



# Digital Economy, Media Literacy, Financial Inclusion, and Economic Growth in Emerging ASEAN Countries

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## ABSTRACT

**Background:** The rapid growth of the digital economy in emerging ASEAN countries has opened new opportunities for financial inclusion and economic development. However, digital expansion does not necessarily ensure broader participation in formal financial systems. In this context, media literacy and digital communication have become increasingly important in shaping how individuals access, interpret, and use digital financial services.

**Purpose:** This study examines the relationships among the digital economy, media literacy, financial inclusion, and economic growth in emerging ASEAN countries. It focuses on the role of financial inclusion as an intermediary mechanism connecting digital transformation and inclusive economic growth, while positioning media literacy and digital communication as enabling factors.

**Methods:** This study adopts a qualitative descriptive-comparative design based solely on secondary data, including policy documents, institutional reports, and relevant academic literature. The data were analyzed thematically to identify recurring patterns and institutional dynamics influencing digital financial inclusion across selected emerging ASEAN economies. The analysis is informed by Endogenous Growth Theory, Institutional Theory, the Financial Inclusion Framework, and the Media Literacy and Digital Communication Perspective.

**Results:** The findings suggest that the digital economy alone is insufficient to produce inclusive economic growth. Its contribution becomes more meaningful when supported by financial inclusion, media literacy, and effective digital communication. Digital transformation broadens access to financial services through fintech, mobile banking, and digital payment systems, while media literacy strengthens individuals' capacity to assess and utilize digital financial information effectively. These relationships vary across countries depending on institutional quality, regulatory adaptability, literacy levels, and infrastructure readiness.

**Conclusions:** Inclusive economic growth in emerging ASEAN countries depends not only on digital transformation but also on the extent to which such transformation is accompanied by meaningful financial inclusion, strong media literacy, effective digital communication, and adaptive institutional support.

**Research Contribution:** This study contributes an interdisciplinary framework for understanding how the digital economy relates to economic growth through financial inclusion, while highlighting the enabling roles of media literacy and digital communication in inclusive digital transformation.

**Keywords:** digital economy, financial inclusion, inclusive economic growth, fintech, emerging ASEAN, MSMEs, digital transformation, institutional quality.

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## INTRODUCTION

Digital economic transformation has become a major catalyst for structural economic change in the Association of Southeast Asian Nations (ASEAN) (Ha & Chuah, 2023a). The development of e-commerce, fintech, digital payments, and digital platforms is driving broader and more efficient economic integration (Shuai et al., 2025; Wei et al., 2025). However, increased digital economic activity has not fully guaranteed equitable financial inclusion and inclusive economic growth (Xi & Wang, 2023). In several emerging ASEAN countries, gaps in access to formal financial services persist, particularly in rural areas, low-income groups, and MSMEs. Ideally, the digital economy is expected to expand access to financial services, reduce transaction costs, accelerate financial intermediation, and drive sustainable economic growth. However, reality shows that digitalization does not always automatically result in effective financial inclusion and equitable economic growth, necessitating an in-depth study of these dynamics.

According to reports from the World Bank (Global Findex) and the Asian Development Bank, internet penetration rates in emerging ASEAN countries have averaged over 75%, yet formal financial account ownership still shows significant disparities. Furthermore, a report by Google, Temasek Holdings, and Bain & Company in the e-Conomy SEA Report shows that the value of ASEAN's digital economy continues to grow annually, but its contribution to reducing economic inequality is uneven.

**Table 1. Comparison of Digital Economy and Financial Inclusion Indicators in Emerging ASEAN**

Country	Internet Penetration (%)	Formal Account Ownership (%)	Main Challenges
Indonesia	±77	±52	Low rural access and digital literacy
Filipina	±73	±51	Limited digital infrastructure
Vietnam	±75	±69	Urban-rural divide
Thailand	±85	±82	Regional inequality
Malaysia	±96	±88	Digital divide by age group

Source: World Bank Global Findex & ADB Reports (latest data before 2024) (Asian Development Bank, 2023; Demirgüç-Kunt et al., 2022)

The data in Table 1 shows that despite increasing levels of digitalization, not all people are integrated into the formal financial system. This indicates a structural gap between digital economic growth and effective financial inclusion. Therefore, the main problem lies not only in technological access, but also in institutional readiness, regulations, digital literacy, and a supportive economic ecosystem.

Beyond technological access and institutional readiness, the effectiveness of digital financial inclusion also depends on the ability of individuals and communities to interpret, evaluate, and utilize digital information in a meaningful way. In this context, media literacy and digital communication become important enabling factors. Media literacy helps individuals to assess the credibility of digital financial information, understand the use of fintech platforms, and make informed decisions in an increasingly complex digital environment. At the same time, digital communication facilitates the dissemination of financial knowledge, promotes trust in digital financial services, and strengthens interaction between users, service providers, and public institutions. Without adequate media literacy and effective digital communication, the expansion of the digital economy may increase access in a technical sense, but not necessarily deepen meaningful financial inclusion.

Previous research generally found that digitalization has a positive impact on economic growth and financial inclusion (Chinoda & Kapingura, 2024; Hashemizadeh et al., 2023; Ozili et al., 2023; Ozturk & Ullah, 2022; Rahman et al., 2025). A World Bank study emphasized the importance of financial inclusion in driving economic development and poverty reduction (Arévalo-Sánchez et al., 2024). Meanwhile, an International Monetary Fund report highlighted the role of fintech in improving the efficiency of the financial system. At the academic level, various quantitative studies have shown a positive correlation between internet penetration and GDP growth in developing countries. This research specifically examining the interaction between the digital economy, financial inclusion, and economic growth in the context of emerging ASEAN is still limited.

The novelty of this research lies in the qualitative approach used to deeply explore how digital economic dynamics influence financial inclusion and economic growth through insights drawn from policy, institutional, and academic literature. This research not only examines cause-and-effect relationships at the macro level but also understands the processes, obstacles, and opportunities in implementing the digital economy at the national and regional levels.

This research aims to qualitatively examine the relationships among digital economic development, financial inclusion, and economic growth in emerging ASEAN countries. It also seeks to identify the institutional factors, regulatory frameworks, digital literacy, and business ecosystem conditions that influence these relationships. This research is significant because it offers a more contextual and comprehensive understanding of how digital transformation can support inclusive economic development. The contributions of this research include:

1. A theoretical contribution by extending the development economics literature through institutional and digital transformation perspectives.
2. A practical contribution in the form of policy recommendations derived from the analysis of secondary data and relevant literature.
3. A regional contribution by providing a comparative overview across ASEAN countries that may inform digital economic integration policies.

This study employs a qualitative descriptive-comparative approach focusing on several emerging ASEAN countries. The analysis is based exclusively on secondary data, including policy documents, international institutional reports, official government publications, and relevant academic literature. The data were analyzed thematically to identify recurring patterns and institutional dynamics related to the digital economy, financial inclusion, media literacy, and inclusive economic growth.

This study is informed by four theoretical perspectives: Endogenous Growth Theory, Institutional Theory, the Financial Inclusion Framework, and the Media Literacy and Digital Communication Perspective. Together, these perspectives provide an interdisciplinary framework for understanding how digital transformation, financial inclusion, and media literacy interact in shaping inclusive economic growth in the ASEAN region. This study positions media literacy not merely as a complementary social factor, but as a strategic dimension that shapes how digital economy initiatives are translated into inclusive financial participation and broader economic outcomes. This perspective is particularly relevant in emerging ASEAN countries, where disparities in digital access are often accompanied by unequal capacities to understand, trust, and effectively engage with digital financial systems.

## RESULTS AND DISCUSSION

### **The Development of the Digital Economy in Emerging ASEAN and Its Implications for Economic Structure**

The rapid expansion of the digital economy across the Association of Southeast Asian Nations (ASEAN) region over the past decade has fundamentally reshaped economic structures in emerging member states, particularly Indonesia, Vietnam, the Philippines, Thailand, and Malaysia. The diffusion of internet access, smartphone penetration, cloud computing, and digital platforms has accelerated the transition from conventional economic systems toward platform-based and data-driven economies (Dhasmana & Dhasmana, 2025). This transformation is not limited to changes in consumption patterns; it extends to production systems, distribution channels, labor markets, and financial intermediation mechanisms (Yufriadi et al., 2024).

One of the most visible manifestations of digital economic growth in emerging ASEAN is the expansion of e-commerce ecosystems. Digital marketplaces and social commerce platforms have enabled micro, small, and medium enterprises (MSMEs) to access broader markets without significant physical infrastructure investment. Cross-border digital trade has become increasingly feasible, contributing to regional integration. However, while transaction volumes have grown substantially, a critical question remains: does this expansion translate into structural productivity gains, or does it merely stimulate consumption-driven growth? In several cases, digital trade growth has been fueled by increased imports and low value-added goods, raising concerns about whether the digital economy strengthens domestic productive capacity or reinforces dependency patterns (H. Yang, 2023).

Beyond e-commerce, fintech innovation and digital banking services have significantly altered financial systems across the region (Cumming et al., 2023). Mobile wallets, QR-based payment systems, peer-to-peer lending platforms, and digital credit scoring technologies have lowered transaction costs and reduced information asymmetries (Đặng & Boratyńska, 2026). In countries such as Thailand and the Philippines, digital payment infrastructure has become embedded in daily economic transactions. These developments enhance financial intermediation efficiency and potentially increase total factor productivity (TFP) (Bai et al., 2025). Within the framework of Endogenous Growth Theory, technological innovation—particularly in financial intermediation—serves as a driver of long-term growth by improving resource allocation and reducing inefficiencies.

Nevertheless, the structural impact of digitalization varies considerably among emerging ASEAN countries. Differences in digital infrastructure readiness, broadband penetration, regulatory frameworks, and institutional capacity shape the extent to which digital transformation affects productive sectors. Malaysia and Thailand, for example, exhibit relatively advanced digital infrastructure and regulatory maturity, allowing digitalization to extend beyond consumption and retail into manufacturing, logistics, and professional services (Ha & Chuah, 2023b). In contrast, in countries where infrastructure remains unevenly distributed, digital economic growth is often concentrated in urban centers, thereby exacerbating urban-rural disparities.

The transformation toward a platform-based economy also carries significant implications for labor market structures (Li et al., 2022). The digital economy has generated new employment categories, including gig workers, digital freelancers, content creators, and platform-based service providers. While these opportunities increase labor market flexibility and expand income-generating avenues, they

simultaneously introduce vulnerabilities related to income stability, social protection, and job security. The rise of platform labor signals a structural shift from traditional employment relationships toward more decentralized and informal work arrangements. Without adaptive labor regulations and social safety nets, digitalization risks intensifying labor market segmentation and inequality.

Another key structural implication lies in the increasing centrality of data as a strategic economic asset. In digital economies, value creation is increasingly driven by data accumulation, analytics, and algorithmic optimization (Fast et al., 2023). Digital platforms monetize user data to enhance efficiency, customize services, and generate network effects. Countries capable of establishing robust data governance frameworks, cybersecurity policies, and digital competition regulations are better positioned to harness digital transformation sustainably. Conversely, weak regulatory environments may undermine public trust, limit innovation, and create monopolistic market structures dominated by foreign technology conglomerates.

Digital economic growth in emerging ASEAN has also fostered deeper regional integration. Cross-border e-commerce platforms, interoperable payment systems, and regional digital trade agreements facilitate intra-ASEAN transactions (Mohammad, 2025). This integration has the potential to strengthen regional value chains and enhance competitiveness within the global digital marketplace. However, it also intensifies competition between domestic enterprises and multinational technology firms. Without strategic industrial policies aimed at strengthening local innovation ecosystems, emerging economies may become predominantly consumer markets rather than producers of digital innovation.

A critical analytical distinction must therefore be made between quantitative digital expansion and qualitative structural transformation (Bryda & Costa, 2023). Quantitative expansion refers to increases in transaction volumes, user adoption rates, and digital platform penetration. Qualitative transformation, on the other hand, involves structural upgrading of production systems, productivity enhancement, innovation capacity, and value-added generation. In several emerging ASEAN economies, digital growth appears heavily consumption-oriented, with limited spillover effects into high-value manufacturing or knowledge-intensive industries. This suggests that digitalization alone does not guarantee structural transformation; complementary investments in education, industrial upgrading, and innovation systems are required.

Human capital development emerges as a decisive factor in shaping the structural impact of digitalization. Countries with stronger digital literacy, technological expertise, and STEM-oriented education systems demonstrate greater capacity to develop indigenous digital startups and innovative enterprises (Chiamogu & Chiamogu, 2025). Conversely, limited digital skills constrain the ability of local firms to move up the digital value chain. The sustainability of digital economic growth therefore depends not only on technological infrastructure but also on workforce readiness and entrepreneurial capacity.

Institutional integration and policy coherence further determine the depth of structural transformation. Successful digital economies typically implement comprehensive strategies that integrate broadband infrastructure development, fintech regulation, data protection laws, competition policy, and digital literacy programs. Fragmented policy approaches can result in uneven digital adoption and suboptimal economic outcomes. Governments that articulate long-term national digital economy strategies are more likely to align technological innovation with broader development goals.

From a theoretical standpoint, the observed dynamics align partially with the

propositions of Endogenous Growth Theory, which emphasizes innovation, knowledge accumulation, and technological progress as engines of sustained economic growth. However, the empirical realities in emerging ASEAN suggest that the relationship between digitalization and structural transformation is linked through institutional quality and socio-economic conditions. Technology alone does not automatically generate growth; it must be embedded within supportive institutional and productive systems.

The development of the digital economy in emerging ASEAN represents a complex process of structural transition. Digitalization offers significant opportunities to enhance productivity, expand market access, and stimulate innovation. Yet its transformative potential is contingent upon infrastructure readiness, human capital development, regulatory quality, and policy integration. Without these supporting conditions, digital growth may remain consumption-driven and shallow, failing to produce meaningful structural upgrading. Therefore, understanding the interplay between digital expansion, financial inclusion, and long-term economic growth becomes essential in assessing whether digital transformation can generate inclusive and sustainable development across the ASEAN region.

### **Digital Economy and the Transformation of Financial Inclusion**

The expansion of the digital economy in emerging ASEAN countries has significantly transformed the landscape of financial inclusion. The proliferation of fintech services, mobile banking platforms, digital wallets, and QR-based payment systems has redefined how individuals and businesses access and use financial services (Bhattacharya & Singla, 2024). In many parts of Indonesia, Vietnam, the Philippines, Thailand, and Malaysia, financial transactions that previously required physical bank branches can now be conducted through smartphones. This digital transformation has reduced geographic barriers, lowered transaction costs, and accelerated the integration of previously unbanked populations into formal financial systems.

Historically, limited banking infrastructure, high administrative costs, documentation requirements, and physical distance from financial institutions contributed to persistent financial exclusion in rural and low-income communities. Traditional banking models were often inefficient in reaching geographically dispersed populations (Kumar & Saha, 2026). The emergence of mobile financial services has disrupted this structural limitation. By leveraging digital platforms, financial service providers can extend microcredit, savings products, insurance, and remittance services without relying on costly brick-and-mortar infrastructure. This shift has created new pathways for inclusion, particularly among micro, small, and medium enterprises (MSMEs) and informal sector workers.

Digital wallets and mobile payment systems, in particular, have become key entry points for financial inclusion. In several emerging ASEAN countries, digital payment adoption has grown rapidly due to interoperability policies and government-backed initiatives promoting cashless transactions (Putrevu & Mertzanis, 2024). For low-income users, digital wallets often serve as the first formal financial account, enabling them to store value, transfer funds, and access microloans. The simplicity of onboarding processes—often requiring only basic identification and a mobile number—has reduced bureaucratic obstacles that previously excluded marginalized populations.

Qualitative findings suggest that digital financial services have enhanced convenience, security, and speed in financial transactions. Informal entrepreneurs

who once relied solely on cash transactions now use digital platforms to receive payments and manage business cash flows. This transition contributes to greater transparency and traceability, which may improve creditworthiness assessments and expand access to formal financing. From a developmental perspective, the digitalization of payments can also increase fiscal capacity by formalizing segments of the informal economy.

However, despite the expansion of digital access, financial inclusion in its substantive sense remains uneven. While more individuals may hold digital accounts, this does not automatically translate into meaningful financial empowerment. Within the Financial Inclusion Framework, inclusion is multidimensional and encompasses not only access but also usage, quality, and sustainability of financial services. Access refers to the ability to open and maintain an account; usage concerns the frequency and diversity of financial transactions; quality relates to consumer protection, affordability, and suitability of services.

Digital financial inclusion remains largely transactional and consumption-oriented. Many users primarily utilize digital wallets for payments and transfers rather than savings accumulation, productive investment, or business expansion (Gachino, 2025; Kolling et al., 2025). Limited financial literacy constrains the ability of users to leverage digital financial tools strategically. Without adequate knowledge of interest rates, risk management, digital security, and financial planning, users may become vulnerable to over-indebtedness or digital fraud. Thus, the quantitative growth of digital accounts does not necessarily reflect qualitative improvements in financial well-being.

The issue of digital literacy intersects closely with financial literacy. While smartphone penetration has increased rapidly, digital competence varies across demographic groups. Older populations, rural communities, and individuals with limited formal education often face difficulties navigating digital financial interfaces (Czech et al., 2024). This digital divide can reproduce or even exacerbate existing socio-economic inequalities. Consequently, digital financial inclusion must be accompanied by comprehensive literacy programs that address both technological and financial capabilities.

Institutional Theory provides an essential lens for understanding the varying effectiveness of digital financial inclusion across countries. Institutional quality—including regulatory frameworks, governance standards, supervisory capacity, and legal enforcement—plays a critical role in shaping digital finance outcomes. Countries with adaptive and forward-looking regulatory regimes tend to foster innovation while maintaining financial stability. Clear licensing requirements for fintech firms, consumer protection laws, data privacy regulations, and cybersecurity standards enhance trust in digital financial systems.

Conversely, weak institutional oversight can generate systemic risks. Rapid fintech expansion without adequate regulation may lead to predatory lending practices, data misuse, or platform monopolization. In some contexts, unregulated digital lending platforms have contributed to excessive household debt and consumer exploitation. Such outcomes undermine the broader objective of inclusive development and may erode public confidence in formal financial institutions. Therefore, digital financial inclusion must be embedded within a stable and transparent institutional environment.

The role of central banks and financial regulators is particularly significant in emerging ASEAN countries. Regulatory sandboxes, interoperability standards, and real-time payment systems have been introduced in several jurisdictions to promote innovation while managing risk (Miglioni, 2023). Where regulators actively

engage with fintech ecosystems, digital financial services tend to integrate more effectively into national financial architectures. Policy coordination between financial authorities, telecommunications regulators, and digital economy ministries further strengthens ecosystem coherence.

Another important dimension concerns the relationship between digital financial inclusion and MSME development. Access to digital credit scoring and alternative data analytics allows fintech firms to evaluate borrowers who lack traditional collateral or credit histories. This innovation has the potential to democratize access to capital. However, qualitative evidence suggests that the scale and terms of digital lending vary significantly. In some cases, short-term, high-interest microloans dominate the digital lending landscape, limiting their developmental impact. To achieve transformative outcomes, digital credit must support productive investment rather than short-term consumption.

Gender dimensions also merit attention. Digital finance has the potential to empower women entrepreneurs by reducing mobility constraints and social barriers to accessing formal financial institutions. In certain emerging ASEAN countries, women have become active users of mobile banking and digital marketplaces. Nevertheless, gender gaps in digital literacy and device ownership persist, indicating that inclusion strategies must address structural inequalities comprehensively.

The digital economy has undeniably expanded the reach of financial services in emerging ASEAN. It has reduced geographic barriers, lowered transaction costs, and introduced innovative financial products (Y. Yang, 2022). Yet, access alone does not equate to inclusive development. Effective digital financial inclusion requires improvements in service quality, consumer protection, literacy, and institutional governance. The transformation must move beyond account ownership toward meaningful financial participation that enhances income generation, resilience, and long-term economic mobility.

The interplay between digital innovation and institutional capacity determines whether financial inclusion becomes a driver of structural transformation. When embedded within robust regulatory frameworks and supported by literacy initiatives, digital finance can contribute to productivity enhancement and inclusive growth. However, without institutional safeguards and human capital development, digital financial expansion risks remaining superficial, potentially reinforcing vulnerabilities rather than alleviating them. Therefore, understanding digital financial inclusion as a dynamic, institutionally shaped process is essential in assessing its broader contribution to economic transformation in emerging ASEAN economies.

### **The Role of Financial Inclusion as a Linkage Between the Digital Economy and Economic Growth**

This subsection represents the core analytical foundation of the study because it explains the mechanism through which the digital economy contributes to economic growth in emerging ASEAN countries. The findings indicate that the digital economy does not automatically or directly generate broad-based economic growth. Rather, its impact is linked through financial inclusion (Elshafei et al., 2025). In other words, digital transformation becomes economically meaningful when it expands access to formal financial services, improves the efficiency of financial intermediation, and enables broader participation in productive economic activities. Without this intermediary process, the expansion of digital platforms may remain concentrated in consumption, communication, or short-term transactional activity, with limited

contribution to long-term structural growth.

The digital economy creates new opportunities for connectivity, efficiency, and market integration, but these opportunities require institutional and financial channels to be translated into productive outcomes (Xia et al., 2024). Financial inclusion serves as that channel. Through fintech platforms, mobile banking, digital lending services, and electronic payment systems, individuals and firms that were previously excluded from formal finance can gain access to savings instruments, working capital, business loans, insurance products, and secure transaction systems. This inclusion reduces financial frictions and enables economic actors, especially micro, small, and medium enterprises (MSMEs), to participate more effectively in market activities. Thus, the digital economy becomes a catalyst, while financial inclusion functions as the transmission mechanism that converts technological expansion into economic growth.

A key finding of this study is that the relationship between the digital economy and growth is not linear. Increased internet penetration, platform use, or digital transaction volume does not necessarily lead to higher productivity or stronger economic performance on its own. The impact depends on whether digitalization succeeds in integrating broader segments of society into formal financial systems. In many emerging ASEAN countries, a substantial proportion of the population has historically operated outside the banking sector. Informal workers, rural households, and small entrepreneurs often rely on cash-based transactions, informal credit sources, and fragmented financial practices. Under such conditions, the digital economy can only influence growth if it reduces these barriers and connects excluded groups to formal finance.

The linkage role of financial inclusion is especially visible in the case of MSMEs. These enterprises are central to employment creation and local economic activity in ASEAN, yet they often face persistent credit constraints. Traditional banking institutions frequently perceive MSMEs as high-risk borrowers because they lack collateral, formal records, or credit histories (Saifurrahman & Kassim, 2022). Digital financial innovation changes this dynamic by enabling alternative data-based credit assessments, simplified onboarding processes, and lower-cost loan disbursement mechanisms. Through digital platforms, MSMEs can access financing more quickly and often with fewer administrative burdens. As a result, they are better positioned to expand production, invest in inventory, adopt technology, and respond to market demand. This process directly contributes to increased productivity and broader economic activity.

In this sense, financial inclusion strengthens the allocative efficiency of the economy. When capital flows more easily toward previously underserved but potentially productive sectors, the overall efficiency of resource allocation improves. The digital economy facilitates this by lowering information asymmetries and transaction costs, while financial inclusion ensures that the benefits of digitalization are not restricted to already banked, urban, or high-income groups. Therefore, financial inclusion is not merely a social objective; it is also an economic mechanism through which digital transformation can support more balanced and sustained growth.

Another important dimension of this linkage process concerns the circulation of capital. Digital payment systems, mobile wallets, and online banking services accelerate the speed and reliability of financial transactions. Faster transaction cycles reduce liquidity constraints for households and firms, support commercial exchanges, and improve cash flow management. In small business environments, the ability to receive payments instantly, transfer funds efficiently, and monitor

cash movements digitally can significantly enhance business continuity and planning. This acceleration of capital circulation contributes to economic dynamism, especially in contexts where informal cash dependency previously slowed market transactions and limited scalability.

The study also finds that the strength of this relationship differs substantially across countries. In countries with adaptive regulatory systems, stronger digital ecosystems, and higher levels of digital literacy, the connection between the digital economy, financial inclusion, and growth is more pronounced. Under such conditions, digital financial services are more likely to be trusted, widely adopted, and effectively integrated into productive sectors. Regulatory clarity encourages innovation while protecting users, and literacy enables citizens and businesses to use digital financial tools more strategically (Barkas, 2024). In these environments, digitalization becomes a meaningful driver of inclusive growth rather than a narrow technological trend.

By contrast, in countries where digital divides remain large, the effects are more limited. Unequal access to internet infrastructure, low digital literacy, weak financial education, and limited institutional coordination constrain the ability of marginalized groups to benefit from digital finance. In such cases, digital services may expand formally while remaining socially and economically shallow. Users may adopt digital wallets for simple transactions, but they may not progress toward savings, investment, credit access, or business formalization. As a result, the broader economic impact of digitalization remains restricted. This suggests that the developmental value of the digital economy depends not only on technological availability but also on the inclusiveness of its financial architecture.

The variation across countries also reflects differences in institutional quality. Institutional Theory helps explain why similar digital technologies can produce different developmental outcomes. Where institutions are capable of regulating innovation, enforcing consumer protection, and maintaining financial stability, digital financial inclusion is more likely to support sustainable growth (Anakpo et al., 2023). On the other hand, where institutions are fragmented or weak, rapid digitalization may generate risks such as fraud, over-indebtedness, data misuse, or exclusion of vulnerable users. These outcomes reduce trust in formal systems and may weaken the positive relationship between digitalization and economic development. Therefore, institutions do not merely support the digital economy from the outside; they actively shape the extent to which it can be transformed into inclusive growth.

This finding also has implications for how economic growth itself should be understood. Growth generated through digitalization is not necessarily inclusive by default. A rise in digital transactions, platform valuations, or online consumption may contribute to aggregate economic indicators, but such gains can remain highly concentrated if financial inclusion is weak. Inclusive growth requires that a broad range of economic actors—especially low-income households, informal workers, and small businesses—gain meaningful access to the tools and opportunities created by digital transformation (Sultana et al., 2022). Financial inclusion is therefore the structural bridge that determines whether the digital economy deepens inequality or broadens opportunity.

From a theoretical perspective, this linkage process can be interpreted through a synthesis of Endogenous Growth Theory and the Financial Inclusion Framework. Endogenous Growth Theory emphasizes the importance of innovation, technology, and knowledge accumulation in sustaining long-term growth. However, the Financial Inclusion Framework adds a critical distributional and institutional

dimension by showing that access, usage, and quality of financial services determine whether the benefits of innovation are widely shared. In this study, financial inclusion links these two perspectives by explaining how technological progress is transmitted through financial systems into productive economic participation.

The findings further suggest that digital transformation should not be evaluated solely by metrics such as user numbers, platform penetration, or transaction value. A more meaningful assessment must consider whether digital expansion leads to deeper financial participation, greater productive investment, and improved resilience among households and firms. In this regard, financial inclusion acts as both a developmental indicator and a conceptual mechanism. It reveals the depth of digital transformation and determines its economic consequences.

Financial inclusion functions as a structural intermediary between the digital economy and economic growth in emerging ASEAN countries. The digital economy creates the technological infrastructure and transactional possibilities, but financial inclusion determines whether these possibilities translate into productive outcomes. Where inclusion is broad, services are trusted, and institutions are effective, digitalization supports MSME development, strengthens capital circulation, and contributes to more inclusive economic growth. Where exclusion persists, the impact of digitalization remains limited and uneven. Therefore, the success of digital transformation in emerging ASEAN should be judged not simply by the scale of digital expansion, but by the extent to which it builds an inclusive financial system capable of supporting sustainable and equitable growth.

### **Media Literacy and Digital Communication as Enabling Factors of Financial Inclusion in Emerging ASEAN**

The relationship between the digital economy, financial inclusion, and economic growth cannot be fully understood without considering the role of media literacy and digital communication (Liu et al., 2021). In many emerging ASEAN countries, the expansion of digital infrastructure, fintech services, mobile banking, and digital payment systems has significantly increased the technical availability of financial services (Warokka et al., 2025). However, access alone does not automatically ensure meaningful participation in the formal financial system. The effectiveness of digital financial inclusion depends not only on the existence of digital platforms, but also on users' ability to understand, evaluate, trust, and utilize the information conveyed through these platforms. In this context, media literacy and digital communication function as enabling dimensions that shape whether digital transformation leads to broader inclusion or merely expands formal access without substantial economic empowerment.

Media literacy may be understood as the capacity of individuals to access, analyze, evaluate, and use information delivered through digital media in a critical and purposeful manner (Livingstone, 2004). Within the context of digital finance, this literacy extends beyond the ability to operate smartphones or applications. It includes the ability to distinguish reliable financial information from misleading content, to understand the basic logic of digital transactions, to interpret financial terms and conditions, to identify fraud risks, and to make rational decisions regarding the use of digital financial services. In emerging ASEAN economies, where large segments of the population are first-time users of formal financial tools, media literacy becomes particularly important because digital platforms often serve as the primary interface between citizens and the financial system.

At the same time, digital communication refers to the processes through which

information about financial services, products, risks, and opportunities is disseminated and exchanged through online platforms, social media, mobile applications, and other networked communication channels. Digital communication is not merely a technical transmission of information; it also influences trust formation, user engagement, behavioral adaptation, and the social diffusion of financial innovation (Kingiri & Fu, 2020). In many emerging ASEAN countries, the adoption of digital finance is closely linked to communication ecosystems in which government agencies, fintech firms, banks, influencers, local communities, and peer networks all play a role in shaping public perceptions. Therefore, the expansion of digital finance should be analyzed not only as an issue of economic accessibility, but also as a communication process in which meanings, trust, and perceived usefulness are continuously negotiated.

This perspective is especially relevant in emerging ASEAN because the region exhibits high levels of digital heterogeneity. While internet penetration and smartphone use have increased rapidly, the ability to engage critically and confidently with digital information remains uneven across countries and population groups. Rural households, older adults, women in vulnerable communities, low-income users, and informal workers often face barriers that are not strictly infrastructural. In many cases, these barriers are cognitive, communicative, and informational. Individuals may have access to mobile devices and internet connectivity, yet still hesitate to use digital wallets, mobile banking, or digital lending platforms because they do not fully understand how these services work, fear fraud, or distrust digital institutions. Thus, the gap between digital access and digital inclusion is often mediated by media literacy and communication quality.

This distinction is crucial because many policy discussions on digital transformation still assume that connectivity will naturally translate into inclusion. Such an assumption risks oversimplifying the social processes through which financial inclusion actually occurs. Digital financial services are embedded in systems of symbols, interfaces, instructions, and narratives that users must interpret (Kingiri & Fu, 2020). When users lack the ability to process this information critically, they may either avoid formal digital finance altogether or participate in ways that do not enhance their welfare. For example, a user may adopt an e-wallet only for basic transfers or promotional discounts without progressing toward savings, productive credit, insurance, or other forms of deeper financial participation. Similarly, a user may become vulnerable to misinformation, scams, or exploitative digital lending because access was not accompanied by sufficient media literacy.

From this standpoint, media literacy should not be treated as a peripheral educational issue, but as a core mechanism supporting the effectiveness of financial inclusion. It strengthens financial inclusion by improving users' capacity to navigate the informational complexity of digital financial systems. A media-literate user is more likely to understand the legitimacy of a financial application, interpret transaction notifications accurately, compare service options, protect personal data, and evaluate online financial advice critically (Olubori & Adisa, 2025). This makes digital financial inclusion more substantive, because participation becomes informed, intentional, and potentially transformative rather than passive or superficial. In other words, media literacy contributes to the quality dimension of financial inclusion, not only its access dimension.

Digital communication, meanwhile, plays a complementary role by shaping how financial knowledge and trust circulate across society (Arcot et al., 2024).

Communication about digital finance occurs through multiple channels, including official campaigns by central banks and regulators, educational content from fintech platforms, community-based financial socialization, social media discourse, and interpersonal recommendations. The effectiveness of these communication processes influences how digital financial services are perceived and adopted. If financial communication is clear, culturally appropriate, accessible, and trustworthy, it can reduce uncertainty and encourage broader participation. Conversely, if digital communication is fragmented, overly technical, misleading, or dominated by commercial interests, it may deepen confusion and mistrust, especially among already vulnerable populations.

In emerging ASEAN countries, trust is a particularly important factor in this discussion. Financial inclusion is not simply about the availability of services, but also about confidence in the institutions and platforms that deliver them. Media literacy contributes to trust by helping users evaluate the credibility of information sources, while digital communication contributes by enabling institutions to explain products, clarify risks, and build relational engagement with users. For example, when fintech services are introduced through transparent communication, supported by digital education, and reinforced by recognizable public institutions, users may be more willing to experiment with formal financial tools. In contrast, when digital lending or investment products circulate mainly through aggressive online advertising or informal peer networks without clear communication safeguards, adoption may occur in ways that increase vulnerability rather than inclusion.

Another important contribution of this perspective lies in its relevance to MSMEs. Much of the literature on financial inclusion emphasizes the importance of MSMEs as engines of employment, productivity, and local economic resilience. However, the successful integration of MSMEs into digital finance also depends on communicative and informational capacities (Arcot et al., 2024). Small business owners need to understand not only how to accept digital payments, but also how to interpret platform analytics, respond to online consumers, evaluate digital credit offers, and manage business communication in digital environments. Media literacy therefore supports entrepreneurial decision-making by strengthening the ability of MSMEs to engage strategically with digital platforms. In this sense, it becomes part of the broader ecosystem linking digital transformation to productivity and growth.

The relevance of media literacy and digital communication is also evident in the issue of digital fraud and over-indebtedness. In many developing digital economies, the rapid spread of online financial platforms has created new opportunities for inclusion, but also new forms of exploitation. Users with limited capacity to assess digital content may be easily exposed to fraudulent links, fake investment schemes, predatory lending, or manipulative advertising. This problem illustrates why digital financial inclusion cannot be measured solely by the number of accounts or transaction volumes. Inclusion that exposes users to greater risk without equipping them with the literacy needed to protect themselves may not contribute to inclusive growth. Instead, it may reinforce insecurity and deepen economic precarity. A communication-based perspective therefore helps explain why some forms of digital expansion fail to produce genuinely developmental outcomes.

This perspective also adds an important interdisciplinary dimension to the study. Endogenous Growth Theory highlights the role of innovation and technology in driving long-term economic growth, Institutional Theory explains the importance of governance and regulation, and the Financial Inclusion Framework emphasizes

access, use, and quality of financial services (Ofoeda et al., 2024). The Media Literacy and Digital Communication Perspective complements these approaches by illuminating the communicative processes through which digital technologies are actually understood and used by society. It recognizes that the value of digital innovation is not determined only by infrastructure or institutional design, but also by the ability of users to interpret and appropriate technological systems in meaningful ways. This is particularly important in the ASEAN context, where rapid digital growth often coexists with unequal educational resources, varied communication ecologies, and asymmetrical capacities to engage with digital systems.

Moreover, incorporating this perspective helps explain cross-country variation in the impact of digitalization on economic growth. Countries with stronger digital communication ecosystems, higher public awareness, and better literacy outcomes are likely to translate digital finance into broader financial participation more effectively. In such contexts, users are not merely connected to digital platforms; they are able to use them with greater confidence, autonomy, and strategic awareness. As a result, digital finance is more likely to support household resilience, MSME development, and productive economic participation (Cai et al., 2023). In countries or communities where communication gaps remain wide, digitalization may still expand in formal terms, but its developmental impact remains limited because users cannot fully convert technological access into economic opportunity.

In policy terms, this discussion suggests that digital economy strategies should be accompanied by serious investment in communication-centered inclusion policies. Governments, regulators, educational institutions, and fintech providers should not assume that the spread of platforms will automatically generate informed usage. Instead, financial inclusion agendas should incorporate media literacy programs, public communication campaigns, user-centered digital education, and community-based dissemination strategies. These initiatives should focus not only on teaching technical skills, but also on building critical understanding, trust, and risk awareness. In this way, communication becomes part of the infrastructure of inclusion rather than a secondary complement to technology.

The Media Literacy and Digital Communication Perspective strengthens the analytical framework of this study by explaining why digital economy expansion alone is insufficient to produce inclusive growth. The pathway from digitalization to financial inclusion and then to economic growth is mediated not only by institutions and infrastructure, but also by communication processes and users' interpretive capacities. Media literacy enables individuals and firms to engage meaningfully with digital financial systems, while digital communication shapes how trust, knowledge, and participation circulate within society. Therefore, a more complete understanding of inclusive digital transformation in emerging ASEAN countries requires attention to both economic and communication dimensions. By incorporating this perspective, the study offers a broader and more realistic explanation of how the digital economy may contribute to sustainable and inclusive economic development.

### **Policy Implications and a Conceptual Model for Strengthening an Inclusive Digital Economy in ASEAN**

This final subsection formulates a conceptual model based on the findings of the study and outlines the policy implications required to strengthen an inclusive digital economy in emerging ASEAN countries. The analysis demonstrates that the

relationship between the digital economy and economic growth is not direct or automatic. Rather, it follows a structural pathway in which digital transformation expands access to financial services, improves financial intermediation, enhances the productivity of micro, small, and medium enterprises (MSMEs), and ultimately contributes to more inclusive economic growth. In this sense, the digital economy should not be understood merely as a technological trend or a market expansion phenomenon, but as a development process whose success depends on how effectively it is connected to inclusive financial systems and productive sectors.

Based on the findings, the proposed conceptual model can be described as follows:

**Digital Economy → Digital Financial Access → Improved Intermediation → MSME Productivity → Inclusive Economic Growth**

This model emphasizes that digitalization becomes developmentally significant only when it strengthens the connection between technological innovation and economic participation. The first stage, the expansion of the digital economy, includes the growth of e-commerce, fintech, digital banking, mobile payment systems, and online business platforms. These developments increase the reach of economic networks and create new forms of market participation. However, the presence of digital platforms alone does not guarantee broad developmental impact. Their role becomes more meaningful when they lead to the second stage: digital financial access.

Digital financial access refers to the ability of individuals and firms to use digital tools to enter the formal financial system (Frimpong et al., 2022). Through mobile banking applications, e-wallets, digital savings accounts, and online lending platforms, populations previously excluded from traditional banking systems can engage in secure and traceable financial transactions. For households, this means easier access to payments, remittances, savings, and basic financial products. For MSMEs, it means opportunities to receive digital payments, build transaction records, and access formal financing. In many emerging ASEAN countries, this stage is particularly critical because a significant share of economic activity has historically taken place in informal or cash-based settings.

The third stage of the model is improved intermediation. Once access to digital finance is established, the financial system can function more efficiently in allocating resources. Information asymmetries are reduced through digital records, credit assessments become more data-driven, and the movement of capital becomes faster and more transparent. This improved intermediation is crucial because it determines whether financial access remains passive or becomes economically productive. If digital finance only facilitates consumption payments, its developmental effect will be limited. But if it enables more effective savings mobilization, credit distribution, and investment support, then the digital economy begins to contribute to structural economic change.

The fourth stage involves increased MSME productivity. MSMEs occupy a central position in emerging ASEAN economies, both as a source of employment and as a driver of local economic resilience. Yet many of these enterprises face chronic barriers, including limited access to finance, weak market integration, and low technological capacity. Digital financial systems can help overcome some of these constraints by enabling easier access to working capital, payment efficiency, inventory management, and online market participation. When MSMEs can obtain capital more quickly and operate with lower transaction costs, they are better positioned to expand output, improve competitiveness, and generate employment. This stage is particularly important because it links financial inclusion to the real

economy.

The final stage of the model is inclusive economic growth. Growth becomes inclusive when the benefits of digitalization are not concentrated only among urban consumers, large firms, or technologically advanced groups, but are distributed more broadly across sectors and populations. This includes low-income households, rural communities, women entrepreneurs, and small business owners. The findings of this study suggest that inclusive growth in the context of digital transformation depends on whether the financial system is capable of connecting innovation with broad-based productive participation. Therefore, the digital economy should not be assessed solely in terms of transaction value or market size, but also in terms of its capacity to reduce exclusion and expand economic opportunity.

From this conceptual model, several important policy implications emerge. The first is the need to strengthen both digital literacy and financial literacy (Koskelainen et al., 2023). Access to digital tools is insufficient if users do not understand how to operate them safely and productively. In many emerging ASEAN countries, digital financial services have expanded rapidly, but the ability of users to make informed financial decisions remains uneven (Ong et al., 2023; Quoc et al., 2025). Limited understanding of interest rates, cyber risks, digital fraud, budgeting, and credit management can weaken the developmental benefits of digital inclusion. Therefore, governments must invest in educational strategies that combine technological skills with practical financial knowledge. These programs should target not only students and urban populations, but also rural communities, informal workers, women entrepreneurs, and micro-business owners.

The second implication is the importance of harmonizing fintech regulation and strengthening consumer protection. The rapid growth of digital finance can generate opportunities, but it can also create risks if regulatory systems do not adapt accordingly. Inconsistent rules across countries, weak supervision, and limited legal protection can reduce public trust and expose users to predatory practices. This study shows that institutional quality significantly shapes the effectiveness of digital financial inclusion. Therefore, regulators must develop clear and adaptive frameworks for licensing, data protection, cybersecurity, platform accountability, and dispute resolution. Consumer protection must be treated as a core component of financial inclusion, not as a secondary issue. An inclusive digital economy cannot be built on unstable or exploitative financial systems.

The third policy implication concerns the integration of digital transformation policies with national economic development strategies. Too often, digital economy policies are treated as separate from industrial policy, MSME development, labor market reform, and social inclusion programs. This fragmented approach limits the transformative impact of digitalization. The findings of this study indicate that digital technology produces stronger growth effects when it is embedded in a broader development framework. National governments should therefore align digital infrastructure investments, fintech policies, MSME support schemes, and innovation strategies within an integrated policy agenda. In this way, digital transformation can support long-term structural upgrading rather than remain confined to isolated sectors or urban centers.

A fourth implication is the need for stronger regional cooperation within the framework of the Association of Southeast Asian Nations. Although ASEAN has made progress toward regional integration, substantial digital gaps persist across member states in terms of infrastructure, regulatory readiness, digital skills, and financial inclusion. These differences limit the potential for shared regional growth and may deepen asymmetries between more advanced and less prepared economies.

Regional cooperation is therefore essential to reduce these disparities. ASEAN-level collaboration can promote policy learning, regulatory interoperability, cross-border payment integration, and the sharing of best practices in digital inclusion. Such cooperation is especially important because digital markets increasingly operate across national borders, while regulatory and institutional capacities remain uneven.

Cross-country collaboration may help smaller or less digitally advanced economies avoid becoming merely passive markets for foreign platforms (Eduardsen et al., 2023). By developing common standards and coordinated strategies, ASEAN can create a more balanced digital regionalism in which member states participate not only as consumers, but also as innovators, service providers, and producers. This approach would support a more equitable distribution of the benefits of digital transformation across the region.

These policy implications reinforce the central conclusion of the study: digital transformation should not focus exclusively on technological expansion or market growth. A narrow emphasis on innovation metrics, startup growth, or transaction volume risks overlooking the institutional and social foundations required for inclusive development. The real challenge is not simply to digitalize economies, but to ensure that digitalization builds an inclusive financial system capable of supporting productivity, resilience, and opportunity for a wider range of economic actors.

The policy agenda for emerging ASEAN should move beyond technology-centered development toward inclusion-centered digital transformation. This means investing in literacy, institutional quality, regulatory coherence, MSME support, and regional cooperation. Only through such an integrated approach can the digital economy contribute to sustainable and equitable growth. In this framework, technology is not the final objective, but a tool whose value depends on how effectively it is connected to financial inclusion and productive development. The conceptual model proposed in this study thus offers both an analytical explanation and a policy roadmap for strengthening an inclusive digital economy in ASEAN.

## **CONCLUSION**

This study concludes that the digital economy in emerging ASEAN countries does not automatically generate inclusive economic growth. While the expansion of digital platforms, fintech services, and mobile financial technologies has significantly transformed economic interactions, their contribution to long-term growth depends largely on the depth and quality of financial inclusion. The findings demonstrate that financial inclusion serves as a structural bridge linking digital transformation to productive economic outcomes. When digital access translates into improved financial intermediation, expanded MSME financing, and more efficient capital circulation, it enhances productivity and supports broader economic participation. However, where digital divides persist, literacy remains limited, and institutional capacity is weak, the impact of digitalization on growth remains shallow and uneven.

The sustainability of digital-driven growth in emerging ASEAN hinges on inclusive policy design and institutional strengthening. Strengthening digital and financial literacy, harmonizing fintech regulations, integrating digital strategies with national development plans, and enhancing regional cooperation within ASEAN are critical steps toward ensuring that digital transformation fosters

equitable and resilient growth. The study underscores that technology alone is insufficient; it must be embedded within inclusive financial systems and supported by strong governance structures. Only through such a comprehensive and coordinated approach can the digital economy evolve into a meaningful driver of sustainable and inclusive development across the ASEAN region.

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The author declares no conflict of interest.

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The first author led the conceptualization, methodology development, data analysis, manuscript drafting, and revision process. The second author contributed to the review of the manuscript, provided constructive feedback to improve the article, and conducted proofreading.

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