A Cross-Country Analysis of Best Practices in Digital Banking and AI Adoption of top ten Economies

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Abstract— **This study objective is to map global trends and best practices in AI-enabled digital banking by examining how adoption varies across major economies, using the IMF World Economic Outlook data (April 2025) and the top ten economies by their nominal GDP as a comparative framework to understand the role of scale and governance. A narrative review methodology is applied, synthesizing peer-reviewed, open-access literature from Scopus and Google Scholar, with analysis conducted through thematic synthesis and comparative clustering grounded in TAM, UTAUT, Diffusion of Innovation and Institutional Theory to explore AI applications, adoption drivers, regulatory practices and financial inclusion strategies. The findings indicate that high-GDP economies such as the United States and China emphasize advanced service automation, fraud detection and regulatory compliance, while mid-tier economies like India and Brazil focus on agility and expanding financial inclusion. Identified best practices include anthropomorphic personalization, explainable AI models, alternative data analytics and hybrid governance mechanisms, alongside key cross-cutting themes of data governance, algorithmic transparency, ethical AI deployment and adaptive regulatory design. The study concludes that AI adoption in digital banking is scale-dependent and institutionally driven, offering a transferable framework that integrates micro-level adoption theories with macro-level diffusion perspectives to guide policymakers and financial institutions in developing inclusive, resilient and sustainable AI-driven financial ecosystems.**

Index Terms— **Digital Banking, Artificial Intelligence Adoption, Cross-Country Comparison, Financial Inclusion**

I. INTRODUCTION

Over the past few decades global banking sector has gone through a significant change because of more digitalization and the use of artificial intelligence (AI), marking the emergence of Banking 4.0 (Fares et al., 2022; Noreen et al., 2023). This transition has moved beyond just being financial intermediaries to creating a platform-based ecosystems where AI facilitates customized and predictive services, as well as connecting customers to numerous other fintech companies (Fares et al., 2022; Kalyani & Gupta, 2023). The COVID-19 pandemic significantly increased the pace at which banks adopted AI enabled services, as they transitioned away from brick-and-mortar facilities to more contactless operations because of lockdowns (Bahoo et al., 2024; Cuadros-Solas et al., 2023). The merging of traditional banking and several types of fintech applications, called "fintech convergence," has also enabled this new evolution of banking, in which banks use a combination of traditional banking methods, such as branch banking, mobile payment systems, and machine learning, to transform how they interact with customers and operate their businesses (Asif et al., 2024; Manta et al., 2024).

This change is important for global financial systems which enhance the efficiency of the financial service sector by improving competitiveness and risk management, while promoting financial inclusion(Carè et al., 2024; Del Sarto & Ozili, 2025). AI-enabled digital banking significantly reduces transaction costs, improved fraud detection via sophisticated algorithms, and access to credit for previously excluded populations in developing economies (Bhattacharya & Sinha, 2022; Gyau et al., 2024). For policymakers and regulators, these developments necessitate balanced regulatory frameworks to address risk such as algorithmic bias

and cyber vulnerabilities, while institutions gain productivity through targeted investments in AI (Fayad et al., 2025). However, the gap in the pace of AI adoption combined with the constraints of slowbalisation on middle-tier economies like Brazil and Italy increase the difficulty of achieving equity and inclusion for underserved populations, underscoring the needs for stakeholders to develop equitable approaches to facilitate distribution of socioeconomic benefits(Agbeve et al., 2025; Antova, 2025; Mark-Denis et al., 2025).

The current literature provides valuable insights for understanding these dynamics however, there are also significant gaps in this literature. The primary trends in the published literature includes on Euro-Asian region and specifically on the rapid growth of China and India fintech sectors as well as most of the published work has utilized either the TAM or UTAUT models which both have substantially different interpretations of the intentions to adopt (Asif et al., 2024; Bahoo et al., 2024; Sharma et al., 2024). The most popular methodologies of those conducting the research have increased use of either PLS-SEM or panel regression and have demonstrated nonlinear effects of performance, such as critical thresholds for AI stability (Gyau et al., 2024; Sonehekpon, 2025). Furthermore, there is a clear contrast between the findings that show high levels of stability in Asia and the neutrality of findings from Latin America. This is because key infrastructural and geopolitical factors are still not fully understood (Mark-Denis et al., 2025; Siddik, Yong, Du, Vigne, et al., 2025). Additionally, an excessive theoretical dependence on micro-models disregards macro frameworks such as Institutional Theory in the context of regulatory pressures (Bharti et al., 2023; Kalyani & Gupta, 2023). Last but not least, ethical and equity aspects of fintech have been fragmented and produced limited comparative analyses of the ethical biases inherent in global markets, particularly those of aging and indigenous populations (Banque de France, 2025; Beau, 2025; Gallegos et al., 2025).

A narrative review is needed to fill these gaps, providing interpretive flexibility for integrating different evidence without systematic review rigidity, while fulfilling the requirement for comprehensive mapping (Paul & Criado, 2020; Webster & Watson, 2002). By focusing the analysis around the IMF's top ten economies justifies globally representative lens and also, we can connect GDP size to differences in how quickly and accurately high GDP countries adopt new technologies.

This review objective is to find global trends, compare best practices in the ten economies, and combine micro and macro theories to help policymakers. By integrating AI applications, drivers, risks and governance, it provides a transferable framework for equitable AI adoption, mitigating literature gaps and regional biases.

II. LITERATURE REVIEW

The acceleration of economic disruption brought on by COVID-19 has resulted in changes to the world economy that may differ in how they will be manifested over time. Countries with the highest ranks and GDPs as indicated by the April 2025 report of the IMF World Economic Outlook are the USA, China, Germany, India, Japan, UK, France, Italy, Canada, and Brazil, which collectively account for more than 60% of the global output (International Monetary Fund, 2025); where GDP scale defines adoption: high GDP nations drive systemic efficiencies, while mid-tier economies adapt for inclusion under constraints (Asif et al., 2024; Bahoo et al., 2024; Cuadros-Solas et al., 2023). After 2020s bibliometric studies show that Asia-Pacific countries are doing better than Latin American countries and it shows that there is a shift from descriptive adoption studies to causal performance inquiries(Kalyani & Gupta, 2023; Manta et al., 2024). This narrative review utilizes TAM, UTAUT, Diffusion of Innovation, and Institutional Theory to put together these patterns and find the best practices to deal with regional imbalances.

AI applications in customer service chatbots and personalization show the best practices for each context. In developed economies, GDP favors accuracy, while developing economies, it favors flexibility. In the United States, managing cost reduction via anthropomorphic designs (Fayad et al., 2025; Ramos et al., 2025). where China's, WeChat bots are used to improve rural access for retention gains (H. Liu et al., 2025; Siddik, Yong, Du, Vigne, et al., 2025), and Germany's RPA screening prioritizing regulatory efficiency (Gherțescu et al., 2024; Villar & Khan, 2021). In emerging context, India's Paytm vernacular bots align TAM's ease with inclusion (Bharti et al., 2023; Bhattacharya & Sinha,

2022), while Brazil's Nubank gamified interfaces minimize literacy barriers by mimetic adaptation (Addula, 2025; Antova, 2025). Developed mid-tier cases, including Italy's cooperative bots fostering local connections (Colamartino & Barone, 2025) and France's GDPR compliant personalization (Banque de France, 2025; Beau, 2025), stand in contrast to Japan's demographic focused assistants (Bank of Japan, 2025; Wang et al., 2025) and Canada's indigenous language tools for remote equity (Agbeve et al., 2025; Fayad et al., 2025). The National Payments Corporation of India (NPCI) launched India's Unified Payments Interface (UPI) in 2016, it revolutionizes digital payments by combining multiple of bank accounts into a single mobile application for seamless peer-to-peer and business transactions. UPI recorded 16.58 billion transactions worth 23.49 lakh crores in October 2024 which reflecting 45% year-on-year growth and advancing a cashless economy for individuals, small businesses, and merchants. It is international acceptance in Bhutan, Nepal, UAE, France, Mauritius, Singapore, and Sri Lanka through partnerships, which makes it easier for people to send money across borders and pay for tourism. Overall, UPI helps people get access to money and the economy grow, even though there are still challenges with the digital divide (Finance, 2024). Developed economies focus on scalable precision, such as uptake proxies in the US or UK, while emerging economies such as India or Brazil focus on agility and affordability. PLS-SEM indicates significant variability in intent influenced by ease (Jisham et al., 2025; Sharma et al., 2024; Vuković et al., 2025).

Adoption drivers underscore comparative nuances. for example, the IMF GDP scale makes infrastructure more important in developed countries, while literacy and affordability are more important in emerging countries. The US and China use social influence to increase Return on Assets, while UTAUT looks at how behavior changes in mature infrastructures (Alzeghoul & Alsharari, 2025; Cuadros-Solas et al., 2023; Y. Liu, 2025). Germany's capital thresholds open the door to AI stability, according to the Diffusion of Innovation compatibility model (Gherțescu et al., 2024; Gyau et al., 2024). On the other hand, India's cost barriers limit self-efficacy but lead to fewer defaults (Addula, 2025; Bharti et al., 2023; Bhattacharya & Sinha, 2022). Japan's focus on demographics raises the expectation of productivity (Fayad et al., 2025; Wang et al., 2025), while France's General Data Protection Regulation trust through EU proxies (Beau, 2025; Schrank, 2025). Italy's co-operatives use isomorphism to find local adoption drivers (Colamartino & Barone, 2025), and Canada's indigenous training uses US effectiveness to work in remote areas (Agbeve et al., 2025; Singh et al., 2025). Brazil's technophobia needs literacy like India's (Antova, 2025; Jisham et al., 2025). Panel regressions show that nonlinearities stabilize high GDP situations, while modest emerging buffers show gaps in longitudinal situations (Mark-Denis et al., 2025; Sonehekpon, 2025; Vuković et al., 2025).

Best practices for managing risk, fraud detection show that developed economies are more precise in terms of scale, while emerging economies are more flexible in terms of inclusion. The US uses blockchain scoring to stop fraud through anomaly tools (Alzeghoul & Alsharari, 2025; Ullah et al., 2024), while China uses alternative data AI to measure Environmental Social and Governance (ESG) lending (Carè et al., 2024; Siddik, Yong, Du, Vigne, et al., 2025). Germany's explainable models cut down on bad loans (Gyau et al., 2024; Villar & Khan, 2021), and India's robo-scoring helps people who don't have bank accounts save money (Bhattacharya & Sinha, 2022; Del Sarto & Ozili, 2025). Japan's CBDC pilots show that equity is at risk during intraday (Bank of Japan, 2025; Wang et al., 2025), while the UK BigTech forecasts that margins will grow (Cuadros-Solas et al., 2023; Fayad et al., 2025). France's SupTech audits biases through the EU's GDPR (Banque de France, 2025; Beau, 2025), while Italy's cooperative AI keeps issuance efficiency (Colamartino & Barone, 2025). Canada's predictive analytics help include indigenous people (Agbeve et al., 2025; Venkatesan, 2025), and Brazil's P2P scoring expands institutions amid rural lags (Agbeve et al., 2025; Antova, 2025; Singh et al., 2025). Fuzzy-set Qualitative Comparative Analysis shows that mediations are important, but Asian stability is stronger than Latin neutrality, which shows differences in infrastructure (Siddik, Yong, Du, Vigne, et al., 2025; Sonehekpon, 2025).

Regulatory frameworks codify the best practices of governance, while GDP size encourages proactive enforcement to stop developing reactivism, in accordance with the term "institutional Theory's isomorphism". The US "Gramm Leach Bliley Act" disclosures keep returns moderate (Alzeghoul &

Alsharari, 2025; Kaya, 2025), while China's state-led CBDCs make sure follow the compliance (H. Liu et al., 2025; Mark-Denis et al., 2025). BaFin in Germany requires explainability (Beau, 2025; Gherțescu et al., 2024), and RBI sandboxes in India allow urban fintech (Bharti et al., 2023; Zverkova, 2025). Japan's FSA pilots work together to improve resilience (Bank of Japan, 2025; Wang et al., 2025), while the UK's FCA sandboxes help businesses stay flexible after Brexit (Fayad et al., 2025). France's CNIL uses the EU's GDPR to check for bias (Banque de France, 2025; Beau, 2025), and Italy's Banca d'Italia makes rules for cooperatives (Colamartino & Barone, 2025). Canada's OSFI includes rules for indigenous data (Agbeve et al., 2025), and Brazil's BC sandboxes help P2P even though they have problems (Antova, 2025; Mark-Denis et al., 2025; Vuković et al., 2025). Content analyses show that hybrids governance is better, but proactive US or UK models are different from Brazil or India's adaptive governance (Bahoo et al., 2024; Ullah et al., 2024).

This review provides the cross-country analysis by combining best practices from the ten IMF economies, which shows how GDP scale accuracy as shown by the US or Germany and agility-inclusion as shown by India or Brazil can be used to create frameworks for resilient AI governance in a fragmented world (Gallegos et al., 2025; Singh et al., 2025).

Table. I: Best Practices in Digital Banking and AI

Country	Brief Economic Context	Key Digital Banking & AI Practices	Best Practices in Digital Banking	Citations
United States	Leading in fintech innovation with high AI integration in retail banking.	1) Anthropomorphic assistants for personalization. 2) Real-time fraud anomaly detection. 3) Integrated digital wallets. 4) Predictive analytics for underserved. 5) Disclosure mandates for transparency.	Scalable precision and trust-building via disclosures (Alzeghoul & Alsharari, 2025)	(Agbeve et al., 2025; Alzeghoul & Alsharari, 2025; Fayad et al., 2025; Ramos et al., 2025; Venkatesan, 2025).
China	State-driven ecosystems with massive scale in mobile AI.	1) WeChat bots for CBDC personalization. 2) ESG alternative data credit. 3) Seamless platform payments. 4) Rural inclusive extensions. 5) State CBDC compliance.	Vast integration and rural reach via state models (Y. Liu, 2025)	(Carè et al., 2024b; H. Liu et al., 2025; Siddik, Yong, Du, Vigne, et al., 2025).
Germany	Regulated precision in cooperative and RPA systems.	1) RPA adverse media screening. 2) Explainable loan models. 3) Secure transaction platforms. 4) Cooperative access gains. 5) BaFin explainability.	Regulatory precision and efficiency (Gherțescu et al., 2024)	(Colamartino & Barone, 2025; Gherțescu et al., 2024; Gyau et al., 2024; Villar & Khan, 2021).
India	Rapid fintech scaling for unbanked via mobile AI.	1) Vernacular chatbots personalization. 2) Robo-scoring defaults reduction. 3)UPI integrations. 4) Unbanked cost cuts. 5) RBI sandboxes inclusion.	Inclusive cost-sensitive scaling (Bharti et al., 2023)	(Bharti et al., 2023; Bhattacharya & Sinha, 2022; Del Sarto & Ozili, 2025).
Japan	Demographic-focused AI for aging society resilience.	1) LINE assistants for trust. 2)CBDC intraday risk. 3) Elderly payment platforms. 4) Demographic equity. 5) FSA resilience harmonization.	Aging-adapted equity and pilots (Wang et al., 2025)	(Bank of Japan, 2025; Wang et al., 2025)
United Kingdom	Post-Brexit agile fintech with high-volume AI.	1) Hedonic chatbots resolution. 2) BigTech margin forecasting. 3) Agile ecosystems. 4) Broad adoption access. 5) FCA sandboxes agility.	Agile post-Brexit innovation (Fayad et al., 2025)	(Bhatnagr et al., 2024; Fayad et al., 2025; Schrank, 2025)

France	GDPR-harmonized AI for diverse markets (EU context).	1) Compliant personalization bias mitigation. 2) SupTech credit auditing. 3) Cross-border systems. 4) Diverse equity extensions. 5) CNIL bias audits.	GDPR equity in diverse flows (Beau, 2025)	(Banque de France, 2025; Beau, 2025)
Italy	Cooperative mutualism with localized AI amid divides.	1) Cooperative chatbots engagement. 2) Local credit efficiency. 3) Localized integrations. 4) Mutualism access. 5) Banca d'Italia ethics.	Localized mutualism preservation (Colamartino & Barone, 2025)	(Colamartino & Barone, 2025)
Canada	Indigenous and remote-focused equity innovations.	1) Indigenous bots' self-efficacy. 2) Predictive inclusion analytics. 3) Northern integrations. 4) Indigenous equity. 5) OSFI sovereignty rules.	Remote/indigenous equity scaling (Agbeve et al., 2025a)	(Agbeve et al., 2025; Fayad et al., 2025; Venkatesan, 2025)
Brazil	Urban gamification and P2P amid literacy gaps.	1) Gamified urban interfaces. 2) P2P institute expansion. 3) Adaptive platforms. 4) Rural mitigation. 5) BC sandboxes P2P.	Adaptive urban-rural bridging (Antova, 2025)	(Addula, 2025; Antova, 2025; Mark-Denis et al., 2025)

Source: Secondary data extracted from Scopus and Google Scholar; Authors Compilation

III.RESEARCH GAPS

The existing literature on AI-enabled digital banking identifies several interconnected deficiencies that hinder a thorough cross-country analysis among the top ten economies. There are big differences between regions, with most studies focusing on Euro-Asian contexts. For example, China's central bank utilized a lot of AIs, and India has been able to cut down on defaults by using alternative data. However, mid-tier economies like Brazil and Italy, as well as Latin America as a whole, have not been studied enough. This has led to insights that are more focused on developed precision and less on emerging agility in the face of slowbalization constraints (Antova, 2025; Asif et al., 2024; Bahoo et al., 2024; Colamartino & Barone, 2025; Vuković et al., 2025). This lack of representation is linked to unresolved ethical and equity issues, such as algorithmic biases in different markets and trade-offs for groups that are already on the outside (Banque de France, 2025; Beau, 2025; Gallegos et al., 2025). Micro-level models like TAM or UTAUT are the most common ways to explain adoption, while macro frameworks like Institutional Theory for regulatory isomorphism are not as well known (Bharti et al., 2023; Kalyani & Gupta, 2023; Sharma et al., 2024; Zverkova, 2025). Methodologically, dependence on cross-sectional PLS-SEM limits causal understanding of post-adoption outcomes and nonlinear thresholds, especially in nascent contexts (Gyau et al., 2024; Jisham et al., 2025; Singh et al., 2025). Performance inconsistencies manifest in robust Asian stability and neutral Latin outcomes, thereby underscoring insufficiently scrutinized infrastructural and geopolitical elements (Antova, 2025; Siddik, Yong, Du, Vigne, et al., 2025; Sonehekpon, 2025).

IV. RESEARCH QUESTIONS

RQ1: To what extent does regional imbalances in empirical studies influence the representation of AI-enabled digital banking best practices in high GDP versus mid-tier economies across the top ten economies?

RQ2: In what ways does the predominance of micro-level adoption frameworks such as TAM and UTAUT constrain theoretical explanations of macro-level regulatory isomorphism and institutional adoption dynamics in AI-enabled digital banking across the ten largest economies?

RQ3: How does the field's reliance on cross-sectional research designs limit understanding of longitudinal post-adoption outcomes and nonlinear performance trajectories in AI-driven digital banking practices across the ten largest economies?

RQ4: What role do intertwine ethical challenges, algorithmic inequity, and geographic underrepresentation in the existing literature play in marginalizing the digital banking needs of vulnerable populations, particularly in mid-tier economies operating under IMF fiscal constraints, across the ten largest economies?

V. RESEARCH METHODOLOGY

This study used a narrative review methodology to explore country specific best practices in digital banking and AI adoption according to the IMF World Economic Outlook April 2025 data, which identifies the top ten economies by their nominal GDP: United States, China, Germany, India, Japan, United Kingdom, France, Italy, Canada, and Brazil. The narrative review technique was chosen for its flexibility in synthesizing different, cross-country evidence and identifying thematic and contextual patterns without a rigidity of systematic protocols (Paul & Criado, 2020; Webster & Watson, 2002). We chose sources from peer-reviewed journals, IMF and World Bank datasets, central bank publications, and reliable industry reports. Data were extracted from Scopus, Google Scholar databases, and institutional portals, with a focus on relevance, recency, credibility and best practices. Limitations consist of possible selection bias and reliance on secondary data sources.

VI. RESULTS AND DISCUSSIONS

The narrative review synthesize of the literature, reveals distinct patterns in AI enabled digital banking across the IMF's top ten economies, underscoring GDP scale moderation in adoption and best practices. High GDP leaders like the United States and China exhibit precision-driven AI applications, with the US leveraging anthropomorphic chatbots like Erica for cost reductions through UTAUT mediated personalization (Fayad et al., 2025; Ramos et al., 2025), and China optimizing WeChat bots for rural retention gains via alternative data analytics (H. Liu et al., 2025; Siddik, Yong, Du, Vigne, et al., 2025). In contrast, mid-tier economies such as India and Brazil prioritize agility for inclusion, with India's Paytm vernacular bots aligning TAM's ease to serve unbanked populations (Bharti et al., 2023; Bhattacharya & Sinha, 2022) and Brazil's Nubank gamified interfaces countering literacy barriers through mimetic adaptation (Addula, 2025; Antova, 2025). Developed mid-tier cases, including Germany's Robotic Process Automation for false positive reductions (Gherțescu et al., 2024; Villar & Khan, 2021) and France's General Data Protection Regulation compliant personalization (Banque de France, 2025; Beau, 2025), contrast Japan's demographic focused LINE assistants and Canada's indigenous language bots for remote equity (Agbeve et al., 2025; Bank of Japan, 2025; Fayad et al., 2025; Wang et al., 2025). These patterns, synthesized via Affordance Theory, illustrate scalable precision in developed contexts versus affordability-driven agility in emerging ones, with PLS-SEM indicating substantial intent variance tied to ease (Jisham et al., 2025; Sharma et al., 2024; Vuković et al., 2025).

Adoption drivers further delineate these nuances, as IMF GDP scale moderation amplifies infrastructural enablers in high GDP settings while mid-tier ones rely on literacy and affordability. The United States and China harness social influence for ROA gains, UTAUT capturing behavioral variance in mature infrastructures (Alzeghoul & Alsharari, 2025; Cuadros-Solas et al., 2023; H. Liu et al., 2025), whereas Germany's capital thresholds and Japan's effort expectancy reflect Diffusion of Innovation compatibility (Fayad et al., 2025; Gherțescu et al., 2024; Gyau et al., 2024; Wang et al., 2025). Mid-tier drivers, including India's cost barriers yielding default reductions and Brazil's technophobia demanding literacy interventions, contrast France's GDPR trust via EU proxies and Italy's isomorphism for cooperatives, with Canada's indigenous training adapting US efficacy (Addula, 2025; Agbeve et al., 2025; Antova, 2025; Beau, 2025; Bharti et al., 2023; Bhattacharya & Sinha, 2022; Colamartino & Barone, 2025; Jisham et al., 2025; Schrank, 2025; Singh et al., 2025). This illustrates UTAUT's mediation of behavioral variance, suggesting that infrastructural disparities cause divergent adoption trajectories, thereby informing RQ2 call for macro-micro integration. These drivers set the stage for examining risk, inclusion, and regulatory best practices.

Risk management and inclusion best practices amplify these divides, with high GDP economies like the US utilized blockchain anomaly tools and China utilized ESG scaling embodying Affordance Theory's

precision (Alzeghoul & Alsharari, 2025; Carè et al., 2024; Siddik, Yong, Du, Vigne, et al., 2025; Ullah et al., 2024), while mid-tier ones such as India's robo-scoring for unbanked cost cuts and Brazil's peer-to-peer expansions address rural lags (Agbeve et al., 2025; Antova, 2025; Bhattacharya & Sinha, 2022; Del Sarto & Ozili, 2025; Singh et al., 2025). Germany's explainable models and Japan's CBDC flagging contrast France's supervisory technology bias audits and Italy's cooperative issuance efficiency, with Canada's predictive indigenous tools tailoring US precision (Bank of Japan, 2025; Banque de France, 2025; Beau, 2025; Colamartino & Barone, 2025; Gyau et al., 2024; Venkatesan, 2025; Villar & Khan, 2021; Wang et al., 2025) Fuzzy-set QCA underscores mediations in these dynamics, implying that infrastructural disparities perpetuate regional inequities, as highlighted in RQ4. Extending to governance, regulatory frameworks reveal how scale influences enforcement models.

Regulatory frameworks codify governance, where GDP scale moderation fosters proactive high GDP enforcement for example US disclosures, China's CBDCs against mid-tier reactivism, per Institutional Theory's isomorphism (Alzeghoul & Alsharari, 2025; Beau, 2025; Gherțescu et al., 2024; Kaya, 2025; H. Liu et al., 2025; Mark-Denis et al., 2025). India's RBI sandboxes, Japan's FSA pilots, and Brazil's BC boosts contrast the United Kingdom's FCA agility and France's CNIL audits, with Italy's Banca d'Italia and Canada's OSFI embedding ethics or equity (Agbeve et al., 2025; Antova, 2025; Bank of Japan, 2025; Banque de France, 2025; Beau, 2025; Bharti et al., 2023; Colamartino & Barone, 2025; Fayad et al., 2025; Mark-Denis et al., 2025; Vuković et al., 2025; Wang et al., 2025; Zverkova, 2025). Hybrids favor proactive US or UK models over Brazil or India's caution (Bahoo et al., 2024; Ullah et al., 2024).

VII. CONCLUSION

The narrative synthesis illuminates key cross-country patterns in AI enabled digital banking, where GDP scale moderation drives divergent adoption strategies: high GDP economies prioritize precision in service automation and risk analytics for systemic efficiency, while mid-tier ones emphasize agility in inclusion-oriented regulatory tech to bridge resource gaps. These best practices ranging from anthropomorphic personalization to explainable models and hybrid governance offer transferable frameworks that balance innovation with equity, highlighting AI's potential to reshape financial paradigms amid global fragmentation.

Theoretically, this review advances digital banking scholarship by integrating micro-level adoption theories such as TAM or UTAUT with macro-level diffusion of innovation and institutional perspectives, thereby elucidating regulatory isomorphism and behavioral variance in diverse contexts. This cross-country narrative approach moves beyond analyses to a holistic mapping that reveals scale dependent causalities.

For policymakers and regulators, implications include adaptive governance emphasizing ethical AI interoperability in mid-tier economies to mitigate equity and inclusion challenges, while developed contexts benefit from standardized frameworks for cyber resilience. Financial institutions and fintech firms should adopt scalable AI designs in high GDP settings for productivity, contrasted with inclusion-focused tools in emerging ones to enhance accessibility.

VIII. LIMITATION AND FUTURE SCOPE

Despite the review articles made in this study, there were a few shortcomings and limitations include narrative review which is subjectivity and it based on secondary sources such as Scopus, Google Scholar and institutional portals. Exclusion of non-English articles due to language barriers which may be undermine regional publication insights. There are some countries which are very close but they don’t share their information, all inherent to this synthesis. Future study should pursue longitudinal and cross-country studies incorporating macroeconomic and geopolitical variables alongside ethical evaluations of AI for marginalized groups to deepen causal insights and policy relevance.

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