Investment Strategy in Indonesia

Human resource (HR) investment is a fundamental strategy in supporting long-term economic development. The Indonesian government has consistently made HR development a national priority, reflected in the 2020–2024 RPJMN and various sectoral policies. Based on the results of a documentation study of reports from Bappenas, the Ministry of Finance, the World Bank, and the OECD, HR investment strategies in Indonesia are classified into three main forms, namely investment in education, training and skills development, and health.

1 Investment in Formal and Non-Formal Education

Education is the main pillar of human resource development. The government has set a minimum budget allocation of 20% of the APBN for the education sector since the enactment of Law No. 20 of 2003 concerning the National Education System. The education investment strategy includes:

- a. Increasing access and equity in education: Through the 12-year compulsory education program and the Smart Indonesia Card (KIP), the government is trying to reduce the school dropout rate, especially in remote areas.
- b. Improving the quality of education: Driven through teacher competency strengthening programs, competency-based curriculum, and school digitalization (Independent Learning Program).
- c. Strengthening vocational and polytechnic education: The government is encouraging vocational education to bridge the needs of the labor market with practical skills-based training.
- d. Development of non-formal education: Organized through PKBM (Community Learning Activity Centers) which reach productive age communities who do not have access to formal education.

This investment has a long-term impact on improving the quality of the workforce and the availability of competitive human resources in the global market.

2. Investment in Training and Skill Development

Investment in job training is a priority in response to the changing dynamics of the labor market due to globalization and digitalization. The strategies implemented include:

- a. Job Training Centers (BLK): The government is developing modern BLK and revitalizing community BLK to provide competency-based training according to local needs.
- b. Pre-Employment Card Program: A digital-based innovation that provides access to online training and incentives for job seekers and workers affected by the pandemic.
- c. Link and match program between education and industry: To ensure that graduates of vocational education and higher education have competencies according to the needs of the business world and industry (DUDI).

- d. Future skills training: Includes digital literacy, artificial intelligence, foreign languages, and entrepreneurship training to support digital economic transformation.

This investment aims to reduce skills mismatch and increase workforce productivity, especially in sectors that require technical and digital expertise.

3. Investment in Human Resources Health and Nutrition

Health aspects are an integral component in human resource development because they are directly correlated with work productivity and learning ability. Investment strategies in the health sector include:

- a. National Health Insurance Program (JKN): Provides universal access to health services for all levels of society through BPJS Kesehatan.
- b. Child and maternal nutrition interventions: Supplementary Feeding Program (PMT), nutrition education, and stunting and wasting control are the focus of long-term investment.
- c. Improving basic and promotive-preventive health services: Through revitalization of community health centers, integrated health post services, and healthy lifestyle campaigns.
- d. Improving the reproductive and mental health of the workforce: So that the productive age workforce can work optimally and sustainably.

These investments contribute directly to reducing mortality rates, increasing life expectancy, and increasing labor productivity efficiency nationally.

Impact of Human Resource Investment Strategy on Economic Productivity

Human resource (HR) investment has a significant impact on economic productivity, because the quality and capacity of the workforce are the main determinants of output growth in economic sectors. Based on the results of the analysis of secondary data from the Central Bureau of Statistics (BPS), the World Bank, the OECD, and reports from related ministries, the impact of HR investment in Indonesia can be seen through various indicators, both macro and sectoral.

1. Increasing the Human Development Index (HDI) as a Proxy for Human Resources Quality

One of the main indicators in measuring the results of human resource investment is the Human Development Index (HDI), which covers three dimensions: education, health, and standard of living. BPS data shows that Indonesia's HDI has increased from 71.94 in 2018 to 73.55 in 2023. This increase reflects improvements in:

- a. Average length of schooling, which increased from 8.17 years (2018) to 8.65 years (2023)
- b. Life expectancy, which increased from 71.2 years to 73 years
- c. Per capita expenditure, which also shows a positive trend, reflects increasing purchasing power.

A high HDI is generally positively correlated with labor productivity, because a healthy and educated workforce has a higher work capacity, better adaptability to technological change, and is able to create greater added value.

2. Labor Productivity in Various Economic Sectors

Labor productivity is measured by output per worker (GDP/workforce). Based on data from BPS and the Ministry of Manpower, there has been an increase in labor productivity, especially in sectors that receive more targeted HR investment support:

- a. The manufacturing sector recorded a productivity increase of 4.7% per year in the last five years, in line with industrial technical and vocational training programs.
- b. The digital and financial services sector saw a productivity surge of up to 6.5% per year, largely driven by higher education, digital training and IT-based skills upgrading.
- c. In contrast, the agriculture and construction sectors show slow productivity growth, mainly due to low levels of workforce education, lack of technical training, and limited access to technology.

This shows that targeted human resource investment can create a productivity leap, especially in sectors that require medium and high skills.

3. Increasing National Economic Competitiveness

The World Economic Forum (WEF) report in the Global Competitiveness Report places the quality of human resources as one of the main pillars of global competitiveness. In the 2023 report, Indonesia showed an increase in scores on several indicators related to human resources:

- a. Quality of vocational training
- b. Availability of skilled labor
- c. Ability to adapt to technological changes

The impact is seen in the increasing interest of foreign investment in the technology and manufacturing sectors based on high-skilled labor, which also drives the structural transformation of the national economy.

4. Contribution to Inclusive Economic Growth

Human resource investment also contributes to more inclusive economic growth through:

- a. Decrease in the open unemployment rate, which fell from 5.86% in 2021 to 5.32% in 2023
- b. Increasing female labor force participation, driven by family-based education and training programs and digital inclusion
- c. The growth of young entrepreneurs, as a result of entrepreneurship training in the Pre-Employment Card program and MSME training

Thus, investment in human resources not only increases macroeconomic productivity, but also promotes equal economic opportunities and reduces inequality.

Challenges and Gaps in Human Resource Investment in Indonesia

Although human resource (HR) investment strategies have shown positive contributions to improving the quality of the workforce and economic productivity, their implementation in Indonesia still faces a number of structural challenges and significant gaps. The results of the analysis of policy documents, international agency reports, and national secondary data show that these obstacles are multidimensional, both in terms of equity, relevance, and institutional effectiveness.

1. Gaps in Access and Quality between Regions

One of the main challenges is the disparity in access and quality of education, training and health services between regions, especially between western and eastern Indonesia:

- a. Access to education and training in the 3T (remote, frontier, outermost) areas is still limited, both in terms of infrastructure, teaching staff, and availability of training facilities. BPS data shows that the average length of schooling in Papua is only 6.3 years compared to DKI Jakarta which reaches 11.1 years.
- b. The distribution of BLK and job training institutions is still concentrated in big cities, while areas with high unemployment rates have not been optimally reached.
- c. Health service inequality is also a serious issue. The ratio of doctors per 10,000 people in eastern Indonesia is still far below the national average, which has an impact on the quality of human resource health and local productivity levels.

This condition exacerbates regional disparities in contributions to national economic growth and slows down structural transformation outside growth centers.

2. Competency Mismatch (Skill Mismatch)

The gap between graduate competencies and the needs of the world of work is a serious challenge that hinders the effectiveness of HR investment:

- a. The OECD report (2023) shows that around 40% of Indonesian workers work in fields that do not match their educational background.
- b. The lack of industry-based curriculum in vocational and higher education results in many graduates lacking relevant skills, especially in the fields of digital technology, artificial intelligence, and foreign languages.
- c. Low industry involvement in job training results in training not being connected to the real needs of the labor market.

This condition has an impact on low worker productivity and increased retraining costs by companies.

3. Limited Role of Private Sector in Human Resources Development

Human resource investment has so far been dominated by the government, while the contribution of the private sector has not been optimal, especially in developing workforce skills:

- a. Many companies still rely on a “ready-made” workforce from the formal education system, and are reluctant to invest in internal training.
- b. Tax incentives for job training in industry have not been fully utilized, due to weak socialization and procedural complexity.
- c. The involvement of the private sector in developing vocational education curricula is still limited, so that the orientation of training is not fully demand-driven.

In fact, the success of countries such as Germany and South Korea in developing human resources shows the importance of close partnerships between the education and industry sectors.

4. Policy Fragmentation and Weak Governance

Human resource investment in Indonesia involves various ministries and institutions (Kemendikbudristek, Kemenaker, Kemenkes, Bappenas, and others). However, cross-sector coordination is often ineffective:

- a. Job training programs, vocational education, and digital skills development are still running partially and overlappingly.
- b. The weakness of outcome-based monitoring and evaluation systems makes it difficult to measure investment effectiveness and design adaptive improvement policies.
- c. The lack of data integration between institutions, such as employment, education and training data, makes evidence-based policy planning difficult.

Without improved governance and institutional integration, the efficiency and impact of HR investments have the potential to be suboptimal.

CONCLUSION

Human resource (HR) investment is a fundamental strategy in driving productive, inclusive, and sustainable economic growth in Indonesia. Based on the results of descriptive analysis of secondary data, this study concludes several important points:

1. Indonesia's human resource investment strategy has included various programs in education, vocational training, strengthening digital competencies, and improving basic health services. The government has also implemented a number of affirmative policies to improve the quality of the workforce through programs such as the Pre-Employment Card, revitalization of vocational schools, and development of Job Training Centers (BLK).
2. The impact of human resource investment on economic productivity is reflected in the increase in the Human Development Index (HDI), the increase in labor productivity in skill-intensive sectors, and the increase in national competitiveness. This investment also contributes to reducing unemployment and increasing the economic participation of vulnerable groups, including women and youth.
3. However, challenges and implementation gaps remain major obstacles. Inequality of access between regions, mismatch of workforce competencies with industry needs, weak involvement of the private sector, and policy fragmentation indicate that HR investment strategies need to be strengthened systemically and across sectors.

SUGGESTION

Based on the findings above, here are some strategic recommendations that can be used as a reference for policy makers, industry players, and other stakeholders:

1. Expansion and Equalization of Human Resources Investment

The government needs to strengthen equal access to education, training, and health services throughout Indonesia, especially in the 3T regions. Incentives need to be provided to improve educational facilities and professional teaching staff in underdeveloped areas.

2. Strengthening the Link and Match between the World of Education and the World of Work

The education curriculum, especially vocational and polytechnic, must be adjusted to the needs of industry through active partnerships between educational institutions and the private sector. Project-based learning and mandatory internship programs can be effective models.

3. Optimizing the Role of the Private Sector in Human Resource Development

The government needs to encourage private sector involvement through fiscal incentives, regulatory ease, and joint research collaboration. The business world must be actively involved in designing job training and preparing competency standards.

4. System Integration and Strengthening of National Human Resource Governance

An integrated and data-driven national HR information system is needed, linking employment, education, and training data. This is essential for precise and accountable HR investment planning.

5. Performance-Based Monitoring and Evaluation (Outcome-based)

Every HR investment program must be equipped with a monitoring and evaluation system that measures real results, not just administrative output. This will increase the effectiveness and accountability of the policies implemented.

REFERENCES

- Agustini, F. (2019). Strategi manajemen sumber daya manusia.
- Asmirin Noor, Adrian Radiansyah, dkk. (2023). Human Resource Management (Manajemen Sumber Daya Manusia). PT Sonpedia Publishing Indonesia
- Dewi, N. K. Y. W., & Darma, G. S. (2019). Strategi Investasi & Manajemen Resiko Rumah Sakit Swasta di Bali. *Jurnal Manajemen Bisnis*, 16(2), 110-127.
- Effendi, M. (2021). Pengembangan sumber daya manusia dalam meningkatkan citra lembaga di lembaga pendidikan islam. *Southeast Asian Journal of Islamic Education Management*, 2(1), 39-51.
- Iskandar, D. (2018). Strategi peningkatan kinerja perusahaan melalui pengelolaan sumber daya manusia dan kepuasan kerja dan dampaknya terhadap produktivitas karyawan. *Jurnal Ilmiah Bisnis Dan Ekonomi Asia*, 12(1), 23-31.
- Khaeruman, K., Mukhlis, A., Bahits, A., & Tabroni, T. (2024). Strategi Perencanaan Sumber Daya Manusia Untuk Meningkatkan Kinerja Organisasi. *Jurnal Riset Bisnis dan Manajemen Tirtayasa*, 7(1), 41-50.
- Malik, N. (2010). Strategi Manajemen Sumberdaya Manusia Berorientasi Investasi Menuju Bangsa yang Berdaya Saing. *Jurnal Salam*, 13(2).
- Maradita, F. (2020). HUMAN RESOURCE SCORECARD Mengaitkan Orang, Strategi dan Kinerja SDM (Suatu Model Pengukuran Kinerja SDM). *Jurnal Ekonomi dan Bisnis Indonesia*, 5(1), 15-18.
- Mokobombang, W., & Natsir, N. (2024). Strategi pengembangan sumber daya manusia dalam meningkatkan kinerja organisasi: Tinjauan pada industri jasa. *Jurnal Minfo Polgan*, 13(1), 606-618.
- Pakaya, A. R. (2011). Pengaruh Manajemen Sumberdaya Manusia Strategi Dan Manajemen Transformasi Terhadap Keunggulan Bersaing. *Jurnal Inovasi*, 8(03).
- Parinsi, W. K., & Musa, D. A. L. (2023). Strategi pengelolaan sumber daya manusia untuk meningkatkan kinerja perusahaan yang berkelanjutan di industri 4.0. *J-MAS (Jurnal Manajemen dan Sains)*, 8(2), 1385-1393.
- Purba, J. H. (2018). Perencanaan strategi sumberdaya manusia dan prestasi kerja karyawan. *Jurnal manajemen*, 4(1), 43-51.
- Rachman, A., Patutie, E., Darmi, N. K., Hasan, R., & Hint, A. (2024). *Manajemen sumber daya manusia*. TOHAR MEDIA.
- Rijal, Syamsu. (2023). The importance of community involvement in public management planning and decision-making processes. *Journal of Contemporary Administration and Management (ADMAN)*.
- Siregar, D. R. S., Ratnaningsih, S., & Nurochim, N. (2022). Pendidikan Sebagai investasi sumber daya manusia. *Edunomia: Jurnal Ilmiah Pendidikan Ekonomi*, 3(1), 61-71.
- Syafitri, D., & Batubara, C. (2023). Evaluasi Strategi Investasi Bank Syariah dalam Menghadapi Volatilitas Pasar Keuangan. *JKEM: Jurnal Ilmu Komputer, Ekonomi Dan Manajemen*, 3(2), 3565-3576.