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AI Readiness and Digital Economy Development in Myanmar: A Strategic Secondary-Data Assessment

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ABSTRACT

This study assesses Myanmar's preparedness to develop the digital economy with the support of AI in the context of connectivity disparities, weak institutional capabilities and significant inclusion and resilience challenges. A multi-source secondary data evidence base combines evidence on internet disruption from the World Bank, evidence of device access and affordability from the World Bank, the Myanmar Digital Economy Roadmap 2030, and indicators of digital adoption from DataReportal and the Government AI Readiness Index 2025, as measured at the end of 2025. This analysis uses descriptive benchmarking, an ASEAN peer comparison, policy to gap mapping and a qualitative priority matrix, but is not causal in estimating the impact of artificial intelligence on economic growth. At the end of 2025, there were 39.8 million internet users and 72.5% internet penetration rate in Myanmar, while 15.1 million were offline. Mobile connectivity was widespread, with 62.5 million connections and 96.8% of connections being broadband capable. Compared to the previous year, mobile connections decreased 2.0 per cent and there were 62.5 million connections. The country was 173th among 195 governments in terms of AI readiness. Myanmar was at the 173th position of 195 governments in terms of AI readiness. The unweighted mean of the six pillars was 19.12 for it, and 55.48 for the ASEAN peers, with the greatest gaps in the governance and policy capacity pillars. The official roadmap conceptually links with these weaknesses in terms of the infrastructure, government, cyber security, inclusion, skills, innovation and legal framework pillars but outcomes of implementation are not yet provided by the evidence selected. The paper outlines a phased approach with priority actions focused on institutional capacity, trustworthy data systems, skills, resilient infrastructure, targeted sectoral pilots and inclusive scaling. The results reveal that Myanmar has a significant digital access foundation, but development with AI will require a greater emphasis on governance, capacity, continuity, and equitable access to the digital space than connectivity.

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Introduction

Digital economies are not only a function of the quantity of connected users but also of the ability to transform data, platforms, skills and institutions into productive and trusted economic activity. Artificial intelligence contributes to this transformation by integrating the prediction, automation, personalization and decision support functions into markets and public services, whether in healthcare or in education (Agrawal et al., 2019; Goldfarb & Tucker, 2019). However, the role of AI in developing economies depends on the quality of access, digital infrastructure, institutional capacity, human capital, and innovation systems (Aly, 2022; Niebel, 2018; Oloyede et al., 2023).

Myanmar is an analytically interesting case. By late 2025, its digital user base had grown significantly, but several national AI-readiness measures highlight significant shortcomings in the policy capacity, governance, public sector adoption, and national diffusion of AI. This balance is a strategic one as the nation is sufficiently connected to merit an AI-driven approach to planning - yet missing some of the tools needed to achieve wide, safe, and economically viable implementation. Research on digital transformation also highlights the need to consider both institutional and organizational transformations when implementing and adopting technology as a standalone technical solution (Mergel et al., 2019; Verhoef et al., 2021; Vial, 2019).

This paper does not aim to provide an estimate of a causal effect of AI on Myanmar's growth. Instead, it assesses the existing state of the nation's digital infrastructure, profiles the readiness of the national AI landscape in relation to ASEAN peers, identifies gaps in capacity and capability observed in the Myanmar Digital Economy Roadmap 2030, and creates a phased strategic approach. The evidence is not considered as a single coherent dataset, but instead is seen as a multi-source secondary data base, due to the fact that the indicators, policy documents, and historical monitoring estimates have been created for different purposes and reporting periods.

First, what are some of the current digital access and infrastructure challenges and opportunities for AI-enabled development in Myanmar?Firstly, what are some of the challenges and opportunities to date for digital access and infrastructure that facilitate or hinder AI-enabled development in Myanmar? (3) What are Myanmar's strengths and weaknesses in relation to the rest of the ASEAN in their six-pillar government AI-readiness profiles? The questions that should be answered are (3) How do the nine pillars of the Myanmar Digital Economy Roadmap 2030 address gaps observed and (4) What sequence of policy and capability development actions is defensible based on the evidence?

The paper has three contributions. Firstly, it supersedes the vague terminology of the concept of “digital potential” with a measurable list of indicators. Second, it decouples access to digital and AI readiness with the outcomes of economic value. Third, it connects the policy's official policy architecture with a sequence of implementation that can be monitored while at the same time acknowledging that policy publication does not necessarily mean successful policy implementation.

Literature Review and Analytical Foundations

AI, Digital Transformation, and Economic Value

In addition to its economic value, the benefits of AI are very much dependent on other organizational and institutional skills (Agrawal et al., 2019; Furman & Seamans, 2019). The organizational level of AI capability is not just about buying software, but about the data, technology, expertise, coordination and learning routines (Mikalef & Gupta, 2021). Innovation research also reveals that AI has the potential to enhance opportunity identification and experimentation, generate new coordination and governance needs (Haefner et al., 2021), and more.

AI needs to be considered within the framework of digital transformation for the development of the country. While these digital infrastructure and platforms provide an environment conducive to productivity, inclusion and welfare gains, they do not automatically produce them (Aly, 2022; Oloyede et al., 2023). While AI can help advance the SDGs by more efficient resources allocation and service provision, it relies on institutions, environmental and social protections and capability dissemination to achieve actual results (Vinuesa et al., 2020).

Digital inclusion, Skills, and Entrepreneurship

One of the main limitations of the digital divide is that is does not just mean that some people are on the internet while others are not. Second and third order divides are related to skills, meaningful use, trust and the ability to use access to achieve educational, social or economic outcomes (Scheerder et al., 2017). This is at the heart of Myanmar: there is the potential for high numbers of connections online, offline populations, unequal quality of service, low enterprise capability and limited access to advanced tools. In addition to ensuring network coverage, inclusion policy should take into account the issues of affordability, devices, local-language services, safety, and practical skills.

While digital entrepreneurship may help to reduce barriers to entry and result in new forms of business models, it also requires access to platforms, institutional support, and the capacity to recombine digital resources (Nambisan, 2017). At the ecosystem level, digital transformation alters the way innovation is structured on the market and within firms, universities, public institutions and investors (Nambisan et al. 2019). Such insight will enlighten a Myanmar strategy of integrating technologies that are context-specific, university-industry partnerships, and MSME adoption support in local languages, instead of solutions that are imported.

Governance, Ddata, Cybersecurity, and Responsible AI

Decision rights, accountability, standards and controls over data assets are established through data governance and are essential for reliable and legal AI systems (Abraham et al., 2019). Key principles of responsible AI frameworks include fairness, transparency, accountability, privacy, human oversight and social benefit (Cath et al., 2018; Floridi et al., 2018; Jobin et al., 2019). Principles, however, do not manifest themselves in enforceable processes, technical controls, procurement requirements, and institutional responsibility unless they are translated into these (Mittelstadt, 2019).

Likewise, cybersecurity is an economic-development requirement due to the reliance on integrity, availability and trust of digital transactions, public databases and AI systems. The shift from information security to a wider concept of cyber security is motivated by the need to safeguard social and technical systems which are interconnected (von Solms & van Niekerk, 2013). However, the possibilities of public good can be achieved with AI, provided that some choices in implementation foster risk management and accountability (Taddeo & Floridi, 2018).

Public-Sector Adoption, Fintech, and Sectoral Deployment

To transform the government to be digital, one needs to change administrative processes, the architecture of the data, the capabilities of the staff and the design of the government services (Gil-Garcia et al., 2018; Mergel et al., 2019). Outcomes from public sector AI can assist with document processing, service information, forecasting and resource allocation, however, lack of data quality, expertise, procurement risk and accountability is a potential threat to outcomes (Sun & Medaglia 2019; Wirtz et al. 2019). A staged approach is better suited to begin with low-risk applications that can be audited than with high-stakes automated applications.

Digital payments and fintech are also relevant as they link online involvement to transactions and formality of businesses. While the positive impact of Fintech is evident with respect to financial inclusion, the impacts differ by income band and institutional setting (Demir et al., 2022; Ozili, 2018). While the literature on fintech highlights the role of technological innovation in protecting against fraud, tracking risk, and personalizing services, the larger body of fintech literature underscores the importance of the interplay of technological innovation, market structure, regulation, and consumer protection (Gomber et al., 2018).

Analytical Framework

The literature suggests that an AI-powered digital economy should be viewed as a sequence: first the digital foundations will make it possible to be ready for AI; second, being ready for AI will be the basis for a responsible deployment on the various sectors; third, the AI-powered deployment of the sectors will yield the effects only when cross-cutting capabilities like skills, governance, innovation, inclusion and resilience are present. Figure 1 shows the analytical framework adopted for this study. The framework also takes into account cross-sector issues with AI adoption, such as the technical, organizational, ethical and policy challenges that it poses at the same time (Dwivedi et al., 2021) and the additional challenges of verification, transparency and institutional safeguards with the use of generative AI (Dwivedi et al., 2023).

Methodology

Research design

The study uses a multi-source secondary-data, country-level strategic analysis. The unit of analysis is the digital economy ecosystem in Myanmar. The design has been described descriptively and interpreted causally but has not been determined causally, as the evidence includes both current adoption indicators and a cross-country composite index, a national policy document, and historical monitoring estimates. There is no regression, mediation or causal attribution. The study does not compare the selected international indicators directly because

they are released on different reporting cycles, and so the indicators serve as complementary structural benchmarks, without making any causal or annual comparisons between the indicators.

Figure 1. Author-developed analytical framework for AI readiness and digital economy development in Myanmar.

Data sources and variable selection

Variables were only kept if they directly pertained to access to digital technologies, infrastructure capacity, AI readiness, governance, public sector usage of AI, innovation and diffusion, resilience and inclusion, or official policy response. Advertising metrics, such as those for each platform, and other demographic variables not related to the advertising were removed from the final analysis. Table 1 summarizes the four source groups, their periods and their analysis roles.

Table 1: Data sources, reporting periods, access dates, and analytical roles

Source	Reference period	Variables retained	Role in analysis	Access date
DataReportal, Digital 2026: Myanmar	Late 2025	Internet users and penetration; offline population; mobile connections; broadband-capable share; fixed speed; annual changes	Current digital foundation and inclusion	13 July 2026
Oxford Insights, Government AI Readiness Index 2025	2025	Global rank and six pillars for Myanmar and ASEAN countries	AI capability benchmarking	13 July 2026
Myanmar Digital Economy Roadmap 2030	2024–2030	Nine pillars, 22 strategic goals, 77 action plans, and implementation phases	Policy-to-gap alignment	13 July 2026
World Bank digital-sector monitoring	Mainly 2019–2021	Historical adoption, affordability, device access, and internet-disruption estimates	Historical context and resilience risk	13 July 2026

Note: Current and historical values are not pooled as if they were contemporaneous. Access dates document the final source-verification date; source URLs are provided in the reference list and data-availability statement.

Analytical Procedure

The analysis was conducted in four steps. First, indicators were categorized into the digital foundations, AI readiness, and historical resilience context. Second, the scores of the six ASIAN countries on the six "AI readiness" pillars were compared to the mean score of the other nine countries in the assembled ASEAN dataset. The gap was determined for each dimension, d, as Gap_d = Score_Myanmar,d − Mean_ASEAN peers,d. Third, the nine pillars of the roadmap were aligned with the empirical gaps that they might be able to plausibly fill. Fourth, evidence-based priorities were summarized into a phased implementation plan.

An unweighted mean of Myanmar's six pillar scores was calculated only as a compact descriptive summary. It is not an official Oxford Insights overall score and is not used to infer causal or cardinal differences in national performance. The regional mean is similarly descriptive. Priority labels in the strategic matrix are qualitative judgments derived from the size of the observed gaps, the importance of the capability for safe AI deployment, and the degree of policy alignment.

Source-Selection Criteria

The source search undertaken is through DataReportal, Oxford Insights, World Bank Open Knowledge Repository, the Myanmar Ministry of Commerce website and Google Scholar in July 2026 and verified on 13 July 2026. The following keywords were used: Myanmar digital economy, Myanmar internet users, Myanmar AI readiness, Government AI Readiness Index 2025 Myanmar, Myanmar Digital Economy Roadmap 2030, Myanmar digital sector monitoring, AI governance developing countries, and digital inclusion Myanmar. The sources that were included were publicly available, directly relevant to Myanmar or the analytical framework, recent enough for the purpose, had a clear indicator of measurement, had been issued by an official public body, an established international organisation or a peer-reviewed journal. Records were duplicated, records specific to platforms not included, unsupported commentary removed, and conceptually similar records with different scales removed.

Data extraction and Synthesis

A structured extraction matrix documented the source, reporting period, access date, indicator/policy claim, unit of measurement, geographic coverage, source website URL, and the role of the analysis. If the data sources were different, the most recent and authoritative value has been kept for current indicators and older data values have been kept only when providing historical background. An attempt was not made to average or pool values from different years or different constructs.

Themes were used deductively and inductively to develop the strategic framework. The themes in the World Bank evidence and peer-reviewed literature on digital-development were subsequently employed to further shape the categories, which were first identified from the six Oxford Insights readiness pillars and the nine pillars of the Myanmar Digital Economy Roadmap 2030. The seven pillars that are created are an analytical framework developed by the author, and not a model statistically validated. Independent dual coding was not conducted, rather, a second pass source-to-claim audit was conducted of all indicators and interpretations extracted.

Reliability and Triangulation

The reliability of the sources was enhanced and further supported by three processes: source triangulation, explicit temporal labelling, and a source-to-claim verification pass. Data on digital-access claims were verified against the original DataReportal page; data on AI-readiness were taken from the validated 2025 Oxford Insights release; data on claims of roadmap were verified against the official policy document, and historical affordability, device-access and disruption estimates were kept as stated by the World Bank. In addition, connection counts are not considered actual user numbers, broadband connections are not seen as evidence of data consumption, policy presence does not indicate policy success and the World Bank disruption estimate is not an actual causal estimate, but rather an order of magnitude estimate (Kemp, 2025; Ministry of Commerce, 2024; Oxford Insights, 2026; World Bank, 2022).

Ethical Considerations

Only publicly available, aggregate secondary indicators, policy literature and peer-reviewed literature are used. It isn't data involving human participants, individual-level records, confidential data or personally identifiable information. Thus, institutional ethics clearance was not needed.

Results

Digital Access and Infrastructure Foundation

Table 2 reports the indicators retained for the final analysis. Myanmar had 39.8 million internet users in late 2025, corresponding to 72.5% of the population. Internet use increased by 4.9% over the year, indicating continued diffusion. Nevertheless, 15.1 million people, or 27.5% of the population, remained offline. Figure 2 visualizes this access divide. These values show that Myanmar has a substantial addressable digital market but does not yet have universal access (Kemp, 2025).

Table 2: Core indicators for Myanmar's AI readiness and digital economy assessment

Dimension	Indicator	Value	Period
Digital access	Internet users	39.8 million	Late 2025
Digital access	Internet penetration	72.5%	Late 2025
Digital exclusion	Offline population	15.1 million (27.5%)	Late 2025
Digital diffusion	Internet-user growth	+4.9%	2025
Mobile infrastructure	Cellular mobile connections	62.5 million; 114 per 100 people	Late 2025
Mobile capability	Broadband-capable mobile connections	96.8% of connections	Late 2025
Mobile trend	Mobile-connection growth	−2.0%	2025
Fixed infrastructure	Median fixed download speed	26.90 Mbps	Late 2025

Fixed trend	Fixed-speed growth	+24.8%	2025
AI readiness	Global rank	173 of 195	2025
Historical affordability	Cost of 1.5 GB mobile data	0.75% of GNI per capita	2019
Historical device access	Smartphone penetration	Approximately 80%	2019
Historical resilience risk	Estimated cost of 2021 restrictions	US$2.8 billion; 3–4% of FY2020 GDP	2021

Note. *Current digital indicators are from Kemp (2025). Historical indicators and the disruption estimate are from World Bank (2022). The 2021 cost is an order-of-magnitude estimate.*

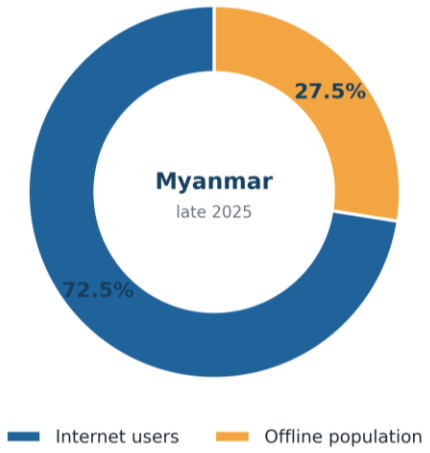

Figure 2: Internet participation and the offline population in Myanmar, late 2025.

Source: *Authors' visualization based on Kemp (2025)*

Mobile infrastructure is wide but needs to be taken with a grain of salt. The 62.5 million connections in use were for mobile devices and compared to 114 connections per 100 persons, meaning multiple-SIM use and not unique people. While 96.8% of connections were broadband capable, the possession of this capability does not mean that everyone actually uses it, that it is affordable, or that it offers a quality of service. The 2.0% drop in mobile connections also suggests that growth in scale can be combined with contraction. Fixed connectivity also improved, with a median download speed of 26.90 Mbps, and an annual increase of 24.8%, although a fixed-line median does not reflect rural and mobile connectivity (Kemp, 2025).

The continuity interpretation gets support from the historical evidence from the World Bank. While the affordability indicators and smartphone indicators provided a useful starting point in the past, the estimated cost of the 2021 internet restrictions, at almost US$2.8 billion or ~3–4% of FY2020 GDP, highlights how disruption can impact services, business operations and investment confidence. This is only an order of magnitude estimation as stated in the source.

Government AI Readiness and ASEAN Comparison

The Government AI Readiness Index 2025 puts Myanmar at rank 173th in among 195 governments. The six pillar scores are compared to the other nine countries in the dataset

(ASEAN countries), as shown in table 3. Figures 3 and 4 show the same data graphically. The author calculated unweighted Myanmar pillar mean was 19.12 whereas the peer group mean was 55.48 which is not an official index score (Oxford Insights, 2026).

Table 3: ***Myanmar's Government AI Readiness pillars compared with the ASEAN peer mean***

Dimension	Myanmar	ASEAN peer mean	Gap (points)
Policy capacity	8.00	59.83	-51.83
AI infrastructure	33.25	52.99	-19.74
Governance	13.67	65.94	-52.27
Public-sector adoption	12.32	64.32	-52.00
Development & diffusion	18.57	42.19	-23.62
Resilience	28.91	47.59	-18.68
Unweighted six-pillar mean	19.12	55.48	-36.36

Note: *Gap = Myanmar score minus the mean of Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam. Negative values indicate lower Myanmar scores. Source data: Oxford Insights (2026).*

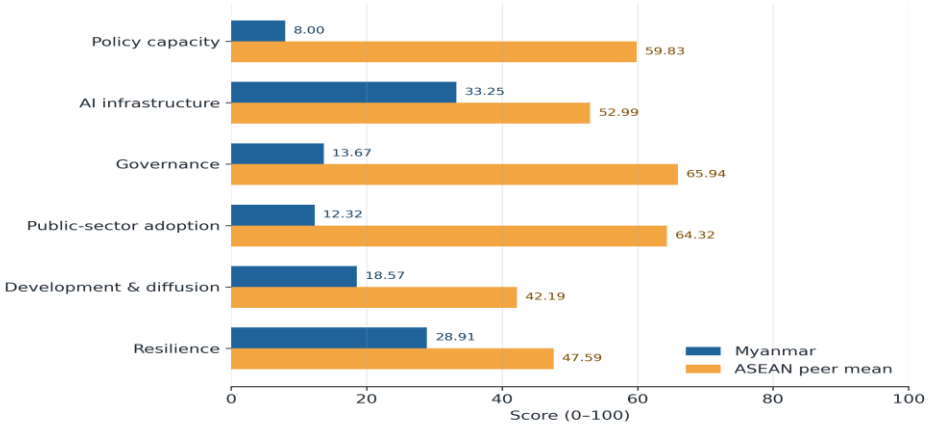

Figure 3: Myanmar's AI-readiness pillar scores compared with the ASEAN peer mean
Source: *Authors' calculations based on Oxford Insights (2026)*

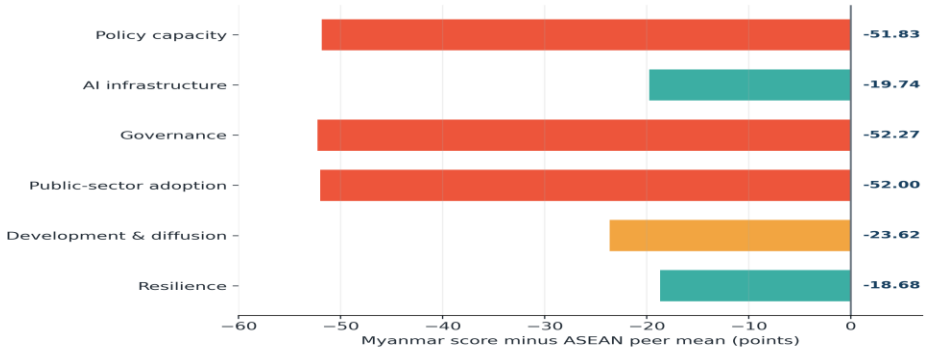

Figure 4: Myanmar's point gaps relative to the ASEAN peer mean across six AI-readiness pillars
Source: *Authors' calculations based on Oxford Insights (2026)*

Governance (−52.27 points), public-sector adoption (−52.00), and policy capacity (−51.83) had the highest negative scores. The findings suggest that Myanmar's most serious problems are not of a technical nature. AI infrastructure was also lower than the regional average, although with a score of −19.74 points, this score gap was significantly narrower than the governance and adoption scores gaps. Myanmar did not do much better than any of the other countries with Resilience at an absolute score of 28.91, but the gap was the smallest (−18.68). Development and diffusion was 23.62 points lower than the peer mean, indicating low levels of AI capabilities in the country's own development, commercialisation and dissemination.

The pattern provides for a sequential approach. Without commensurate progress in policy, legal rules, government capacity and trust, the most significant limitations would remain unaddressed as compute, cloud access and connectivity expand. On the other hand, effective governance, no investable infrastructure, and no implementers would lead to governance rules that have little effect. The six pillars are and should be treated as a system of capabilities and not as separate ranks.

Alignment of the Digital Economy Roadmap 2030 with observed gaps

The Myanmar Digital Economy Roadmap 2030 is comprised of 9 strategic pillars, 22 goals and 77 action plans. It features clear activities in the field of artificial intelligence, blockchain technology, big data, cloud computing, Internet of Things, digital learning, innovation centers, and practical skills in the use of new technologies. The nine pillars are mapped to the nine identified empirical gaps in this study as shown in Table 4 (Ministry of Commerce, 2024).

Table 4. Alignment of roadmap pillars with AI-readiness and digital-economy gaps

Roadmap pillar	Strategic role	Main AI-readiness link	Interpretation
Digital trade and e-commerce	Market activation	Development and diffusion; policy capacity	Convert connectivity into firm sales, platform use, and cross-border activity
Digital payments and e-invoicing	Transaction infrastructure	Infrastructure; governance; public adoption	Create trusted, machine-readable transaction systems
Digital infrastructure	Foundational enabler	AI infrastructure; resilience	Strengthen connectivity, cloud, data centers, continuity, and interoperable platforms
Digital government	Public-sector enabler	Public-sector adoption; policy capacity	Build standards, service use cases, and administrative capability
Cybersecurity	Trust and continuity	Resilience; governance	Protect transactions, systems, data, and service continuity
Digital inclusion	Distributional channel	Resilience; governance	Reduce exclusion across location, income, disability, and skill levels
Digital skills	Human-capital	Policy capacity;	Build citizen, workforce,

	enabler	development and diffusion	public-sector, and technical capability
Digital innovation	Ecosystem enabler	Development and diffusion; infrastructure	Support startups, applied research, incubation, and commercialization
Digital legal framework	Institutional enabler	Governance; policy capacity	Provide legal certainty for data, AI accountability, transactions, and trust

Note: *The mapping assesses conceptual alignment, not implementation success. Source: Ministry of Commerce (2024) and authors' analysis.*

The roadmap, therefore, is highly in line at strategic architecture level. Its unique features in the infrastructure, government, cyber security, inclusion, skills, innovation and legal domains directly target the areas in which Myanmar fails in its capabilities. It also specifically acknowledges new technologies around AI. The sources selected, however, do not include completed-action rates, expenditures, service use indicators, regulatory results or productivity impacts at the sector-level. An empirical limitation of the policy to implementation gap is still a major issue.

Strategic gap and priority analysis

The evidence is compiled into a priority matrix in Table 5. The critical priority is given when the absolute readiness score is low, the gap is large, and the dimension is a prerequisite for safe and scalable AI deployment. High priority is given to constraints where the gap is significant, but where the country already has a good foundation or where more outcome data is needed to determine if the constraint is critical.

Table 5. Strategic priority matrix for AI-enabled digital economy development

Dimension	Priority	Evidence anchor	Immediate strategic response
AI policy capacity	**Critical**	Score 8.00; gap −51.83	Publish mandates, milestones, budget responsibilities, and transparent implementation monitoring
AI governance and legal readiness	**Critical**	Score 13.67; gap −52.27	Establish data, privacy, accountability, risk-assessment, procurement, and appeal rules
Public-sector AI adoption	**Critical**	Score 12.32; gap −52.00	Begin with low-risk, auditable pilots linked to service problems and data readiness
Innovation and diffusion	**Critical**	Score 18.57; gap −23.62	Support applied research, startups, university-industry links, local-language tools, and MSME adoption
Digital skills and human capital	**Critical**	Low policy and diffusion scores; roadmap recognition	Build basic literacy, professional capability, public-sector training, and advanced technical pathways
Infrastructure and	**High**	27.5% offline;	Improve reliability, affordability, rural

inclusion		infrastructure score 33.25	access, devices, cloud/data capacity, and accessibility
Resilience, trust, and continuity	**Critical**	Score 28.91; historical US$2.8bn disruption estimate	Protect continuity, cybersecurity, disaster recovery, open access, and incident response
Digital market activation	**High**	Strong policy intent; limited firm-level outcome data	Track digital payments, e-commerce sales, SME platform use, AI adoption, and productivity

Note: *Priority labels are qualitative and should be updated when implementation and outcome data become available.*

Strategic Framework for Implementation

Seven Integrated Capability Pillars

The evidence indicates that a deductive and inductive synthesis (as described in Section 3.5) results in seven capability pillars that are integrated. It is not a model that has been statistically validated by the authors. Rather, it is a framework that is developed by the authors. Firstly, digital infrastructure readiness should involve availability of mobile/fixed connectivity, electricity, cloud access, data centres, interoperability and disaster recovery. Second, the policy and governance of AI must establish institutional mandates and risk categories, procurement procedures, transparency, human oversight, and redress. Third, data quality, data governance and cybersecurity should implement data quality, access, sharing, privacy, security and incident-response controls.

Fourth, there should be a link between basic digital skills and skills in the workforce and public sector, as well as advanced AI skills, and human capital should be linked to these skills. Fifth, the integration of the sector should be given a preference to problems where AI offers a clear, tangible benefit in the fields of agriculture, MSMEs, digital payments, education, healthcare, logistics and administration. Sixth, innovation policy should be pro-innovative for local startups, applied research, local-language systems, university-industry collaboration and technology diffusion. Seventh, inclusion should be considered as a design criterion for the rural population, women entrepreneurs, persons with disabilities, low income groups, informal sector, and low bandwidth.

Phased Implementation Roadmap

The pillars are presented in a cumulative sequence of implementation in Figure 5. Phase 1 – Lay the foundations with continuity, affordability, cyber security awareness, digital literacy and basic data standards. Phase 2 is about building capacity by establishing a national AI strategy, mandates by institutions, training for public sector, legal protections, and pathways to education. In Phase 3, small-scale sectoral pilots are introduced, involving specific users, specific service objectives, a risk assessment and an independent review. Only those that are found to be valuable, safe, inclusive and sustainable in operation are scaled at Phase 4.

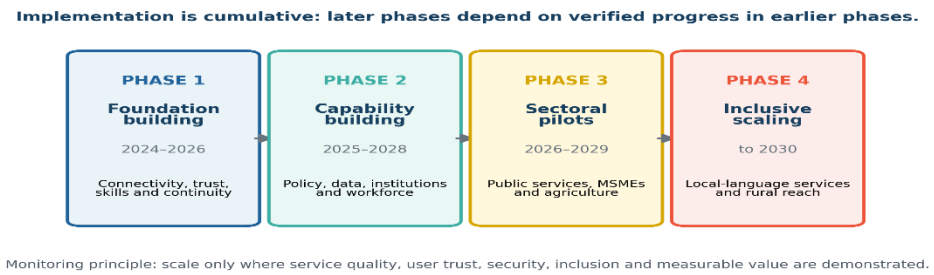

Figure 5: Phased implementation roadmap for AI-enabled digital economy development in Myanmar

Source: *Authors' strategic synthesis, aligned with the Myanmar Digital Economy Roadmap 2030*

Sectoral Priorities and Safeguards

Agriculture is a good sector for low-bandwidth advisory services, forecasters and market information, crop risk support and supply-chain coordination. Multilingual customer support, inventory tools, bookkeeping assistance, and demand forecasting are just a few features that can aid MSMEs. While AI can be applied to fraud and anomaly detection in digital payment apps, transparency, human oversight, privacy protection, and strong dispute resolution are critical for credit and identity decisions. Before a focus on high stakes decisions, education and public-service pilots should focus on information access, document classification and staff support.

Each pilot should establish a baseline, plan on using, understand data provenance, understand model limitations, who is responsible for oversight, cybersecurity controls, failure procedures, and measurable service outcomes. This operational discipline is required as technical performance does not create public value or responsible adoption. It also provides an opportunity for government, universities, businesses, and civil-society organizations to gain lessons learned of small projects prior to investing in national-scale systems.

Discussion

From Connectivity to Capability

The big conclusion is that there's more to the digital economy constraint in Myanmar than just lack of connectivity. The country has a large population of internet users, high mobile penetration and rising fixed speed internet, but high institutional deficits make AI ready. This is in line with research that indicates that digital technologies create value through complementary organizational and institutional change (Mikalef & Gupta, 2021; Verhoef et al., 2021). The value of connectivity does not necessarily mean productive use, trustworthy governance, or the ability to create and run AI systems.

This is further enhanced by the ASEAN comparison. Governance fell by over 50 points from the peer mean, as did the capacity to implement policies, while the infrastructure and resilience gaps were relatively small. Thus, a strategy which focused on technical infrastructure would impact on relative deficits rather than the highest readiness deficits. However, governance can't be

divorced from infrastructure as rules without good data, secure systems and trained implementers are hard to operationalize.

Strategic and Theoretical Implications

The paper brings strategic digital transformation thinking to a new level, breaking it down into four phases: access, readiness, deployment and outcomes. This prevents a typical analytical bias that equates Internet penetration with AI capacities or the impact of AI on the digital economy. The results also validate the ecosystem view of digital innovation, where coordination between various public agencies, firms, universities, the financial sector and users, and not one particular entity is key for achieving national outcomes (Nambisan et al., 2019).

The other implication is in the area of responsible AI. Governance should not be considered a post-deployment activity in low readiness environments. Data standards, security, accountability, human oversight, and user protection are elements of the productive infrastructure of the digital economy, as they impact trust, adoption and continuity (Abraham et al., 2019; Floridi et al., 2018). The above is corroborated by the historical disruption evidence: resilience and reliable access is not a technical characteristic of the services, but rather a macroeconomic condition (World Bank, 2022).

Policy Implications

The top priority policy action is to take the high-level vision of the roadmap for the digital future and make it a capacity for implementing responsible AI. This needs to be coordinated nationally, have an implementation matrix published, be transparent with milestones and have budget and data responsibility. Pilots in the public sector should be limited in scope, reversible and auditable. The law should be focused on protecting data, cyber security, procurement, the accountability of automated decisions and accessible redress. Citizen literacy and advanced technical education must be linked to the skills policy, by the sector.

The shift from input to output monitoring should also take place. Some indicators that are useful are service uptime, participation in the internet (rural and subgroup), internet affordability, capacity of cloud and data-centers, cyber incidents, adoption of government services, achievement of skills pathways, number and survival of AI enabled firms, SME productivity, user satisfaction, error rates, appeal outcomes, and distribution of benefits. If these measures are not used, policy activity can be observed, but it is not possible to determine the level of implementation quality.

Limitations and Future Research

There were six major limitations in this study. First, the sources of data differ: Current digital adoption is given for the end of 2025; The roadmap is for 2024–2030; the AI-readiness index for 2025; and the World Bank indicators are historical. Secondly, the analysis is at the country level and does not account for differences at subnational, gender, income, disability, enterprise size or city level. Third, composite readiness scores are based on the methodology of the index, and should not be viewed as a direct index of quality of implementation. Fourth, the mapping of the roadmap focuses on the conceptual level and not on actual actions/effects. Fifth, this study lacks information on the adoption and transaction of AI, as well as service quality, firm productivity

and employment data, which would enable the calculation of economic returns. Sixth, the coding of the themes and the source-to-claim audit were done by the author and did not involve inter-coder reliability.

Future research should build a longitudinal panel/dataset on the digital-economy in Myanmar, gather enterprise-level data on the adoption of digital payment, e-commerce, cloud, and AI, and assess public-service and pilot projects of the various sectors on the basis of transparent outcome indicators. Access quality, skills, affordability, trust and meaningful use should be explored as part of subnational studies. Local-language models should also be analyzed for their performance and representativeness of their data, their readiness in the cyber security field, and the distributional impacts of AI-enabled services.

Conclusion

Findings from this study suggest that while there is a significant but insufficient digital base for AI-powered economic development in Myanmar. By late-2025 evidence indicates there is a significant 'offline' population, as well as a large connected population and a significant amount of mobile infrastructure. The 2025 AI-readiness comparison reveals that the policy capacity and governance, and AI adoption and diffusion within the public sector, are areas of deeper weakness. The infrastructure gap is smaller than these institutional gaps with respect to the ASEAN countries.

The nine pillars of the Myanmar Digital Economy Roadmap 2030 will provide a relevant strategic base as they cover the infrastructure, government, cybersecurity, inclusion, skills, innovation, law, payments and digital trade. This will be determined by the degree of implementation discipline, measurable outcomes and explicit AI safeguards integration. It is phased: enhance foundations, develop institutional and human resources capacity, test lower-risk sectoral applications, and scale up only if the value, safety, continuity, and inclusion are proven.

The overall strategy is then apparent. Connectivity is not enough to bring about the outcomes of the digital economy in Myanmar; rather, AI will play a role in achieving these. Key issues involve the ability of the country to control data and automated systems, to ensure access to digital systems is reliable, to train institutions and foster local innovators, to safeguard users, and to ensure that rural communities and small businesses benefit from these.

Declarations

Ethics approval: Not applicable. The study uses publicly available secondary data and policy documents and does not involve human participants or identifiable personal data.

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Conflict of interest: The author(s) declare no conflict of interest.

Data availability: The study uses publicly accessible aggregate data and policy documents obtained from DataReportal, Oxford Insights, the World Bank, and the Myanmar Ministry of Commerce. No new primary dataset was generated. Source links, reporting periods, access dates, and analytical roles are provided in Table 1 and the reference list. The processed strategic-analysis workbook accompanies the manuscript.

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