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Ai For Digital Inclusion: A Quantitative Assessment Of Urban And Rural Readiness Between Central Jakarta And Lebak Regency

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Abstract

The growing use of AI across digital platforms is reshaping Indonesia and pushing the country toward stronger inclusive digital access need. Although, national progress can be seen from year to year. Improvement is not happening evenly in every region. The Indonesia Digital Society Index (IMDI) shows a steady rise from 43.18 in 2023 to 44.53 in 2025. Differences shown between urban and rural areas remain noticeable. Central Jakarta, reaches a digital maturity level of 56.55. While, Lebak Regency, only reaches 48.81, indicating that readiness for AI adoption is still far from equal. Several studies also emphasize that digital inclusion is not a simple concept; it involves many interconnected aspects and is widely understood as multi- layered. The digital divide itself is often described as the gap in opportunities and ability to access of ICT across different social and geographical groups. The differences that play, show how schools and communities in Indonesia could adopt AI-based learning tools in the future.

Keywords: Digital Inclusion, Artificial Intelligence

INTRODUCTION

Digital inclusion is growing in significance as AI changes the way people access and contribute to digital society. Based on the We Are Social research, the number of internet users is increased, reaching 5.65 billion in mid-2025, however two billion do not have access to the internet which is a sign that digital participation continues to be an unequal one (Kemp, 2025). Internet penetration in Indonesia is 80.66% in 2025, which indicates great strides to access but low profitability or adoption of advanced digital technologies such as AI remains limited, with only 27% of the population reporting active use (APJII, 2025). These figures suggest that digital inclusion challenges extend beyond connectivity toward issues of readiness and meaningful use.

Regional inequalities further complicate this landscape. Central Jakarta recorded a higher of digital readiness than Lebak Regency, as reflected in the Indonesian Digital Society Index (IMDI), despite the two areas being separated by only approximately 140 kilometers (BPSDM Kominfo, 2025). This contrast highlights that geographic proximity to metropolitan centers does not necessarily translate into similar levels of digital or AI readiness. While existing studies largely explain such gaps through differences in infrastructure and digital literacy, emerging evidence suggests that social trust may also shape technology

engagement. In rural areas, communities tend to place greater trust in human sources of information, particularly religious leaders and field experts, than in digital or algorithmic systems (Al Ayyubi, 2025). Rather than representing resistance to technology, this trust structure may influence how AI is perceived and adopted.

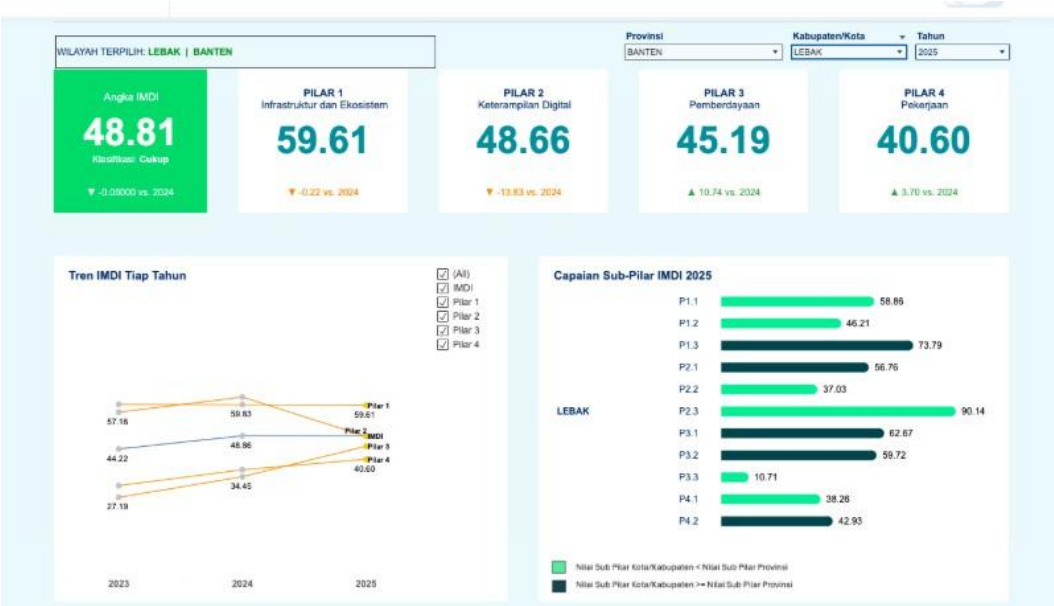
Against this background data, this study examines differences in digital readiness and AI adoption readiness between Central Jakarta and Lebak regency by integrating a secondary data analysis with reviewing national datasets, including IMDI and APJII survey data. This study seeks to explain why Lebak exhibits lower digital readiness while potentially maintaining stronger human trust, and to analyze how this combination affects local preparedness for AI adoption within the broader framework of digital inclusion.

METHODOLOGY

This study uses a quantitative approach based on secondary data analysis. The main data sources are the Indonesia Digital Society Index (IMDI) datasets from 2023– 2025 published by BPSDM Kominfo and the 2024 APJII Internet Penetration Survey. These datasets were selected due to their national scope and standardized indicators of digital development.

A comparative analysis is conducted between Central Jakarta as an urban area and Lebak Regency as a non-urban area. The IMDI framework is applied, focusing on four pillars: a. Infrastructure and Ecosystem. b. Digital Skills. c. Empowerment. d. Employment

Picture 1. Indonesia Digital Society Index (IMDI) dataset 2025 in Jakarta Pusat.



Picture 2: Indonesia Digital Society Index (IMDI) dataset 2025 in Lebak Regency.

Picture 3: Indonesia Digital Society Index (IMDI) dataset from 2023-2025

RESULTS AND DISCUSSION

Results from the secondary data analysis from the Indonesia Digital Society Index (IMDI) for the period 2023–2025 and the APJII Internet Penetration Survey shows huge difference in digital readiness between Central Jakarta and Lebak Regency. In 2025, Central Jakarta achieved an IMDI score of 56.55. While, Lebak Regency recorded 48.81. Factors included such as infrastructure, internet availability, wider exposure to digital skills which affect overall digital readiness.

Possible Factors:

A possible explanation that lebak remains lower than Central Jakarta could be from a role of trust and learning culture. In urban settings, such as Central Jakarta. Students in Jakarta are more exposed to digital platforms and AI-based tools, which are often used for academic tasks, information searching, and problem solving, including for simple activities.

Learning practices in Lebak Regency, may still heavily rely on human interaction in the learning process. Such as teachers, community leaders, and religious figures. This reliance on human guidance may reduce dependence on AI tools, even as digital access gradually improves.

Lower level of AI usage does not necessarily indicate resistance to technology, but, shows differences in educational practices and trust relationship within the community.

These findings highlight that the digital divide between urban and rural areas is not only technical but also social and cultural. Even within the same island and relatively close geographical distance, differences in infrastructure, skills, and trust-based learning systems contribute to unequal levels of AI readiness. Without targeted efforts to address these factors, the gap in AI adoption in education may continue to persist.

CONCLUSION

Based on the results and discussion, several conclusions can be drawn study finds that digital and AI readiness in Indonesia remains uneven between urban and non- urban areas. Based on secondary data from IMDI and APJII, Central Jakarta shows higher levels of digital readiness than Lebak Regency, particularly in infrastructure and digital skills.

The findings indicate that differences in AI readiness are influenced not only by access and connectivity, but also by learning practices and social context. As this study relies on secondary data, future research should include field-based methods to further examine how local educational practices shape AI adoption in non-urban settings.

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REFERENCES

Al Ayyubi, S. A. (2025, August 21). *Riset BBC: TikTok dominasi konsumsi berita di Indonesia, risiko disinformasi mengintai?* Bisnis.com. https://kabar24.bisnis.com/read/20250821/15/1904467/riset-bbc-tiktok-dominasi- konsumsi-berita-di-indonesia-risiko-disinformasi-mengintai

Asosiasi Penyelenggara Jasa Internet Indonesia / APJII. (2025). *Survei penetrasi internet dan perilaku penggunaan internet Indonesia 2025*. APJII.

BPSDM Kominfo. (2025). *Indeks Masyarakat Digital Indonesia 2025 Kota Banten (IMDI) – Kabupaten/Kota Dashboard* [Data set]. https://public.tableau.com/app/profile/pusbangkos.sdm.komdigi.bpsdm.komdigi/viz/shared/TX MYWJYSG

BPSDM Kominfo. (2025). *Indeks Masyarakat Digital Indonesia 2025 Kota Jakarta Pusar (IMDI) – Kabupaten/Kota Dashboard* [Data set]. https://public.tableau.com/shared/7R8JQ4JBT?:display_count=n&:origin=viz_share_link&:em bed=y

BPSDM Kominfo. (2025). *Publikasi Indeks Masyarakat Digital Indonesia (IMDI) 2025*. Kementerian Komunikasi dan Informatika Republik Indonesia. https://imdi.sdmdigital.id/unduh- laporan/

Kemp, S. (2025). *Digital 2025 July global statshot report*. We Are Social. https://wearesocial.com/id/blog/2025/07/digital-2025-july-global-statshot-report/

Nguyen, A. (2022). Digital inclusion: Social inclusion in the digital age. In *Handbook of Social Inclusion: Research & Practices in Health and Social Care* (pp. 89–107). Springer