International Journal of Society 5.0

Type Original Research
Published 20-01-2026
Doi

Smart Society or Unequal Society? Internet Access, Education, and Inclusive Development in the Era of Society 5.0 of Asean Countries

Raira Chandara Wanda
Magister Governmenet Study, Universitas Muhammadiyah Malang

*Correspondence: rairachandara@webmail.umm.ac.id

Citation:

Received: 12-01-2026
Accepted: 19-01-2026
Published: 20-01-2026

Publisher's Note: IJS5 stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Abstract: Development technology information and communication be the core of digital transformation, which marks society 5.0, namely people who use technology for increase welfare humans. However, the development This can expand inequality social Because no always happen in a way evenly. Research objectives This is for inspect connection between internet access, costs education and development inclusive, and whether digital transformation in ASEAN countries tends to produce public inclusive smart or precisely produce society that does not increasingly fair split. Based on secondary data from Our World in Data, International Telecommunication Union, World Bank, and UNESCO, analysis content qualitative used in study this. This data covers level internet use and shopping government for education as percentage of GDP in ASEAN countries in term long. Analysis done in a way comparative and contextual for find patterns, inequalities, and implications social from digital transformation. Research results show that although internet penetration is increasing in a way significant across ASEAN, increasing This No always accompanied by investment sufficient education. Countries that have extensive internet access and systems strong education show trend going to public smart, while countries that have source Power limited education risky experience inequality technology new. The result show that access technology without increase ability man No in a way automatic produce inclusive development. Research This aim for make framework analysis integrative that connects digitalization, inclusion social and education in the context of Society 5.0 in ASEAN. Not much indicators and aggregate data national that can used in study this. Therefore, research addition must done with micro data or approach mixture for get greater understanding Good about dynamics digital and social inequality in the field this.

Keywords: Society 5.0, Digital Divide, Internet Access, Digital Education and Literacy, Inclusive Development

Introduction

Around the world, digital transformation is increasingly fast happen has change how people interact one each other, learn, work, and participate in development socio-economic in a way significant. Paradigm new development known as Society 5.0, which places human in the center utilization technology and emphasize integration digital and physical space (Fukuyama, 2018; Shin, 2022) . Within the framework this technology like intelligence artificial, *big data*, and the Internet of Things are not only used for increase efficiency economy, but also for answer challenge social like access education, equality service public and development sustainable (Ghobakhloo and Fathi, 2023) . In the ASEAN region, digital transformation is opening up opportunity big for push realization an inclusive smart *society* through expansion internet access and digital education. However, the differences capacity infrastructure, level digital literacy, and conditions social economy between ASEAN countries has the potential create dynamics *unequal society* if digital transformation is not accompanied policy adequate distribution (Bank, 2022; Foundation, 2023) . Therefore that, appears question important Will Society 5.0 in ASEAN be increase intelligence and inclusion or precisely extend difference existing social.

Various study previously show that digital divide still exists become challenge main in the digital transformation process in various parts of the world, including Southeast Asia. Inequality this No only occurs at the access level to technology (*first-level digital divide*), but also at the skill level usage (*second-level digital divide*) and benefit social and economic benefits obtained from technology (*third-level digital divide*) (Hargittai, 2002; van Dijk, 2020) . Studies in Asia show that group public with level education and income more tall tend get far- reaching benefits more big from digital technology compared group vulnerable, so that technology potential strengthen inequality social If No managed in a way inclusive (Hilbert, 2011; James, 2020) . In context education, research show that although digital learning can increase flexibility and reach service education, inequality internet access and digital literacy instead can widen gap results Study between group social economy (Selwyn, 2016; Park, 2021) . UNESCO (2021) confirm that digitalization education without approach justice social risky reproduce inequality long standing structural .

Although literature about *digital divide*, digital education, and development inclusive Keep going developing, still there is gap significant research in study relatedness third aspect the in Society 5.0 framework, especially at the ASEAN regional level. Most of studies Still focus on one dimensions just like access technology, digital literacy, or policy education national, without integrate all three in One framework complete analysis (OECD, 2021; Foundation, 2023) . In addition, research comparative across ASEAN countries which are systematic compare how internet access and digital education influence development inclusive is still very limited. In fact, the variations condition economic, political and social culture between ASEAN countries is very important How digital transformation is implemented and felt by the community (Bank, 2022) . Empty This show the need research that connects Society 5.0, digitalization education and inclusion social in a way comprehensive in regional context.

Study This offer novelty with integrate the concept of Society 5.0 with theory *digital divide* and development inclusive in One framework ASEAN regional analysis. Different from studies previously tended to partial, research This in a way simultaneous analyze internet access, quality digital education, and its implications to development social an inclusive economy. With approach comparative cross-country research This No only identify level inequality, but also explains pattern connection intervariable the in context different social groups. In addition , research This contribute in development indicator analytical For evaluate to what extent the transformation of Society 5.0 in ASEAN is truly human - oriented and inclusive social , not just on growth technology and economics (Shin, 2022; Zheng & Walsham, 2021).

Based on framework said, research This concentrate on analyzing connection between internet access, digital literacy, and development inclusiveness in ASEAN countries in the Society 5.0 era. Research objectives This is to (1) measure level inequality in digital literacy and internet access in ASEAN countries, (2) analyzing impact inequality the to results education and development social economy, and (3) formulate consequence policy for build more internet access good for everyone. Research This ask about things like how much evenly internet access and digital literacy in ASEAN, how inequality This influence opportunity education and development, and policy what is most effective for ensuring Society 5.0 becomes place For everyone is welcome.Research This use approach *mixed methods* with combine analysis quantitative secondary data (internet access, indicators education and development human) and analysis qualitative to digital policies and document strategic in ASEAN countries to get comprehensive understanding about dynamics the.

Literature Review

Paradigm new in development social and economic has appear as results from progress rapidly digital technology. The idea of Society 5.0 is one of them. The paradigm This first introduced by Japan, a very intelligent country that integrates technology tall such as big data, fast internet, and intelligence artificial intelligence (AI) to in life social, making it No just tool production but as runway for increase quality live and respond problem complex social technology new expected can create society that does not only smart society, but also inclusive and equitable (Narvaez Rojas et al., 2021). However, if Society 5.0 is implemented, this That can cause society that does not fair. Studies previously emphasize that good digital divide in matter internet access and digital skills can strengthen inequality in education and opportunities economy, blurring hope for equality progress social in this digital era. This is become attention important for ASEAN countries that have level diverse digital developments in regional scale (Lopez-Sintas et al., 2020).

Literature about internet access shows that even though ASEAN has experience significant improvement in a number of decade Lastly, internet penetration in member countries still very much not evenly, with some countries only reached 50% penetration, while other still below 50 %, indicating This inequality gives rise to challenge big For share digital opportunities , especially in the field of education and services social other (Foundation, 2023) . Growth digital economy in ASEAN has bring opportunity outside usual, like improvement amount internet users up to hundreds million in the region this, but also raises problem distribution that is not balanced between urban and rural areas as well as public income low (Tran, Phan and Nguyen, 2022) .

In context education, literature academic show that although internet access and digital literacy are not available in a way comprehensive, digitalization education no in a way automatic cause equal learning. According to study empirical and review policy, two constraints main obstacle utilization technology digital learning in various countries is limitations digital access and capabilities. For example, policies connectivity schools in several ASEAN countries have show imbalance between request use technology and supply infrastructure. Ultimately, this influence effectiveness use technology in education (McFarlane, Mieruch and Si, 2024) . This matter reinforced by findings that state that, although Lots institution education try apply digital education, shortcomings infrastructure and competency of permanent teachers become factor main obstacle quality and results learning inclusive. Other studies around the world also highlight that a comprehensive strategy that includes development digital skills for teachers and students are essential for technology can truly expand opportunity (Zou *et al.* , 2025) .

Researchers who studied ASEAN conditions regionally also highlight challenges faced by member states in translate digital developments become inclusive development. Some study emphasize that although internet connectivity and digital technology have developing, its benefits Not yet evenly Because disparity in access, literacy technology, and readiness different economies in each member country. Imbalance This seen between countries such as Singapore or Brunei Darussalam which have high internet penetration, with countries like Myanmar and Laos still own penetration low, indicating that challenge internet inequality still exists rooted strong in ASEAN (Chong *et al.* , 2023) . Other research in context integration ASEAN digital economy affirms that handle the digital divide is not Enough only expand broadband infrastructure , but it also has to overcome various form inequality like digital skills, access financial and empowerment digital economy for group prone to (Maulana and Suryana, 2025) .

In addition, regional studies on digitalization and inclusion known show that internet access that is not evenly impact directly on the ability of ASEAN countries to implement quality and inclusive digital education. Differences in ability access and utilize digital education in ASEAN countries has result in inequality in results learning and opportunities economy term length, including opportunity work in the digital economy era. This provides signal that although digitalization considered as the main strategy for inclusion social, without support strong policies and efforts integrated technology can strengthen inequality that has There is previously in the ASEAN community. Various regional initiatives such as the ASEAN Cyber University Project are trying bridge challenge this, however evaluation comprehensive empirical to its effectiveness Still limited in literature existing academic (Foundation, 2023).

Lots of research has discuss connection between internet access, digital education, and inclusion social. However, still There is Lots room for research. First, some big study Not yet do analysis comparative comprehensive from ASEAN countries and only discuss condition or policy national certain. Second, research often consider access and quality digital education as phenomenon separate, without combine second element the in One framework adequate analysis for describe How digital inequality affects development man in a way wide. This is show the need further studies structured, using empirical data cross-country for map connection intervariable in a way quantitative and qualitative in the era of Society 5.0 (Nurdiana et al., 2023). With integrate third element literature main internet access, digital education, and inclusion social and economic in context of Society 5.0 in ASEAN, research This offer significant novelty. First, the research This will use approach comparative for compare condition digital inequality among ASEAN member countries, not only description national. Second, research this will make indicator measurement that looks at No only internet penetration and availability infrastructure, but also capabilities usage, quality digital learning, and outcomes development man like inclusion economy, opportunities work and mobility social. Third, the framework Work study will designed for describe condition digital inequality.

Based on review literature said, the framework proposed research (framework) will map connection between three variables Main: *(1) Internet access* (infrastructure, penetration, and availability connectivity), *(2) Digital Education* (quality digital learning, literacy technology, access online education), and *(3) Inclusion Social and Economic* (opportunities work, mobility social, decline inequality). Framework This will tested with approach *mixed methods* combining secondary data ASEAN statistics, survey field, and analysis policy national for generate comprehensive insights about how Society 5.0 interacts with dynamics development in the ASEAN region.

Method

This Study use approach analysis content qualitative Because aim for understand in a way deep phenomenon inequality internet access, digital education, and inclusion social in the era of Society 5.0 in ASEAN countries. This method relevant Because focus study No only measure variables in a way quantitative, but interpret meaning, pattern, context social, policy, and narrative distributed digital development in various source documents, policies, and reports (Wiraguna, Purwanto and Rianto Widjaja, 2024) .

Approach qualitative allows researchers for explore perception, policy strategy, and impact emerging social from implementation digital technology in society, which often does not can revealed only with numerical data solely. In addition, research this put perspective public as center study in accordance with principle *Society* 5.0 oriented man so that analysis content qualitative become tool important in understand How various actor interpret and implement digital policies in different contexts in ASEAN. Research This capable catch nuances social and context historical content in text policies, reports statistics, as well as narrative public about digital transformation, which is becoming runway important For answer question study in a way comprehensive (Basyo and Anirwan, 2023) .

Although framework mainly is analysis content qualitative research this also adopts approach qualitative big data analysis, namely processing text data in amount large source from multi-country datasets and documents digital policy (Mills, 2019). Qualitative big data analysis allows researchers For extract themes, patterns, and structures narrative from big data sources in a way systematic with utilise technique like *text mining*, coding thematic, as well as narrative data visualization (Andreotta et al. , 2019) . This method different from method analysis content traditional Because researchers No only read a number of small document manually, but also using device soft analysis text (such as NVivo or MAXQDA) for handle large volumes of data, ensuring reliability coding, and finding pattern hidden in extensive heterogeneous data (Vignato et al., 2022). For studies across countries such as In this case, the use of big qualitative data is very important Because the data source No only originate from one country or One type documents; they also include report international, documents national digital policy, transcription interview experts and officials, and information from online statistics portals such as Our World in Data. Approach This enrich analysis with give outlook cross scale from policy macro until impact micro in social experience so that allows greater understanding comprehensive about connection between digital inequality and development inclusive in the era of Society 5.0.

One of the main data source used in study This is an open dataset from Our World in Data, which is repository global statistics based researched and curated by scientists from the University of Oxford and institutions international others. This dataset provide information across countries about phenomenon important like internet penetration, broadband access, usage digital devices, level education, as well as indicator socio-economic other relevant with this study. Our World in Data has superiority Because longitudinal or reach a number of year or decade, comparative across countries, and obtained from source official such as ITU (International Telecommunication Union), World Bank, and statistical agencies national, so that ensure quality and comparability between countries. In the context of study qualitative this, Our World in Data numeric data is not only used as number only, but represented as narrative of analyzed data in a way thematic in connection between digital development and inclusion social (Yates & Carmi, 2020). For example, stories about difference in digital preparation of ASEAN countries and their relationships with statement policy digital education in document national interpreted use trend internet penetration. In addition, graphs and visualizations from Our World in Data helps in find regional patterns, which then interpreted in a way qualitative for answer question research. This method in line with idea research that combines analysis context social with statistical data big data. This method produce results that are not only quantitative but also meaningful in a way qualitative (Kusumastuti & Nuryani, 2020).

Results

The results section presents the empirical findings of this study regarding the relationship between internet access, government spending on education, and inclusive development in ASEAN countries within the Society 5.0 framework. Using comparative and longitudinal secondary data, this section highlights regional patterns, cross-country disparities, and structural differences that shape the outcomes of digital transformation. Rather than merely reporting descriptive statistics, the analysis emphasizes how variations in digital connectivity and educational investment interact to produce different trajectories toward either inclusive smart societies or emerging forms of digital inequality. These findings provide an empirical foundation for the subsequent discussion on the inclusiveness of Society 5.0 in the ASEAN context.

Development of Internet Access in ASEAN Countries

This subsection examines the development of internet access across ASEAN countries over time to identify trends, disparities, and patterns of digital connectivity in the region. Internet penetration is treated as a key indicator of digital infrastructure readiness and a prerequisite for participation in the Society 5.0 ecosystem. By comparing levels and growth rates of internet usage among ASEAN member states, this analysis highlights the extent to which digital access has expanded unevenly and reveals persistent structural digital divides between countries with different economic and institutional capacities.

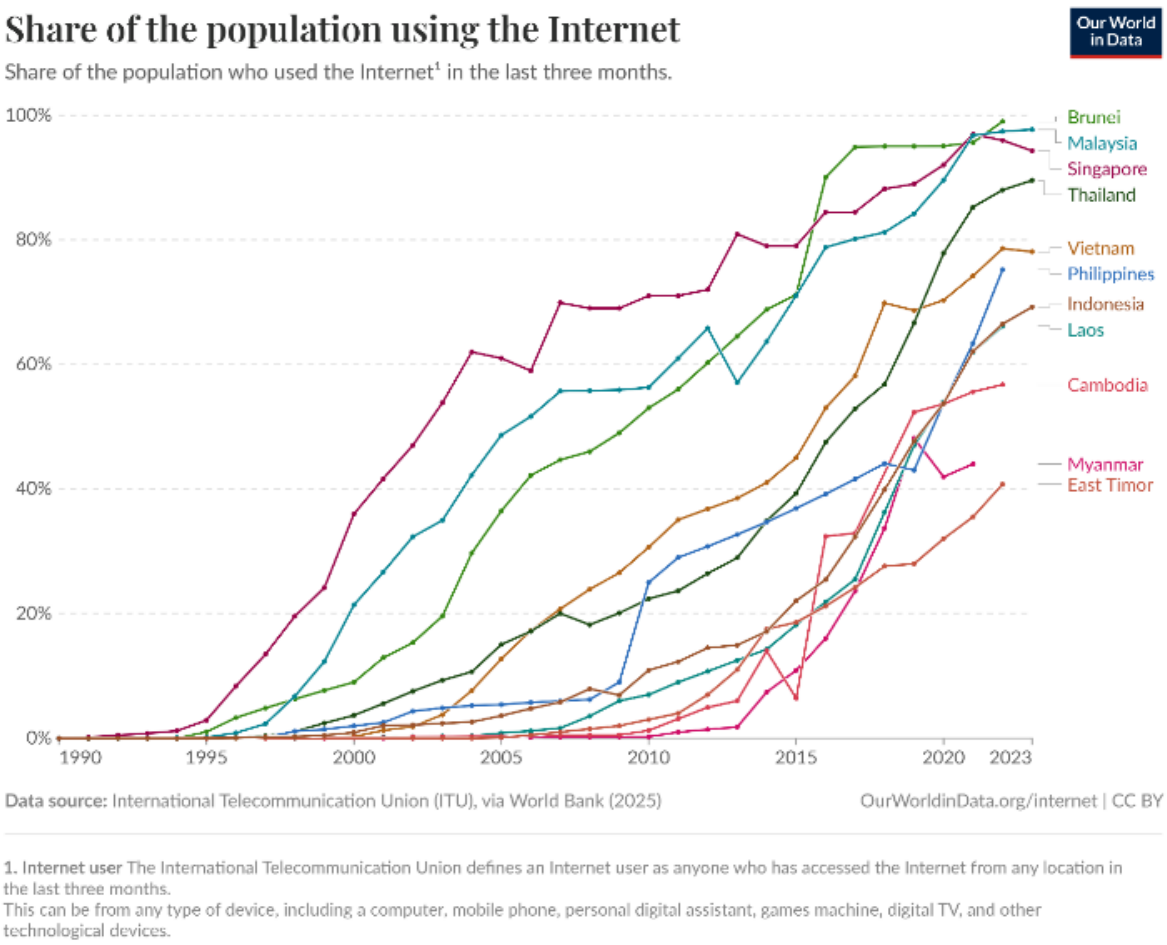

Figure 1. Data Public spending on education as a share of GDP

Based on chart Share of the population using the Internet from the data taken from Our World in Data, ITU & World Bank, it is seen that in a way general all ASEAN countries are experiencing improvement significant in proportion population using the internet since early 1990s to 2023. However Thus, the rate growth, point beginning, and level his achievements show sharp variations between countries. Countries such as Singapore, Brunei, and Malaysia demonstrate level very high and relatively internet penetration evenly since early 2010s. Singapore achieved more of 90% of internet users since around 2015 and still stable until 2023. Brunei even approach penetration full (around 98–100%) at the end period observation. This is show that digital infrastructure, literacy technology, as well as access the economy in these countries Already be at a level that allows formation A relatively Smart Society ripe.

On the other hand, countries such as Indonesia, the Philippines, Vietnam, Laos, Cambodia, Myanmar, and Timor Leste show pattern more growth slow and not evenly. Indonesia, for example, has just reach around 70% of internet users by 2023, while the Philippines is around 75%, Vietnam is around 78%, and Laos is around 68%. Countries with achievements lowest are Myanmar and Timor Leste which are still is in the range of 40–45%. The difference This reflect the existence of a structural digital divide in the ASEAN region, not only between developed and developing countries, but also between countries develop That alone. Although trend overall show progress, gap between low-income country group high and lower-middle class still significant. This is indicates that digital transformation in the Society 5.0 era has not yet ongoing in a way evenly, so that potential benefit technology No enjoyed in a way equal by all public.

Shopping Patterns Government for Education

This subsection examines the development of internet access across ASEAN countries over time to identify trends, disparities, and patterns of digital connectivity in the region. Internet penetration is treated as a key indicator of digital infrastructure readiness and a prerequisite for participation in the Society 5.0 ecosystem. By comparing levels and growth rates of internet usage among ASEAN member states, this analysis highlights the extent to which digital access has expanded unevenly and reveals persistent structural digital divides between countries with different economic and institutional capacities.

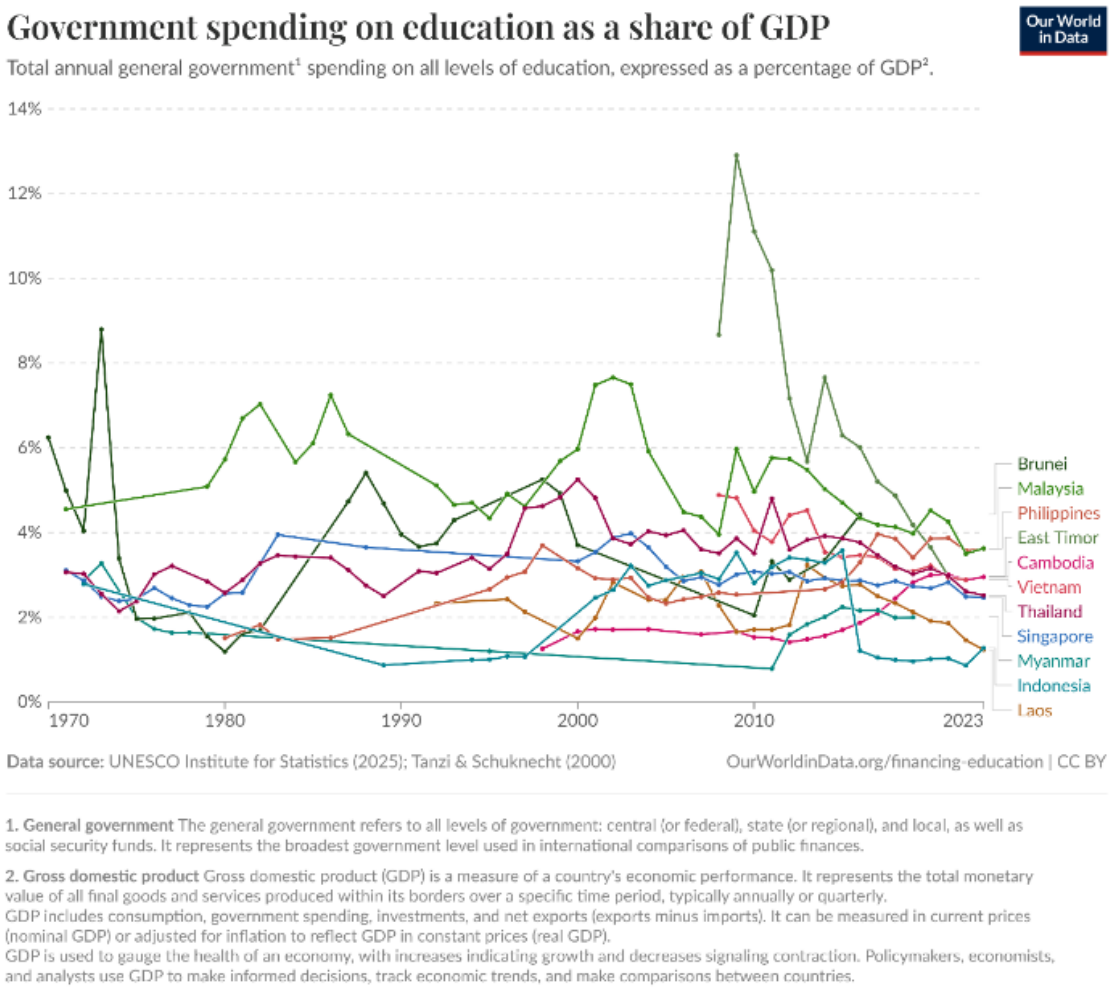

Figure 2. Share of the population who used the Internet in the last three months.

Chart *Government spending on education as a share of GDP* show that shopping education as the proportion of GDP in ASEAN is relatively stagnant and variable between countries throughout period 1970–2023. Several countries such as Malaysia and Thailand consistent allocate shopping education in the range of 4–6% of GDP, although with fluctuations certain. Malaysia had reach more from 7% in the early 2000s before decrease to around 4% in the decade last. Thailand is relatively stable in the range of 3–4%. Singapore, although known as a country with system education quality high, in fact own proportion shopping relative education moderate (around 2.5–3.5% of GDP), reflecting efficiency high tax base large, and capacity strong institutional.

In contrast, Indonesia, the Philippines, Laos, Cambodia, and Myanmar tend to own shopping education is below 3% of GDP in term long, though there is improvement moderate since 2000s. Indonesia, for example, was in the range of 2–3% of GDP, which is relatively low compared to need population big and challenging geographically. The low investment education this implications direct to quality source Power human, digital literacy, and capabilities public for utilise technology in a way productive. In other words, internet access without support investment adequate education potential produce connected society but no fully empowered.

Relation between Internet Access and Education

If both indicator read in a way simultaneously, visible that the country with high internet penetration generally also have system relative education strong and investment stable public, although no always tall in a way quantitative. Singapore and Brunei became example How quality institutions, policies public and governance play a role more big than just magnitude budget. In contrast, in countries such as Indonesia, the Philippines, and Vietnam, the increase no internet access always accompanied by an increase quality comparable education and digital literacy. This cause risk formation what can called as a "connected but unequal society", namely connected society in a way technological but still fragmented in a way social, economic, and cognitive. In the context of Society 5.0 which emphasizes integration technology For welfare human, condition This problematic. Instead become tool inclusion, technology precisely can deepen inequality If only can utilized by groups public with more educational, economic and social capital strong.

Implications towards Inclusive Development

This result show that development inclusive in the era of Society 5.0 is not can reduced only on development digital

infrastructure, but must accompanied by with investment Serious in education, strengthening capacity humans and policies redistributive. ASEAN countries are on different spectrums: from the relatively *Smart* Society model mature (Singapore, Brunei, Malaysia) to transitional models which are still face inequality structural (Indonesia, Philippines, Vietnam), as well as models that are still fight chase access basic (Myanmar, Laos, Timor Leste). With Thus, the results study This confirm that digital transformation is not nature neutral. He influenced and at the same time strengthen structure existing social. Without intervention explicit policies for inclusion, Society 5.0 is at risk reproduce pattern *Unequal Society* in form new based technology.

Discussion

This Research result This show description interesting about How *digital transformation* in *the Society 5.0 era* taking place in ASEAN countries. Findings main in the form of significant improvement in penetration inappropriate internet use balanced in a way proportional with investment education leading to A interpretation important: that *access* technology just Not yet Enough For produce development social inclusive economy in a way evenly distributed. Findings This in line with part big literature previous underlining the importance of 'meaningful connectivity' in digital development, not just connectivity technical. Some studies show that growth internet penetration in many developing countries bring opportunity improvement welfare, literacy information and access to service public (James, 2020) . However, the results study moment This find that although internet penetration is growing rapidly in ASEAN, especially in countries such as Singapore, Malaysia, and Brunei, other countries still face obstacle significant structural.

Research by van Dijk (2020) explain that internet access only No Enough create digital inclusion if No followed by developments digital skills and abilities utilise technology in a way productive. This is consistent with our findings that countries with high internet penetration Not yet Of course own ability adequate education for support public in a way full in the era of Society 5.0. In addition, other studies emphasize that digitalization effective education need adequate investment no only on internet infrastructure, but also on development source Power people and meaningful learning (Selwyn, 2016; UNESCO, 2021) . In the ASEAN context, although improvement relative internet access significant especially since mid- 2010s, investment education as percentage of fixed GDP stagnant and relative low in many countries. The situation This show that opportunities presented by connectivity digital technology is often not caught optimally because limitations institutional education, teacher capacity, and community digital literacy in a way general. This is strengthen argument that digitalization without strong education precisely can widen gap social , appropriate with findings analyzed by Park, Shin, and Choi (2021) .

However, there are also studies that show more results optimistic related connection between improvement digital access and development inclusive. For example, a report by the ASEAN Foundation (2023) highlight aspect positive from growth ASEAN digital economy, where access technology has open opportunity business new, digital markets, and activities economy others that contribute to growth economy national. However, the report it also noted that benefit digitalization the most felt by marginalized groups who have have social and economic capital certain, while group prone to Still left behind. Findings This in harmony with results our research shows that, although internet access increases, relationships between access and inclusion social no linear automatic, but rather influenced by factors education and policy redistribution. Other findings that need to be contextualized is variability between ASEAN countries. For example, Singapore and Brunei show that nearly universal internet access at the same time with system relative education strong tend produce dynamics a smarter *society* Good compared to other countries.

This situation give proof empirical For theory put forward by Castells (2010) that public network *society* will best developed when combined digital infrastructure with capability human resources and responsive policies. In contrast, countries with greater internet penetration low such as Myanmar, Laos, and Timor Leste show that without support adequate education and policies inclusive, digitalization No Enough For produce benefit equal social conditions. In the heterogeneous ASEAN context, the variability This underline importance policy nationally adjusted with condition local. For example, research by McFarlane et al. (2024) emphasize importance policy digital education that is not only focused on providing infrastructure but also on development content, teacher training, and reduction gap access interregional in one country. This also shows that *online connectivity* must treated as component system more education wide, not only as facility network solely.

Research result this also shows existence potential phenomenon *uneven connectivity,* where society own internet access but no succeed use access That in a way meaningful in life social and economic they. This is in line with Hilbert's (2011) findings explain that the digital divide is not only related with access physical (quantity) internet users), but also with quality uses and benefits socio-economic status obtained. Inequality This in ASEAN context shows the need approach holistic policy, where factors infrastructure, education, economy, and regulation technology viewed as part from integrated system. Findings moment this also brings implications important to discourse *Society 5.0* That itself. Although Society 5.0 emphasizes integration technology for welfare man in a way comprehensively, the reality in ASEAN shows that technology no Work in a way automatic For reach objective Without a strategy that takes into account need public vulnerable, technology precisely can strengthen structure exclusive social . Observation This confirm concerns raised by Zheng and Walsham (2021) that e-society can produce *capability deprivation* If utilized in a way no evenly. In order to answer challenge said, research This give proof empirical that ASEAN's digital transformation is underway

ongoing, but good direction and the benefits influenced by policy education, distribution source power, as well as readiness institutional.

Combination between access technology and education quality required for avoid trap *technological determinism* which only prioritize technology as objective end without see the impact to inequality existing social (Selwyn, 2016) . In addition, the combination indicator education and internet access data shows that more investment aggressive in digital literacy, training modern skills, and policies fiscal support equality education must accompanied with improvement access technology. As a result, the discussion This show that ASEAN is facing challenges in the Society 5.0 era. Although There is desire for use technology for development humans and inclusion social, there is risk that inequality will increase If technology No used together with policy strong economy and education. These results show that public clever only can achieved through Work The same between all parties: technology, development capacity human, and policies that focus on needs group prone to.

Conclusion

This study show that digital transformation in ASEAN countries in the context of Society 5.0 is not walk in a way evenly and not yet reach inclusive development. Although internet usage is increasing across the region, especially in countries such as Singapore, Brunei and Malaysia, increasing This No always followed by sufficient education funding. In developing countries such as Indonesia, the Philippines, Vietnam, Laos, Myanmar, and Timor Leste, there are quite a difference big between digital connectivity and capabilities education. If not There is balance, technology can cause inequality social and not increase welfare. Therefore that, society 5.0 in ASEAN is in the middle between possibility build public smart and dangerous emergence public No fair. It depends on how much Good a country can align progress technology with development source Power human rights and inclusive policies. For understand dynamics of Society 5.0 in the ASEAN region, research This give analysis integrative that connects internet access, shopping education and development inclusive in One framework conceptual. With expand the conversation that was going on This tend emphasize technology as driving force main development, research This show that role policy social and educational the same importance in determine direction impact digitalization.

In a way empirical, research This give description comparison of ASEAN countries, shows difference in route digital transformation and its effects to inequality social. As a result, research This No only add literature about Society 5.0 and the digital divide, but also provides base analysis for formulation policy more public notice problem justice social in the digital era. But study this own limitations. First, the analysis No can catch intra-country inequality, such as difference between regions or group social. Second, the indicators used limited to internet access and shopping education, so that No covers other factors such as digital literacy, quality education, or factor culture and politics. Therefore that, for understand dynamics social behind number statistics said, research furthermore must using micro data, using a more longitudinal approach in-depth, and combines technique quantitative and qualitative. In addition, research upcoming must see How policy digital education, regulations technology, and participation public civil can support a truly Society 5.0 inclusive and equitable.

Reference

Andreotta, M., Nugroho, R., Hurlstone, M. J., Boschetti, F., Farrell, S., Walker, I., & Paris, C. (2019). Analyzing social media data: A mixed-methods framework combining computational and qualitative text analysis. *Behavior Research Methods*, *51*(4), 1766–1781. https://doi.org/10.3758/s13428-019-01202-8

Bank, A. D. (2022). *Bridging the digital divide in Southeast Asia*.

Basyo, I., & Anirwan, A. (2023). Pelayanan Publik Era Digital: Studi Literatur. *Indonesian Journal of Intellectual Publication*, *4*(1), 23–31. https://doi.org/10.51577/ijipublication.v4i1.477

Castells, M. (2010). *The Rise of the Network Society*.

Chong, M. T., Puah, C. H., Mansor, S. A., & Teh, C. S. (2023). Digital Connectivity Bridging Digital ASEAN. *International Journal of Economics and Management*, *17*(1), 139–149. https://doi.org/10.47836/ijeam.17.1.10

Foundation, A. (2023). *Digital literacy in ASEAN: One divide or many divides?*

Fukuyama, M. (2018). Society 5.0: Aiming for a new human-centered society. *Japan Spotlight*.

Ghobakhloo, M., & Fathi, M. (2023). Industry 5.0 and Society 5.0: Toward a sustainable, human-centric, and resilient future. *Technological Forecasting and Social Change*.

Hargittai, E. (2002). Second-level digital divide: Differences in people's online skills. *First Monday*.

Hilbert, M. (2011). The end justifies the definition. *Telecommunications Policy*.

James, J. (2020). Digital divide across all citizens of the world. *Social Indicators Research*.

Kusumastuti, A., & Nuryani, A. (2020). *Digital Literacy Levels in ASEAN (Comparative Study on ASEAN Countries)*. https://doi.org/10.4108/eai.23-10-2019.2293047

Lopez-Sintas, J., Lamberti, G., & Sukphan, J. (2020). The social structuring of the digital gap in a developing country.

The impact of computer and internet access opportunities on internet use in Thailand. *Technology in Society*, *63*. https://doi.org/10.1016/j.techsoc.2020.101433

Maulana, A., & Suryana, Y. (2025). Perkembangan Integrasi Digital Untuk Mendorong Digitalisasi Ekonomi di Kawasan Asean. *Global Mind*, *5*(2), 37–50. https://doi.org/10.53675/jgm.v5i2.1170

McFarlane, D., Mieruch, Y., & Si, N. L. W. (2024). Closing the digital divide in education: an innovative review of demand and supply side policies in four ASEAN member states. *International Journal of Evaluation and Research in Education*, *13*(6), 3827–3837. https://doi.org/10.11591/ijere.v13i6.28011

Mills, K. A. (2019). Big data for qualitative research. *Big Data for Qualitative Research*, 1–78. https://doi.org/10.4324/9780429056413

Narvaez Rojas, C., Alomia Peñafiel, G. A., Loaiza Buitrago, D. F., & Tavera Romero, C. A. (2021). Society 5.0: A Japanese concept for a superintelligent society. *Sustainability (Switzerland)*, *13*(12). https://doi.org/10.3390/su13126567

Nurdiana, E. D., Hariyani, H. F., & Boedirochminarni, A. (2023). The impact of digitalization and economic openness on economic growth in ASEAN countries. *Jurnal Ekonomi & Studi Pembangunan*, *24*(2), 331–345. https://doi.org/10.18196/jesp.v24i2.18335

OECD. (2021). *Bridging the digital divide: Policy insights*.

Park, Y. J. (2021). Digital inequality, education, and inclusive growth. *Information Development*.

Selwyn, N. (2016). *Education and Technology: Key Issues and Debates*.

Shin, D. H. (2022). Society 5.0 and the future of human-centered digital transformation. *Telecommunications Policy*.

Tran, L. Q. T., Phan, D. T., & Nguyen, M. T. (2022). Digital Economy: A Comparative Study in ASEAN. *Theory, Methodology, Practice*, *18*(2), 83–92. https://doi.org/10.18096/tmp.2022.02.05

UNESCO. (2021). *Reimagining Our Futures Together*.

van Dijk, J. (2020). *The Digital Divide*.

Vignato, J., Inman, M., Patsais, M., & Conley, V. (2022). Computer-Assisted Qualitative Data Analysis Software, Phenomenology, and Colaizzi's Method. *Western Journal of Nursing Research*, *44*(12), 1117–1123. https://doi.org/10.1177/01939459211030335

Wiraguna, S., Purwanto, L. M. F., & Rianto Widjaja, R. (2024). Metode Penelitian Kualitatif di Era Transformasi Digital Qualitative Research Methods in the Era of Digital Transformation. *Arsitekta : Jurnal Arsitektur Dan Kota Berkelanjutan*, *6*(01), 46–60. https://doi.org/10.47970/arsitekta.v6i01.524

Yates, S. J., & Carmi, E. (2020). What do digital inclusion and data literacy mean today? *Internet Policy Review*, *9*(2), 1–14. https://doi.org/10.14763/2020.2.1474

Zheng, Y., & Walsham, G. (2021). Inequality of what? Social exclusion in the e-society as capability deprivation. *Information Technology for Development*.

Zou, Y., Kuek, F., Feng, W., & Cheng, X. (2025). Digital learning in the 21st century: trends, challenges, and innovations in technology integration. *Frontiers in Education*, *10*. https://doi.org/10.3389/feduc.2025.1562391