From Global LLMs To Indigenous Intelligence: Is India's Sovereign AI Framework Capable to Bridge the Financial Inclusion Gap

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***Abstract*—India presents a major paradox when it comes to the area of financial development. While it processes over 21 billion Unified Payments Interface (UPI) transactions per month and is at the forefront of the global scene of real-time digital payments, a significant portion of adults are still unserved by formal financial services (World Bank, Global Findex, 2021). Artificial intelligence (AI) is fundamentally changing the nature of the financial sector; however, this transformation is largely guided by large language models (LLMs) from other countries, which are not adapted to the diversity of Indian languages, informal economies, and rural financial realities.**

Sovereign AI: A nationalized and indigenously designed infrastructure of artificial intelligence based on domestically available data offers a structural solution to the a forementioned paradox. In August 2025, the Reserve Bank of India released the FREE-Artificial Intelligence framework (Framework for Responsible and Ethical Enablement of Artificial Intelligence), which is the first comprehensive regulatory roadmap for the responsible deployment of AI in the financial sector in India. The document has 26 recommendations that can be implemented in practice and include AI sandboxes, indigenous modeling, and governance mechanisms (RBI, 2025). Notwithstanding the prominence of the framework, we would not have looked at the concept through the prism of financial inclusion, as if that constituted a study gap that this work explicitly attempts to address.

Utilizing a conceptual analysis complemented by secondary data, this paper puts forward the Sovereign AI for Inclusive Lending and Literacy (SAIL) Framework, an AI sovereignty approach that integrates four dimensions of AI sovereignty (language, data, governance, and infrastructure) with measurable financial inclusion outcomes. The analysis suggests that sovereign AI, with inclusion as a key goal, can be used to improve rural access to credit, strengthen the protection of consumers from fraud, and offer multilingual financial literacy tools. However, with the major potential this holds, it seems necessary to convert FREE-AI from advisory guidance to a binding regulation.

***Index Terms*—Sovereign AI, Financial Inclusion, FREE-AI Framework, RBI, Digital Finance, India AI Mission**

I. INTRODUCTION

1.1 Context Setting

India's financial landscape has changed tremendously in the last decade, spanning the Jan-Dhan-Aadhaar-Mobile (JAM) framework, a pioneering policy agenda combining worldwide banking access with biometric identity verification and mobile connectivity. As of August 2025, more than 56.16 crore accounts had been opened under the Pradhan Mantri Jan Dhan Yojana (PMJDY), of which 67% accounts are in rural and semi-urban areas (Ministry of Finance, 2025).

The total value of retail-based digital payments made via the Unified Payments Interface (UPI) ecosystem in 2025 was 228.3 billion transactions, that is It accounted for 84.8% of the total retail-based digital transactions in India (NPCI, 2025). India now contributes almost 48.5 per cent of the world's total real-time payment transactions, which is an unbelievable feat for a nation that is struggling with deep financial exclusion (RBI Annual Report, 2025). Simultaneously, Artificial Intelligence (AI) is becoming the defining financial services technology worldwide.

From credit underwriting to fraud detection to customer onboarding and wealth management, AI is making the delivery of financial products faster than ever before and on a larger scale. In India, the adoption of AI in the financial sector is taking off, and a survey conducted by the Reserve Bank of India (RBI) in 2025 suggested that 67% of the supervised financial entities

have shown active interest in exploring AI use cases (RBI, 2025).

1.2 Problem Statement

Even though digital money and artificial intelligence payments have been speeding up simultaneously, a structural contradiction still exists. The AI systems deployed in Indian financial services are mostly based on foreign or big language models (LLMs) developed by OpenAI, Google, and Meta, which have been trained mostly with Western English language corpora. These models display limited ability to represent the linguistic plurality of India's twenty-two scheduled languages, an informal cash-based economy in rural India, and the financial behaviors of India's large unbanked and underbanked population. This dependence on global infrastructure for AI power serves to create a whole range of contradictions: data sovereignty vulnerabilities, as sensitive financial information moves through systems controlled by foreign economies; cultural bias, where models internalize Western economies of financial rules and not India's socio-economies; exclusion amplification effect, where AI-bred techniques of credit evaluation or fraud detection using parameters anchored in urban, English-centric data will automatically push away the rural populace who speak vernacular languages. As the RBI FREE-AI committee explicitly stated, general-purpose LLMs "are predominantly trained on western-centric datasets and won't be able to handle the multilingual diversity of financial ecosystem of India" (RBI, 2025).

1.3 Research Objectives

This study seeks to undertake the following research objectives:

1) To formulate a holistic analysis of India's sovereign artificial intelligence policy landscape in the context of the financial sector, with a special focus on the RBI FREE-AI framework (August 2025) and India's AI Mission.
2) To analyze the possibility of home-engineered artificial intelligence systems to overcome the structural barriers to financial inclusion in India.
3) To develop an original conceptual framework, which in this study will be referred to as the SAIL Framework, which aligns sovereign artificial intelligence design principles and quantifiable outcomes in the context of financial inclusion.

1.4 Research Gap and Significance

Although there is a burgeoning body of scholarly literature studying artificial intelligence in the domains of financial services and the promotion of financial inclusion as separate domains per se, there has been no systemic study tracing the nexus between sovereign artificial intelligence policy and financial inclusion strategy within the Indian domain. The RBI framework on artificial intelligence (AI), known as the RBI FREE-AI framework, issued in August 2025, is a landmark policy document and has received significant commentary from lawyers and regulatory academics. However, considerable discussion has not taken place on the implications of this policy document with respect to financial inclusion, despite it having been completely unequally studied in the academic literature. This study addresses this gap by presenting the first conceptual analysis of FREE-AI through an understanding of inclusion and contributing an original theoretical framework aimed at contributing to practitioners and policymakers.

1.5 Paper Structure

The remainder of this manuscript is organized as follows. Section 2 reviews the relevant literature on the concepts of 'financial inclusion in India,' 'artificial intelligence in financial services, and 'sovereign artificial intelligence.' Section 3 analyzes the current sovereign AI policy space in India. Section 4 introduces the original SAIL Framework. Section 5 presents a detailed analysis and discussion. Section 6 presents the conclusions and policy recommendations.

II. LITERATURE REVIEW

2.1 Financial Inclusion in India

Financial inclusion is defined by the World Bank as providing access to useful and affordable financial products and services that meet the needs of individuals, including transactions, payments, savings, credit, and insurance. This idea has been a key policy priority for India since 2014. The landmark initiative of Pradhan Mantri Jan Dhan Yojana (PMJDY) has significantly changed the financial landscape, with 56.16 crore accounts as of August 2025, a big jump from 14.72 crore accounts in 2015 (Ministry of Finance, 2025). These accounts have formed the channel for Direct Benefit Transfers (DBTs), which stand at a value of 6.9 lakh crores of Indians alone

towards FY 2024-25 thereby removing the leakages in the intermediary and creating the channel for reaching welfare directly to the beneficiaries (PIB, 2025).

Nonetheless, there is a continual differentiation in scholarship on this matter between account ownership and actual financial inclusion. Demirguc-Kunt et al. (2022) underlines that the possession of a formal account does not necessarily translate into its active use, accessibility of credits and insurance coverage. In India, as of July 2025, approximately 20-23 per cent of PMJDY accounts are dormant, with more than 13.04 crores of accounts being inoperative (Vision IAS, 2025). Scholars have identified last-mile barriers such as lack of financial literacy, inaccessible language, trust in formal institutions, and digital infrastructure in rural areas that challenge millions of people from participating significantly in the financial space (Ozili, 2018; NITI Aayog, 2021).

The academic consensus emphasizes that technology alone cannot address the issue of financial exclusion and must be supplemented with context-relevant, linguistically approachable, and trust-building interventions. This viewpoint builds the groundwork for the sovereign AI argument: that artificial intelligence systems need to be domestically anchored to precisely serve India's different financial groups.

2.2 AI in Financial Services

The integration of artificial intelligence in financial services has accelerated significantly in the past few years. According to the World Economic Forum's 2025 report on AI in Financial Services, the major areas where AI is being implemented across the world are credit underwriting, fraud detection, customer service automation, and regulatory compliance (WEF, 2025).

A complementary survey carried out by the Reserve Bank of India in 2025, which surveyed 612 supervised entities, showed that in the Indian setting, the most common use cases of AI are customer support through chatbots, sales automation, credit underwriting, and cyber security. However, the adoption of AI is still disproportionately concentrated in larger private sector banks, while Urban Co-Operative Banks (UCBs) and smaller Non-Banking Financial Companies (NBFCs) have significantly lower levels of adoption (RBI, 2025).

The academic literature highlights the burning risks of AI-driven financial services, especially in developing economies. Algorithmic bias, that is, the tendency of artificially intelligent (AI) models trained on past datasets to perpetuate and compound social inequities between economic groups, is known to exist in credit-scoring applications (Bartlett et al., 2022). In the Indian context, this risk is compounded by the fact that the majority of commercially deployed models of AI have been calibrated on data from the financial behaviors of urban and formally employed English-speaking populations and are becoming less reliable for predicting rural, informal, or vernacular-speaking borrowers (Dvara Research, 2025).

2.3 Sovereign AI Definition and Global Context

The idea of sovereign artificial intelligence (AI) has become the dominant policy paradigm of the post-ChatGPT era, as governance bodies worldwide have recognized the strategic necessity of governing their own AI apparatuses. In general, sovereign AI refers to how well a state possesses the capability of designing, maintaining, and managing AI systems using infrastructure, data, human capabilities, and regulation that is domestically generated, thus lessening dependency on travel to external vendors (NITI Aayog, 2023).

Global best practices for sovereign AI efforts are instructive. The European Union's AI Act (2024) regulates AIs with mandatory rules for certain situations. AIs are particularly mindful of high-risk applications, such as credit scoring and biometric identification systems. France's Mistral AI and the United Arab Emirates' Falcon model are part of government-supported initiatives to develop competitive domestic large language models (LLMs). China enacts a layered AI governance structure through the Interim Measures for the Management of Generative AI Services 2023.

Singapore FEAT (Fairness, Ethics, Accountability, and Transparency (FEAT) principles, developed in collaboration with the financial sector, are an example of the co-regulatory model of responsible AI deployment in finance (RBI, 2025). While there is a common thread on which India is built on these global precedents, the IndiaAI Mission and FREE-AI framework adapt sovereign policies on AI to address nation-specific concerns about linguistic diversity and financial inclusion.

2.4 Literature Gap

A systematic review of the available academic literature exposes a significant and serious gap: while various scholars have made separate attempts to discuss the role of artificial intelligence (AI) in the field of financial services and financial inclusion at large, no work seems to have been done to discuss the role of sovereign AI as an impetus for financial inclusion in India. Specifically, the Reserve Bank of India's framework (dubbed the 'FREE-AI' framework), which has arguably been one of the most consequential regulatory developments in Indian AI governance, has not been discussed in the academic literature from the perspective of financial inclusion. In response to this deficiency, the current study outlines an original framework that maps the design of sovereign AI policies to outcomes in the arena of financial inclusion.

III. INDIA'S SOVEREIGN AI LANDSCAPE IN THE FINANCIAL SECTOR

3.1 IndiaAI Mission (2024)

The IndiaAI Mission, proclaimed in the Union Budget 2024, with a budgetary proposal of ₹10,372 crore as its capital, is India's most exhaustive venture towards establishing sovereign artificial intelligence (AI) infrastructure. The Mission is patterned on seven interdependent pillars: computing infrastructure, foundational model development, dataset platforms, application development, India-specific AI safety, AI talent cultivation, and startup financing. Notably, it explicitly focuses on building the development of AI models in Indian languages and for Indian use cases, including financial services (MeitY, 2024).

In relation to the financial space, the compute-infrastructure initiative under the IndiaAI Mission aims to provide access to shared GPU to smaller financial institutions, start-ups, and research organizations that do not have the financial budget to invest in host AI and an extensive infrastructure. This measure has the immediate benefit of increasing the financial inclusion level by reducing the entry barrier for non-bank financial companies (NBFCs) and microfinance institutions to use AI-driven credit-assessment tools. The datasets platform, which aggregates anonymized public data generated by government schemes, including Pradhan Mantri Jan Dhan Yojana (PMJDY) and Direct Benefit Transfer (DBT), provides a fundamental resource base of data for the training of financially inclusive AI models (MeitY, 2024).

3.2 RBI FREE-AI Framework (August 2025)

The central part of the sovereign AI strategy in India's finance sector is the FREE-AI framework, which was published by the Reserve Bank of India (RBI) on August 13, 2025. It was conceptualized by a high-level committee with Professor Pushpak Bhattacharyya of IIT, Bombay, as its chairperson and formed with the broad consultations of leading academicians, policymakers, corporate bodies, and government officials (RBI, 2025).

The framework of FREE-AI is organized around seven guiding principles: Trust, People First, Innovation, Fairness, Accountability, Explainability, and Resilience. These principles are operationalized in the form of 26 practical recommendations structured around six strategic pillars: Infrastructure, Policy, Capacity, Governance, Protection, and Assurance (KPMG, 2025).

From a sovereignty perspective, the most important recommendation is the construction of indigenous, sector-specific AI efforts as public goods. The framework explicitly states that 'general purpose LLMs are predominantly trained on western-centric datasets and are unlikely to deal with the multilingual diversity of the Indian financial ecosystem' and recommends the development of models with the capacity to operate in all the languages spoken in India (RBI, 2025). This recommendation directly addresses the exclusion risk identified in this study.

Other key recommendations with direct relevance to inclusion include AI integration with India's Digital Public Infrastructure (Unified Payments Interface, Aadhaar, Account Aggregator) to boost the speed of inclusive financial services; enablement of affirmative action by AI for promoting equitable access of underserved people, MSMEs, among others; and establishment of AI innovation sandboxes for regulated experimentation (RBI, 2025). The framework also implements a 'tolerant supervisory stance' towards first-time AI errors, signaling the RBI's openness to AI experimentation if governance standards are followed (Boston Institute of Analytics, 2025).

3.3 SEBI AI/ML Consultation Paper and Cross-Regulator Convergence

Building on the Reserve Bank of India (RBI) and Securities and Exchange Board of India (SEBI) regulations, the Securities and Exchange Board (SEBI) issued a consultation document on the responsible use of artificial intelligence and machine learning in the Indian securities market in 2025. The document outlines provisions concerning matters such as investor protection, governance, and data privacy, notes concern regarding fairness and bias and establishes a parallel mentality of governance institutions for AI deployment in capital markets. Expected coordination between RBI, SEBI and the Insurance Regulatory and Development Authority of India (IRDAI) is to harmonize the standards for banking, securities and insurance sectors to promote a common Indian government level AI governance ecosystem (RBI, 2025).

The joining of the dots in regulatory protocols implies a lot for financial inclusion. A harmonized regulatory architecture across different financial subsectors is likely to remove operational friction on behalf of consumers who make efforts to access credit, insurance, and investment services through one singular digital interface and thus form a prerequisite for the provision of seamless and inclusive financial services mediated by sovereign artificial intelligence.

3.4 MeitY AI Governance Guidelines (November 2025)

On November 5, 2025, the Ministry of Electronics and Information Technology (MeitY) published the India AI Governance Guidelines under the IndiaAI Mission. These guidelines set out a comprehensive techno-legal framework that forms the basis of sector-specific frameworks such as FREE-AI. The guidelines are organized on seven basic principles, such as voluntary compliance and graded liability, and the creation of institutional bodies such as the Artificial Intelligence Governance Group (AIGG), Committee of Technical and Policy Experts (TPEC), and an Artificial Intelligence Safety Institute (AISI) for safety testing (MeitY, 2025). The RBI FREE-AI framework is explicitly in line with this national governance architecture and, therefore, prompts the institutional level from a top-down and bottom-up policy ecosystem for sovereign artificial intelligence in India.

IV. THE SAIL FRAMEWORK: SOVEREIGN AI FOR INCLUSIVE LENDING AND LITERACY

4.1 Framework Overview

This study makes a novel and unique conceptual contribution to the extant scholarship through the introduction of the Sovereign AI for Inclusive Lending and Literacy (SAIL) framework. The SAIL framework links four dimensions of AI sovereignty viz. Language Sovereignty, Data Sovereignty, Governance Sovereignty, and Infrastructure Sovereignty to four corresponding results of financial inclusion viz. linguistic accessibility, alternative credit access, consumer trust and protection, and equitable digital infrastructure.

The framework is based on the policy-architecture of the RBI FREE-AI framework and IndiaAI Mission and amalgamating the theory of financial-inclusion of the World Bank and the behavioural-finance literature.

4.2 Dimension 1 Language Sovereignty

The concept of language sovereignty implies building artificial intelligence systems which can operate effectively with 22 scheduled languages and myriad of regional dialects of India. The hegemony of English-language large language models in the Indian financial services ecosystem will serve as an exploitative exclusionary device as more than 600 million Indians without English proficiency are hindered from accessing AI-enabled financial interfaces, understanding AI-based credit determinations and utilising AI-enabled financial literacy resources (RBI, 2025).

Artificial intelligence systems indoctrinated for linguistic inclusiveness can encourage the multilingual chatbot systems to work for rural banking conditions, vernacular voice interfaces for Unified Payments Interface (UPI) economies, Indic-language financial literacy products, and regionalised credit-counselling tools.

The guidance of the FREE-AI framework in favour of models "capable of operating in all languages talked about in India" direct exhibits this objective. Such an endeavour is expected to increase access to financial services for non-English speaking groups the group most systematically marginalised in India's financial sector.

4.3 Dimension 2 Data Sovereignty

Data sovereignty implies the adoption of India-specific financial data for training artificial intelligence models for credit evaluation and predicting financial behaviour. Existing foreign large language models are usually trained on western financial datasets that focus on formal employment, credit card histories and documented income, profiles of data that are generally not available within the Indian rural and informal economies.

Indigenous AI models that leverage Indian unique data assets such as UPI transaction history, PMJDY account behaviour, DBT disbursement patterns, utility payment history, and agricultural income cycles are powerful enough to build better and more inclusive credit profiles of currently invisible creditworthy borrowers. The recommendation for a "financial sector data infrastructure as Digital Public Infrastructure" made by the framework on financial sector artificial intelligence (FREE-AI) supports this development directly (RBI, 2025). The expected result of the implementation of such infrastructure is an increase in the extension of formal credit access to workers in the informal economy, small farmers and street vendors, as well as owners of micro-, small- and medium-size enterprises (MSMEs).

4.4 Dimension 3 Governance Sovereignty

Governance sovereignty refers to the regulatory oversight of AI systems by the Indian institutions (the Reserve Bank of India, the Securities and Exchange Board of India, and the Insurance Regulatory and Development Authority of India) and not compliance with worldwide platform compliance to the terms of service. When systems that make consequential decisions like approving a credit application, spotting fraud and setting the price for insurance are controlled by foreign entities, Indian consumers have few recourse options under the law, and Indian regulators have limited visibility into the model behaviour.

AI systems that the RBI governs and imposes transparent requirements (e.g., SHAP or LIME-based model interpretability), consumer grievance redressal schemes, and audit trails are all part of the trust infrastructure that is required for financial inclusion. Low-income consumers, who have historically been disadvantaged by the practice of informal moneylenders, are especially sensitive to the lack of trust in financial systems. The governance pillar under the umbrella of the FREE-AI framework - a board of directors-approved AI policies, as well as AI-specific consumer protection and audit mechanisms - directly enables this dimension to take place. The predicted success of this is more consumer trust, less algorithmic discrimination and greater protection for financially vulnerable populations under law.

4.5 Dimension 4 Infrastructure Sovereignty

Infrastructure sovereignty refers to the ownership and management of computational, cloud and connectivity infrastructure which are the building blocks of artificial intelligence systems used by the financial sector within India. At present, most of the Indian financial institutions rely on foreign cloud service providers (Amazon Web Services, Microsoft Azure and Google Cloud) to process their AI workloads. Such a reliance entails some vulnerabilities in terms of data localisation, concentration risks, all of which has been clearly identified by the Reserve Bank of India (RBI, 2025).

The IndiaAI Mission's allocation of ₹10,372 crore on the part of computational infrastructure locally, coupled with the instruction of the FREE-AI framework for shared AI infrastructure accessible for lesser regulated entities, lays the basis for obtaining infrastructure sovereignty. When smaller non-bank financial companies, cooperative banks, and the micro-financial institutions receive access to cost-effective RBI-compliant AI infrastructure, the playing field is levelled, thus empowering these institutes — especially the rural and under-served players — to implement AI tools which are accessible for use only to the big private banks till date. The expected result is the democratisation of the capability of AI all through the Indian financial system, with special gains going to institutions which cater to the bottom of the pyramidal economic distribution.

V. ANALYSIS AND DISCUSSION

5.1 How Sovereign AI Can Advance Financial Inclusion

The SAIL Framework demonstrates that sovereign AI has the potential to overcome the multiple dimensions of financial inclusion, and would consequently move ahead of the system as a whole compared to dealing with single-dimensional and piecemeal financial inclusion through fintech interventions. In contrast to

app-based financial products, which require ownership of a smartphone, internet connectivity and English literacy, sovereign AI embedded in India's Digital Public Infrastructure can be delivered over feature phones, voice interfaces and Business Correspondent networks and thus can extend reach to populations still beyond the reach of traditional forms of digital finance.

The inclusion of alternative data in the models for credit is perhaps the most impactful nearby opportunity. Over 350 million people use UPI which creates a lot of transaction-based data that might be used as a proxy for borrowers who don't have formal credit histories in terms of getting credit worthy. An indigenous AI credit model based on dataset of UPI, PMJDY and agriculture, coming into line with the envisioned FREE-AI computation model, has the potential to unlock access to credit for the tens of millions of borrowers who have been hitherto categorised as 'thin-file' by conventional credit bureaus. Early evidence of alternative credit scoring models driven by artificial intelligence technologies in similar developing economies (e.g., Kenya, Bangladesh) shows that such models can deliver lower default rates and increased credit access rates of 20-30 per cent among underserved segments.

In the context of fraud protection, a key issue to low-income consumers having limited buffers against financial loss, the use of indigenous trained AI models is an advantage over the use of foreign large language models. India-specific fraud patterns such as those in SIM-swap fraud, UPI PIN phishing and government welfare officer impersonation will not find much representation in global training datasets. A sovereign artificial intelligence fraud detection model based on Indian data in the cybercrime area would therefore be much more effective in protecting the cohorts of consumers who are most prone to falling victim to financial fraud: first generation digital payment users in rural and semi-urban areas.

5.2 Challenges and Limitations

While the sovereign AI agenda for financial inclusion shows much promise, it faces considerable challenges around its implementation for which no measures of opacity should be taken. The current version of the FREE-AI framework is simply an advisory document with no binding legal force and no requirements that regulated entities should comply with this framework. The Reserve Bank of India's "tolerant supervisory stance" in addressing the earlier instances of artificial intelligence error - justified by its incentive to innovation - is at the same time creating the situation of an accountability vacuum, leaving the amelioration of consumer damage caused by artificial intelligence systems to being left to chance.

The current concentration of adoption of AI in the large private-sector banks (with UCBs and smaller NBFCs also lagging behind substantially) implies that the entities that are most likely to get on board with implementations of FREE-AI compliant, sovereign AI systems are the ones who are already focused on reaching relatively well-banked urban populations. In the absence of any targeted regulatory incentives or mandates guiding the use of sovereign AI in rural and underserved markets, the largest beneficiaries of the FREE-AI ecosystem may be urban consumers who are financially included anyways. The present risk of "inclusion washing," that is, using inclusion rhetoric to justify AI investments that mostly deliver value to existing customers, needs to be reduced by explicit inclusion mandates on the roadmap of FREE-AI implementation.

Moreover, there are data quality and privacy issues that present a serious obstacle to the data sovereignty dimension of the SAIL Framework. The Digital Personal Data Protection Act (DPDP Act, 2023) makes data use consent a prerequisite for different data uses, that although indispensable for consumer protection, may hamper the aggregation of the large-scale data sets needed to train inclusive AI models. Harmonization of privacy guarantees and data infrastructure requirements for sovereign AI is a regulatory challenge recognised but not fully addressed by the FREE-AI framework.

5.3 Comparative Perspective

India has a relatively favourable sovereign AI approach to finance when compared to other countries in the world using multiple dimensions. China has a stratified architecture that offers binding governance; though this arrangement limits innovation flexibility. By contrast, India's FREE-AI framework has a more balanced posture and incorporates both explicit principles as well as adaptive implementation mechanisms. Singapore's FEAT framework and Veritas Toolkit offer the most directly comparable models - a principles-based approach in a financially

sophisticated industry. Nonetheless, some of the structural features of Singapore, with its homogeneous population and high internet penetration make the challenges in its inclusion distinct from those faced in India.

Likewise, the European Union's AI Act, however detailed, has been criticised for absurd compliance burdens which will harm smaller innovators. India's strategy, which emphasises on shared infrastructure and tolerance for mistakes in the beginning, is calibrated better for the developing economy dealing to democratise AI adoption. Most distinctive about India's sovereign AI strategy - and that which most directly relates to financial inclusion - is the integration with the Digital Public Infrastructure. No other country has an equivalent of the JAM trinity and UPI ecosystem of India as a data and delivery foundation for inclusive AI in India. This is India's structural advantage, since the infrastructure for sovereign, inclusive AI does exist and the framework of FREE-AI provides the governance architecture required to put it in motion.

VI. CONCLUSION AND POLICY RECOMMENDATIONS

6.1 Summary of Findings

This paper has made the argument for the first time about India's sovereign AI policy landscape built on IndiaAI Mission and RBI FREE-AI, which brings opportunities to use indigenously designed artificial intelligence as a force multiplier to promote financial inclusion, at a historical high. Through the SAIL Framework, the paper outlines how sovereign AI, across four dimensions (language, data, governance and infrastructure), can systematically overcome barriers in the last mile that went on excluding millions of Indians from formal financial services despite mega works by PMJDY-led inclusion mechanisms in the last decade.

The paper concludes that the FREE-AI framework is well-designed as a policy document, based on specific analysis of India's digital ecosystem and comparative analysis of countries in the region, and has a clear application in terms of inclusion goals. However, its advisory status and gap from implementation and current concentration of adoption of AI by large urban banks engender risks of potential realization of its inclusion may not be achieved without deliberate policy intervention.

6.2 Policy Recommendations

Drawing on the analysis and the SAIL Framework, the following policy recommendations are proffered in this paper. Firstly, the Reserve Bank of India should make the framework of FREE-AI a regulatory standard rather than advisory within a two-year window with a phased schedule of compliance matching the size of institutional regulations. Secondly, the IndiaAI Mission should consider a dedicated Financial Inclusion AI Fund, which is ring-fenced inside its allocation of ₹10,372 crore, that is explicitly for the development of Indic language financial AI models as public goods that should be easily available to all regulated entities. Thirdly, all AI systems used in public-sector credit programmes (e.g., PMJDY overdraft, MUDRA loans, Kisan Credit Cards, etc.) should be mandatorily made to handle at least ten Scheduled languages and have auditable non-discrimination standards in place. Fourthly, the RBI should institute a Consumer AI Ombudsman, to receive and adjudicate grievances which arise as a result of AI driven financial decisions, in the similar style of the Banking Ombudsman framework set up so far. Finally, SEBI, RBI and IRDAI would be filing jointly a cross-sectoral AI inclusion roadmap in a twelve-month time frame outlining the range of use cases where sovereign AI can best extend the access to the consideration of credit, insurance and investment products to neglected populations.

6.3 Limitations and Future Research

This paper is conceptual in nature and is subject to the limitations inherent in policy analysis and framework development. The SAIL Framework has neither been empirically tested nor its predictions regarding outcomes of inclusion based on direct, rather on evidence from similar situations. Future research should benefit from a more empirical analysis of the extent to which Models of Indic language AI, when deployed at scale, would have an effect on credit access, gains in financial literacy scores or reductions in fraud incidence rates among targeted populations. A comparative analysis of the sovereign AI inclusion strategy of India vis-a-vis the AI credit ecosystem (M-Pesa) of Kenya and the AI models of mobile financial

services (Bangladesh) would also provide interesting insights.

As the FREE-AI framework moves towards implementation, longer term tracking of the results of their inclusion will be critical to determine whether the promise of sovereign AI for financial inclusion is being delivered. To conclude, India is at a very unique inflection point. Its sovereign AI policy architecture, its world-leading digital payments infrastructure, and unfinished agenda of financial inclusion, are coming together at just the right moment when AI has the power to move in all three directions at once. The question of whether sovereign AI has the potential to bridge the gap of financial inclusion in India is no longer an issue at hand - the technology, the policy framework and the data infrastructure in India all point to the answer as yes. The question is, does the political and regulatory will exist to make inclusion and not efficiency at the center of the design objective of India's sovereign AI in the context of finance.

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