



Digital ID as Development Infrastructure: Promise, Progress, and Peril in Ethiopia's Fayda System

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Abstract: Ethiopia's Fayda national digital identification system represents one of Africa's most ambitious efforts to build foundational digital public infrastructure, with nearly 50 million registrations and integration across more than 150 public and private institutions. This critical review synthesizes evidence from World Bank implementation reports, UNHCR protection assessments, and independent governance analyses to evaluate Fayda's contributions to economic development, social security, and the Sustainable Development Goals, while interrogating the governance risks that accompany rapid digitalization. The evidence reveals a dual narrative: Fayda has reduced electronic Know-Your-Customer costs by 90 percent, accelerated female financial inclusion by nearly 40 percentage points, extended legal identity to over 191,000 refugees, and demonstrated measurable progress toward at least six SDGs, anchored in SDG 16.9 on legal identity for all. Yet independent analyses highlight concerns regarding de facto mandatory enrollment, incomplete data protection frameworks, the absence of an independent Data Protection Commission, and the concentration of sensitive biometric data within a single state-run enterprise under Ethiopian Investment Holdings. This review argues that digital ID in Ethiopia exemplifies the paradox of developmental digital infrastructure: its promise is genuine, its progress measurable, but its perils require vigilant, independent governance to prevent the transformation of an instrument of inclusion into a mechanism of exclusion and control. Five governance imperatives are proposed, an independent data protection authority with enforcement powers, transparent grievance mechanisms, and statutory limits on mandatory use, periodic independent audits, and enforceable data minimization to transition Fayda from a technology project into accountable public infrastructure.

Keywords: digital ID, Ethiopia, Fayda, digital public infrastructure, financial inclusion, social protection, SDGs, data governance

I. Introduction

1.1 Background

The global commitment to provide legal identity for all by 2030, enshrined in Sustainable Development Goal (SDG) Target 16.9, has catalyzed an unprecedented wave of national digital identification programs across the Global South. Approximately 800 million people worldwide still lack any form of official identification, with women disproportionately affected (Women's World Banking, 2026a). This identity gap excludes individuals from financial systems, social protection, healthcare, and political participation, making legal identity a foundational prerequisite for inclusive development.

Ethiopia, Africa's second most populous nation with approximately 130 million residents, entered the digital identity arena comparatively late but with extraordinary ambition. Prior to 2023, nearly all Ethiopians relied on paper-based Kebele identification cards issued by local administrative units. This fragmented system spanned more than 16,400 kebeles without

central coordination, biometric verification, or interoperability with financial or social service systems (Integrated Biometrics, 2026). The Kebele ID system was highly susceptible to fraud, with bank officials estimating that forged local paper IDs were implicated in 90% of all bank fraud cases (Fayda National ID, 2026). Coverage was also incomplete, particularly among women and rural populations, leaving millions without documentation necessary for formal economic participation.

The Fayda (meaning "value" in Amharic) digital ID system, legally established by Proclamation No. 1284/2023, represents a foundational departure from this legacy system (Fayda National ID, 2025). Administered by the National ID Program (NIDP) and supported by a US\$350 million World Bank investment through the "Ethiopia Digital ID for Inclusion and Services Project" (P179040), Fayda aims to register 115 million residents by 2027/2028 (Integrated Biometrics, 2026; World Bank, 2023). The system integrates biometric verification—including ten fingerprints, dual iris scans, and facial images—with demographic data to establish the principle of "one person, one identity" (Ethiopian National ID Program, 2023). By early 2026, the system had registered nearly 50 million individuals and integrated with over 100 public and private institutions, facilitating more than 78 million authentication transactions (World Bank, 2026a).

1.2 Problem Statement

Despite Fayda's impressive quantitative achievements, the system's trajectory raises fundamental questions about the relationship between digital infrastructure, development outcomes, and governance in contexts characterized by limited institutional oversight. The World Bank's own risk assessments have consistently rated "Political and Governance" risk for the Fayda project as "Substantial," acknowledging that the project's success depends on factors beyond technical implementation (World Bank, 2025b; World Bank, 2026a). This rating reflects recognition that digital ID systems are not merely technological interventions but are embedded within complex political economies that shape their developmental impact.

Three interconnected problems motivate this review. First, while Fayda has demonstrably accelerated financial inclusion and streamlined service delivery, the system has become de facto mandatory for accessing essential services. Although the Digital ID Proclamation describes registration as voluntary (Ethiopian National ID Program, 2023), the National Bank of Ethiopia mandated Fayda for new bank accounts beginning in January 2026, with nationwide extension planned (Biometric Update, 2025). Ethio Telecom requires Fayda for SIM card registration, the Ministry of Revenue mandates it for Tax Identification Numbers, and school registration will require Fayda from 2026 (Integrated Biometrics, 2026). This creates a paradox: a nominally voluntary system becomes functionally compulsory for participation in modern economic and social life, potentially excluding populations facing barriers to registration.

Second, the concentration of extensive biometric and demographic data within a single state-run system raises significant data protection and surveillance concerns. Fayda collects ten fingerprints, dual iris scans, facial images, full name, gender, address, and date of birth (Ethiopian National ID Program, 2023). While the NIDP protocol prohibits collection of sensitive categories such as religion, ethnicity, and birthplace, and emphasizes "minimal data collection," independent assessments have noted that trust in data protection mechanisms remains critical (DIAL, 2025). The World Bank's environmental and social risk assessment explicitly acknowledged "potential risks that identification could be used as a tool for

discrimination or to infringe on, or deny individual or collective rights" (World Bank, 2023, p. 12).

Third, the system faces persistent challenges in reaching the most vulnerable populations. World Bank implementation reports indicate that as of March 2025, no registrations had been recorded in remote and hard-to-reach areas, despite a target of 7.2 million registrations in such areas by 2028 (World Bank, 2025b). Similarly, while 71,028 refugees had received Fayda numbers by March 2025 against a target of 924,000, the pace of refugee inclusion remains below projections (World Bank, 2025b). These gaps suggest that the populations most in need of legal identity; those in remote regions, pastoralist communities, and displaced persons, may be the last to benefit from a system that is already becoming mandatory for service access.

1.3 Objectives of the Review

This critical review pursues four interconnected objectives:

- a. To synthesize available evidence on Fayda's contributions to economic development, including financial inclusion, cost reduction for financial service providers, and regional trade integration.
- b. To evaluate the system's impact on social security, with particular attention to social protection delivery, gender-inclusive outcomes, and the inclusion of refugees and displaced populations.
- c. To assess Fayda's alignment with the Sustainable Development Goals, examining its contributions to SDG 16.9 on legal identity, as well as its cross-cutting implications for poverty reduction, gender equality, and financial inclusion.
- d. To critically examine governance risks, including mission creep, data protection gaps, exclusion of vulnerable populations, and the implications of corporatization for public accountability.

1.4 Significance of the Review

This review makes three significant contributions to the growing literature on digital public infrastructure in the Global South.

First, it provides a comprehensive, evidence-based assessment of one of Africa's largest digital ID implementations. While numerous studies have examined digital identity programs in India (Aadhaar), Kenya (Huduma Namba), and other contexts, Ethiopia's Fayda system has received limited scholarly attention despite its scale and ambition. By synthesizing World Bank implementation data, UNHCR protection assessments, and independent governance analyses, this review offers a multidimensional account of Fayda's trajectory that is accessible to researchers, policymakers, and practitioners.

Second, the review advances theoretical understanding of the "digital ID paradox"—the tension between developmental potential and governance risk that characterizes large-scale identification systems in contexts of institutional fragility. The Ethiopian case demonstrates that digital ID can simultaneously deliver measurable economic and social benefits while creating new forms of exclusion and surveillance risk. As the World Bank (2023) acknowledged, digital ID systems carry inherent risks that identification "could be used as a tool for discrimination or to infringe on, or deny individual or collective rights" (p. 12). This paradox is not unique to Ethiopia but reflects broader challenges facing digital public infrastructure globally.

Third, the review offers actionable recommendations for policymakers seeking to govern digital ID as public infrastructure rather than as a technology project. These

recommendations—including the establishment of an independent data protection authority with enforcement powers, statutory limits on mandatory use, and periodic independent audits—address governance gaps that have been identified but not systematically addressed in existing policy frameworks. As DIAL (2025) emphasized, "transparency and trust in processes and practices can reinforce trust in the system," and without trust, "people will actively or constructively quit using the system as intended" (p. 4).

The remainder of this article proceeds as follows. Section 2 examines Fayda's contributions to economic development, focusing on financial inclusion, cost reduction, and regional trade integration. Section 3 evaluates the system's impact on social security, with attention to social protection, gender, and refugee inclusion. Section 4 assesses alignment with the SDGs. Section 5 critically examines governance, privacy, and exclusion risks. Section 6 discusses the implications for digital public infrastructure theory and practice. Section 7 concludes with recommendations for policy and future research.

II. Review of Literature

2.1 Economic Development: Realizing Fayda's Value

a. Financial Inclusion and Cost Compression

The economic rationale for digital identity rests on reducing friction in identity verification, a function that has historically imposed substantial costs on financial institutions operating in environments characterized by unreliable identification systems. Ethiopia's Fayda system has delivered measurable economic gains that substantiate this rationale. Electronic Know-Your-Customer (eKYC) onboarding costs have fallen by approximately 90 percent, from several dollars per verification to cents per API call (Biometric Update, 2026; Integrated Biometrics, 2026). For financial institutions, this cost compression translates into substantially lower customer acquisition expenses, with reductions ranging from 4 to 48 percent, alongside transaction cost savings of 23 to 49 percent (Integrated Biometrics, 2026).

These cost reductions are not merely operational efficiencies but represent structural changes in the economics of financial inclusion. Prior to Fayda, Ethiopian banks suffered cumulative losses of ETB 1.8 billion (approximately USD 32.8 million) over five years due to fraudulent activities enabled by the paper-based Kebele ID system (KAF, 2023). The absence of a centralized, biometrically verified identity registry allowed individuals to maintain multiple accounts under different identities, creating vulnerabilities for money laundering and complicating Customer Due Diligence processes. As one customer service officer at Awash Bank observed, cases of customers maintaining accounts under multiple identities were "not isolated instances" (KAF, 2023, p. 4). Fayda's biometric verification—incorporating ten fingerprints, dual iris scans, and facial recognition, directly addresses these vulnerabilities by establishing the principle of "one person, one identity" (Ethiopian National ID Program, 2023).

The gender dimension of these economic gains is particularly significant given Ethiopia's historical identity gap. Survey data from the ID4D-Findex 2022 round revealed that Ethiopian women were approximately 15 percentage points less likely than men to possess a Kebele ID, with women significantly more likely to report lacking required documentation as a barrier (World Bank, 2024). The Fayda system has been designed with explicit gender-inclusive features, including community mobilization through women's networks, training of female registration officers, and prioritizing women in registration campaigns (World Bank, 2025a). These efforts have yielded measurable results: national data indicate that approximately 40 percent of Fayda ID holders are women, with the program targeting 30

million women and 10 million children for enrollment (ENA, 2026). This represents a substantial closing of the historical identity gap that had constrained women's access to formal financial services.

Table 1: Economic Impact Indicators of Fayda Digital ID

Indicator	Baseline	Current Status	Source
eKYC cost per verification	Several USD	Cents per API call	Biometric Update, 2026
Female Fayda enrollment	—	~40% of registrants	ENA, 2026
Bank fraud losses (5-year cumulative)	ETB 1.8 billion	System addresses root vulnerability	KAF, 2023
Projected GDP boost	—	6–8%	KAF, 2023
Digital transactions (projected 2025)	—	ETB 3 trillion (~39% of GDP)	KAF, 2023

The macroeconomic implications extend beyond individual financial inclusion. The KAF (2023) report estimates that Fayda's contribution to Ethiopia's GDP could reach 6 percent by 2030, with digital transactions projected to reach ETB 3 trillion (approximately USD 54.6 billion) (Table 1), accounting for 39 percent of the country's total GDP by 2025. Prime Minister Abiy Ahmed has emphasized Fayda's potential to boost GDP by 7 percent, framing the system as "far more than just a card" but rather "a system built on trust" (EBC, 2026). These projections align with broader continental evidence: the Africa Continent Correspondents report notes that digital ID implementation could save up to USD 1.6 trillion globally (KAF, 2023).

2.2 Regional Trade and Remittance Integration

Ethiopia positions Fayda as a critical enabler of regional economic integration, particularly within the framework of the African Continental Free Trade Area (AfCFTA). Cross-border remittance fees have historically averaged approximately 9 percent in African corridors, a cost burden that disproportionately affects low-income senders and recipients. The integration of interoperable digital identity with payment systems is projected to reduce remittance costs to fewer than 3 percent, unlocking billions in savings for small businesses and traders (Biometric Update, 2026; Foresight Institute, 2026).

As Executive Director of Ethiopia's Fayda program, articulated: "When an Ethiopian farmer or small business owner obtains a Fayda ID, they gain a legally verified identity that allows them to open a bank account on their phone, access credit, and trade across borders" (Foresight Institute, 2026). This framing positions digital identity not merely as a domestic administrative tool but as foundational infrastructure for cross-border economic participation. The AfCFTA Secretariat's ADAPT initiative (Africa Digital Access and Public Infrastructure for Trade) explicitly identifies digital identity systems as core components for reducing trade friction, alongside cross-border data exchange and interoperable payment rails. The initiative estimates that current inefficiencies contribute to a \$100 billion annual trade finance gap, particularly affecting small and medium enterprises, which constitute 90 percent of African businesses (Blockchain News, 2026). By addressing the "identity border" that has historically impeded intra-African trade, Fayda and analogous systems contribute to the AfCFTA's goal of increasing intra-African exports by 80 percent and generating up to \$450 billion in economic gains by 2035.

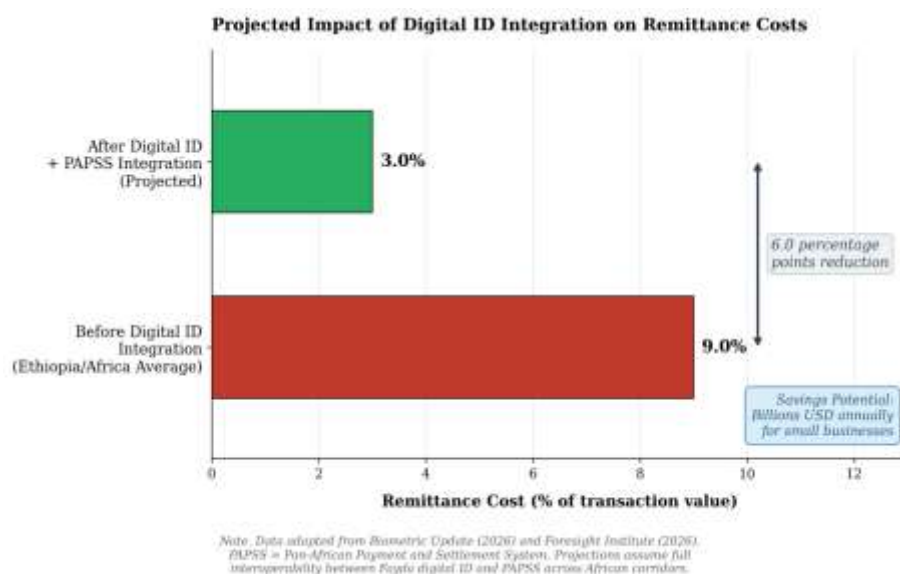


Figure 1: Projected Impact of Digital ID Integration on Remittance Costs

Figure 1 illustrates the projected reduction in cross-border remittance fees resulting from interoperable digital identity integration, based on data from Biometric Update (2026) and Foresight Institute (2026).

2.3 Agricultural and Rural Economic Integration

Beyond urban financial services, Fayda has been deliberately extended to agricultural and rural economic ecosystems, addressing the geographic concentration of economic opportunity that has historically disadvantaged rural populations. The National ID Program, in collaboration with the Ministry of Agriculture, has linked Fayda to farmer and land registries, supporting over 1.2 million registrations within this integrated ecosystem (World Bank, 2026a; World Bank, 2026b).

The agricultural integration operates through a multi-system architecture. Fayda serves as the foundational identifier linking three critical registries: the national ID system, the Agricultural Transformation Institute (ATI) farmer profiling system, and the National Rural Land Administration Information System (NRLAIS) (World Bank, 2026b). This interoperability creates "trusted and verifiable farmer profiles" that enable access to essential agricultural inputs, Tax Identification Numbers, and bank loans previously inaccessible to smallholders (MOSIP, 2026). The system directly addresses a structural constraint in Ethiopian agriculture: the inability of farmers to prove their identity and land rights in formal financial transactions.

For rural populations, the economic significance extends beyond credit access. The Fayda mobile registration kit; leveraging Integrated Biometrics' Kojak scanner, which operates in direct sunlight, extreme temperatures, and without electrical connection has enabled registration in remote areas across Ethiopia's diverse terrain, from "dusty deserts to tropical forests" (Integrated Biometrics, 2026). This technological adaptation to rural conditions represents a deliberate strategy to ensure that digital ID's economic dividends reach populations historically excluded from formal economic systems.

The integration with the Productive Safety Net Programme (PSNP) further extends Fayda's rural economic impact. By seeding Fayda identifiers into the PSNP management information system, the program strengthens deduplication and ensures that cash transfers reach intended beneficiaries, addressing the embezzlement challenges that had previously

plagued the program (KAF, 2023; World Bank, 2026b). This integration demonstrates how digital identity can simultaneously serve financial inclusion and social protection objectives, creating synergies between economic empowerment and poverty reduction.

III. Research Methods

3.1 Social Security: Targeted Inclusion and Protection

a. Social Protection Delivery

Digital identity systems fundamentally transform social protection delivery by converting fragmented, leakage-prone processes into verifiable, efficient mechanisms for targeting and disbursing benefits. Ethiopia's Fayda system has been explicitly designed to serve this function, with the World Bank's project appraisal identifying reduced fraud and leakage in social protection as a primary expected outcome (World Bank, 2023). The appraisal noted that Fayda provides "the ability, for the first time, to uniquely identify and securely verify individuals" across social protection programs (World Bank, 2023, p. 8).

The integration of Fayda with Ethiopia's Productive Safety Net Programme (PSNP) and urban PSNP represents the most significant operationalization of this capability. By linking biometric verification to beneficiary rosters, the system addresses long-standing challenges in Ethiopia's social protection architecture. Prior to Fayda, the absence of a centralized identity registry allowed duplicate registrations and "ghost beneficiaries" to divert resources from intended recipients. The Ferdi (2025) report on digital identification in Africa confirms that digital IDs facilitate precise targeting of transfer program beneficiaries while reducing fraud through the elimination of multiple identities. In the Ethiopian context, this translates into more reliable delivery of cash and food transfers to the approximately 8 million chronically food-insecure households covered by PSNP.

Beyond PSNP, Fayda's integration with social protection extends to health insurance enrollment, pension administration, and emergency humanitarian assistance. The World Bank (2025b) implementation report documents that the system supports "adaptive social protection" by enabling rapid re-targeting during crises, a capability of particular significance in Ethiopia, where climate-induced shocks (drought, floods) and conflict displacement regularly require emergency expansion of social assistance. The resident portal and mobile application, with over 335,000 downloads as of March 2026, further reinforce beneficiaries' ability to manage their identity credentials and access entitlements (World Bank, 2026).

Table 2. Fayda Integration with Social Protection Systems

Social Protection Program	Integration Status	Fayda Function	Source
Productive Safety Net Programme (PSNP)	Operational	Beneficiary deduplication; biometric verification	World Bank, 2023
Urban PSNP	Operational	Cash transfer verification	World Bank, 2026
Health Insurance Enrollment	In progress	Identity verification for enrollment	World Bank, 2025b
Emergency Humanitarian Assistance	Pilot	Rapid beneficiary identification	World Bank, 2025b
Pension Administration	Planned	Life verification; payment authentication	Fayda National ID, 2025

Note. Data compiled from World Bank project documents and Fayda program reports.

Table 2 maps Fayda's integration across five social protection domains, revealing a graduated implementation landscape. The Productive Safety Net Programme (PSNP) and Urban PSNP are fully operational, employing biometric verification and beneficiary deduplication to reduce leakage and ensure transfers reach intended recipients (World Bank, 2023, 2026). Health insurance enrollment is progressing, while emergency humanitarian assistance remains in pilot phase—a notable gap given Ethiopia's recurrent climate shocks. Pension administration, involving life verification and payment authentication, is still planned, indicating that elderly populations have yet to benefit from Fayda's efficiency gains (Fayda National ID, 2025). This uneven progression suggests that while foundational integration has been achieved in flagship programs, comprehensive social protection coverage remains aspirational, requiring accelerated rollout to realize Fayda's full protective potential.

3.2 Gender-Inclusive Social Protection

The gender dimensions of Fayda's social protection implications warrant particular analytical attention, given Ethiopia's historically pronounced gender gap in identity documentation. Prior to digital ID, Ethiopian women faced compounded barriers to social protection access: they were less likely to possess Kebele IDs, less likely to have bank accounts in their own names, and more likely to depend on male relatives for access to formal systems (World Bank, 2024). Survey data from the ID4D-Findex 2022 round confirmed that women were approximately 15 percentage points less likely than men to possess a Kebele ID, with women significantly more likely to cite lack of required documentation as a barrier to obtaining identification .

The Fayda program has incorporated explicit gender-inclusive design features to address these historical disparities. The National ID Program (NIDP) conducted dedicated gender diagnostic and developed recommendations that have been operationally integrated into registration campaigns (World Bank, 2024). These measures include:

- a. Targeted enrollment strategies: The program aims for 50 percent female registration, with specific campaigns targeting women through existing social networks such as the Women Development Army and Iddir insurance groups.
- b. Female registration officers: Information campaigns and registration assistance targeting women are delivered by women, based on evidence that female peers are more effective communicators on gender-sensitive issues .
- c. Accessible registration design: Mobile registration campaigns bring enrollment to locations women already frequent (health centers, cooperatives), with operating hours designed to accommodate women's schedules. Childcare and meals are offered at special registration events to offset the indirect costs of participation.
- d. Male engagement: Recognizing that women's registration decisions are often shaped by household dynamics, the program delivers information about Fayda's value to men as well as women, acknowledging that "most women will require buy-in from the men in their lives to participate in Fayda".

These efforts have yielded measurable results. As of March 2026, women and girls constituted 41.4 percent of Fayda registrants, up from 40.7 percent in September 2025, with a target of 50 percent by project completion (World Bank, 2026). While this remains below the aspirational target, the trajectory demonstrates progress toward closing the historical gender gap.

The implications for social protection access are significant. Women with Fayda IDs can now receive social protection payments directly into accounts opened in their own names, eliminating the intermediation of male relatives that characterized the Kebele ID era (World Bank, 2025a). This direct access has cascading effects: women gain not only the economic value of the transfer but also the dignity and autonomy associated with financial control. As the World Bank (2025a) documented, "Fayda is closing the gender gap, empowering women to access social protection payments, open bank accounts, access loans, and fully participate in the economy".

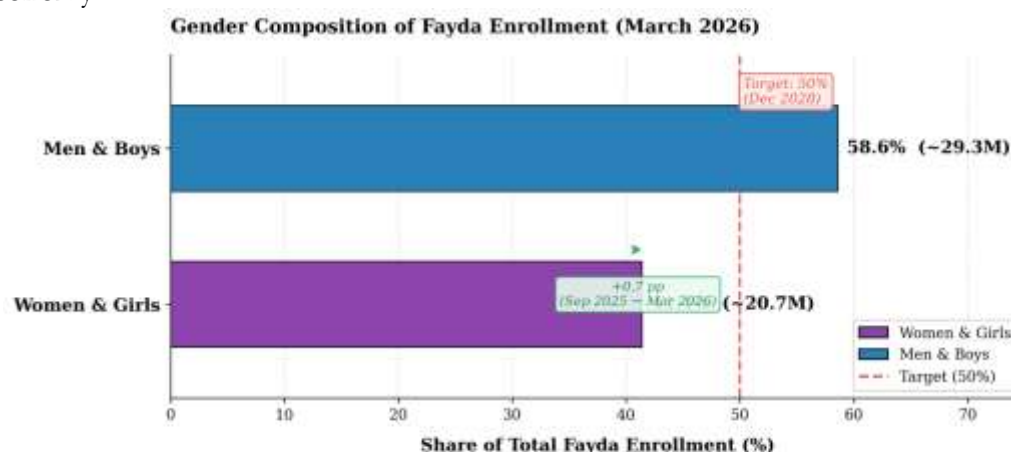


Figure 2: Gender Composition of Fayda Enrollment.

Figure 2 illustrates the gender composition of Fayda enrollment as of March 2026, based on World Bank (2026) implementation data. The target of 50 percent female enrollment reflects the program's explicit gender-inclusive design.

3.3 Refugee and Displaced Population Inclusion

Ethiopia hosts over 1 million refugees, primarily from South Sudan, Somalia, Eritrea, and Sudan (UNHCR, 2025). Historically, refugees possessed limited, often expired documentation—more than 90 percent of refugees aged 14 and older had expired refugee ID cards or no cards at all by 2024 (Development Action Platform, 2025). This documentation gap exposed refugees to heightened protection risks, restricted freedom of movement, and systematically excluded them from financial services and formal economic participation.

The legal foundation for refugee inclusion was established by the 2019 Refugee Proclamation (No. 1110/2019), which affirmed refugees' rights to work, access services, and obtain documentation. However, implementation lagged until the tripartite collaboration between the National ID Program (NIDP), UNHCR, and the Refugees and Returnees Service (RRS) operationalized these commitments through digital identity inclusion (UNHCR, 2025). The technical architecture enabling this inclusion is the PRIMES Interoperability Gateway (PING), first deployed in East Africa through this initiative. PING facilitates secure, auditable data exchange between UNHCR's proGres registration system and the NIDP database, transferring biographical data, registration status, and biometrics from proGres to the national system, and returning Fayda identification numbers and QR codes for insertion into refugee ID cards and Proof of Registration documents (UNHCR, 2025; Development Action Platform, 2025). All data exchange is governed by a Data Sharing Agreement and UNHCR's Data Protection Policy, with complete audit trails maintained through a secure partner portal.

The tripartite agreement was signed in October 2023, followed by Standard Operating Procedures in January 2024. The first refugees received Fayda numbers in March 2024, and by March 2026, 191,335 refugees had been assigned Fayda numbers, a significant acceleration from 71,028 in March 2025 and 120,765 in September 2025 (World Bank, 2025b; World Bank, 2026). This figure represents approximately 21 percent of the 924,000 target for December 2028. Notably, 9,619 Sudanese refugees received Fayda numbers as part of the broader response to the Sudan emergency, and 205,570 individuals in refugee host communities have also been registered (World Bank, 2026) .

Table 3. Refugee Inclusion in Fayda System Milestones and Progress

Milestone	Date	Status	Source
Tripartite data sharing agreement signed	October 2023	Completed	UNHCR, 2025
Standard Operating Procedures finalized	January 2024	Completed	UNHCR, 2025
First refugees receive Fayda numbers	March 2024	Completed	UNHCR, 2025
Refugees with Fayda numbers (cumulative)	March 2025	71,028	World Bank, 2025b
Refugees with Fayda numbers (cumulative)	September 2025	120,765	World Bank, 2026
Refugees with Fayda numbers (cumulative)	March 2026	191,335	World Bank, 2026
Sudanese refugees specifically	June 2025	9,619	Development Action Platform, 2025
Host community members registered	March 2026	205,570	World Bank, 2026
Target for refugee registration	December 2028	924,000	World Bank, 2023

Note. Data compiled from World Bank implementation status reports and UNHCR documentation.

Table 3 traces the institutional and quantitative trajectory of refugee inclusion in Ethiopia's Fayda system from October 2023 to March 2026. The sequence reveals a deliberate, phased approach: legal and procedural foundations were established first through the tripartite agreement (October 2023) and Standard Operating Procedures (January 2024), followed by initial registrations in March 2024 (UNHCR, 2025). Cumulative enrollment then accelerated markedly—from 71,028 in March 2025 to 120,765 by September 2025, reaching 191,335 by March 2026 (World Bank, 2025b, 2026). This represents a 169% increase within twelve months. Notably, 205,570 host community members were also registered, reflecting an integrated approach that mitigates tensions between refugees and hosting populations (World Bank, 2026). However, the 191,335 total constitutes only 20.7% of the 924,000 target, indicating that accelerated outreach will be essential to achieve universal refugee registration by December 2028 (World Bank, 2023). The protection dividends of this inclusion extend well beyond service access. Verifiable digital credentials reduce risks of arbitrary arrest and expedite release of detained individuals by providing immediate proof of legal status. They facilitate civil registration of vital events, births, deaths, and marriages, which in turn enables family unity and access to inheritance rights. Critically, Fayda-enabled documentation enables refugees to obtain exit permits for resettlement and complementary pathways such as family reunification and labor mobility (UNHCR, 2025) . For refugees engaged in formal employment, the Fayda ID permits application for Tax Identification Numbers (TIN) from

the Ministry of Revenue, operationalizing the right to work guaranteed by the 2019 Proclamation .

The UNHCR (2025) case study identifies several lessons from Ethiopia's experience that may inform analogous initiatives elsewhere. First, national ownership and political will—evidenced by Ethiopia's commitments at the 2023 Global Refugee Forum—were essential prerequisites. Second, multi-stakeholder collaboration, supported by multi-year funding through the PROSPECTS partnership with the Government of the Netherlands, enabled the technical innovation (PING) and operational capacity required for implementation. Third, sustained policy dialogue between humanitarian, development, and government actors created the enabling environment for legal and policy reforms that made inclusion possible.

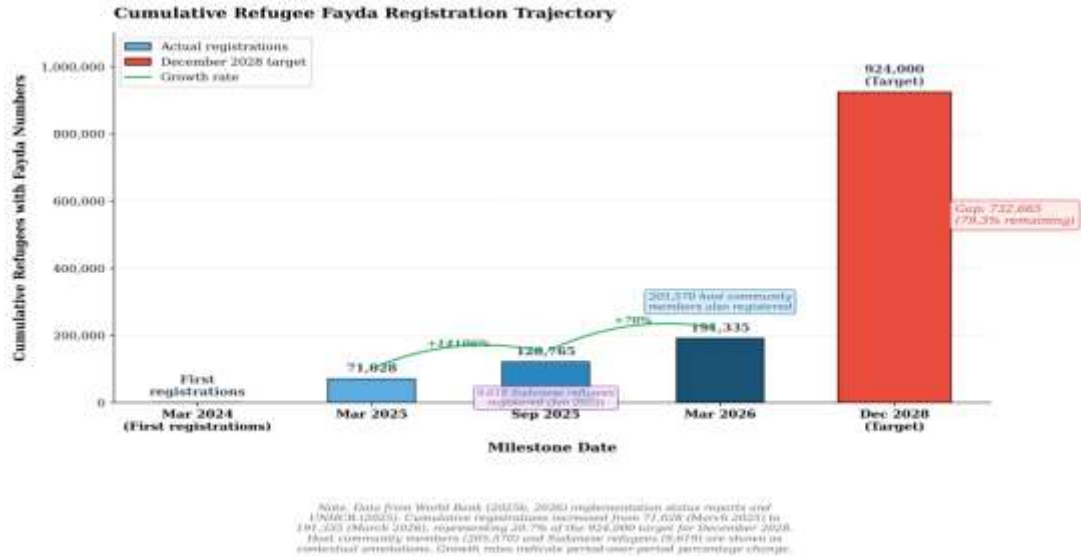


Figure 3: Cumulative Refugee Fayda Registration Trajectory

Figure 3 presents the cumulative trajectory of refugee Fayda registration from March 2024 to March 2026, with the December 2028 target indicated. Data from World Bank (2025b, 2026).

Despite these achievements, significant challenges persist. The World Bank (2025b) implementation report notes that as of March 2025, no registrations had been recorded in remote and hard-to-reach areas, despite a target of 7.2 million registrations in such areas by 2028. Security concerns in some refugee-hosting areas limit access for registration teams, and awareness among refugees about the importance of Fayda inclusion remains uneven (UNHCR, 2025) . The pace of refugee registration, while accelerating, remains below what would be required to achieve the 924,000 target by December 2028, suggesting that intensified outreach and resource allocation will be necessary.

IV. Result and Discussion

4.1 SDG Alignment

a. Digital Identity as a Cross-Cutting SDG Enabler

Ethiopia's Fayda system is explicitly positioned as a tool for accelerating progress across multiple Sustainable Development Goals (SDGs), a framing the government advanced at the UN General Assembly and in its broader digital transformation strategy (ENA, 2025; Ethiopian Broadcasting Corporation, 2026). This positioning reflects a growing international consensus that legal identity is not merely a standalone development target but a foundational enabler whose effects cascade across poverty reduction, gender equality, financial inclusion, and institutional strengthening (United Nations Statistics Division, n.d.; World Bank, 2023).

The theoretical basis for this framing is well established. The United Nations Legal Identity Agenda identifies legal identity as essential for the realization of at least twelve of the seventeen SDGs, noting that without proof of identity, individuals cannot access healthcare, education, financial services, or social protection (United Nations Statistics Division, n.d.). The World Bank's ID4D initiative similarly estimates that approximately 850 million people globally lack any form of official identification, with the majority concentrated in Sub-Saharan Africa and South Asia (World Bank, 2023). Fayda's ambition to register 115 million residents by 2027/2028 therefore represents a direct contribution to closing this global identity gap (Integrated Biometrics, 2026).

Table 4. Fayda's Alignment with Sustainable Development Goals

SDG	Target	Fayda Contribution	Evidence	Source
SDG 16.9	Legal identity for all by 2030	~50M registered; 115M target by 2027/28	Registration data; project targets	Integrated Biometrics, 2026; World Bank, 2023
SDG 1.3	Social protection systems	PSNP integration; reduced leakage	Biometric verification; beneficiary deduplication	World Bank, 2023, 2026
SDG 5	Gender equality	50% female enrollment target; +40pp account ownership	Gender-disaggregated enrollment data; Findex data	World Bank, 2024, 2026; Women's World Banking, 2026a
SDG 8.10	Financial inclusion	90% eKYC cost reduction; 150+ institutional integrations	Cost data; integration records	Biometric Update, 2026; Integrated Biometrics, 2026
SDG 9.c	ICT access	Digital infrastructure investment; rural connectivity	Mobile registration kits; rural enrollment targets	World Bank, 2025b, 2026
SDG 10.2	Social inclusion	Refugee and IDP inclusion; "leave no one behind" principle	191,335 refugees registered; host community inclusion	UNHCR, 2025; World Bank, 2026

Note. Data compiled from World Bank implementation reports, UNHCR protection assessments, and independent evaluations.

Table 3 maps Fayda's contributions across six SDGs, revealing a cascading architecture anchored in SDG 16.9 (legal identity for all). With approximately 50 million registrations and a 115 million target by 2027/28, Fayda directly addresses the foundational identity target (Integrated Biometrics, 2026; World Bank, 2023). Downstream effects span social protection through PSNP integration and leakage reduction (World Bank, 2023, 2026), gender equality via a 50% female enrollment target and 40 percentage point gains in account ownership (World Bank, 2024, 2026; Women's World Banking, 2026a), and financial inclusion through

90% eKYC cost reduction across 150+ institutional integrations (Biometric Update, 2026; Integrated Biometrics, 2026). Social inclusion extends to 191,335 registered refugees (UNHCR, 2025; World Bank, 2026), while ICT infrastructure investment supports rural connectivity (World Bank, 2025b, 2026). This configuration demonstrates digital ID's cross-cutting developmental role.

4.2 SDG 16.9: Legal Identity for All

SDG Target 16.9, "by 2030, provide legal identity for all, including birth registration"—is the goal to which Fayda is most directly and explicitly linked (United Nations Statistics Division, n.d.). Ethiopia's progress toward this target is substantial. As of March 2026, approximately 50 million residents had been registered in the Fayda system, representing roughly 38 percent of the estimated population (World Bank, 2026). The program's target of 115 million registrations by 2027/2028 would achieve near-universal coverage of the adult population (Integrated Biometrics, 2026).

The speed of Fayda's scaling is notable in comparative perspective. Ethiopia registered approximately 18 million individuals in a single year (2024–2025), a pace that the Integrated Biometrics (2026) case study describes as among the fastest in Africa. This acceleration has been enabled by the deployment of mobile registration kits capable of operating in remote areas without electrical connection, as well as by the integration of registration with existing service delivery points such as banks, telecom offices, and agricultural extension centers (Integrated Biometrics, 2026; World Bank, 2026).

However, the achievement of SDG 16.9 requires not merely registration but the issuance of legal identity documents that are recognized and accepted across sectors. While Fayda provides a unique identification number and biometric record, the extent to which it has displaced the Kebele ID as the primary identity document varies by sector. Banks and telecom operators have moved rapidly to accept Fayda, but other institutions—including some government ministries and local administrative bodies—continue to require Kebele IDs for certain transactions (DIAL, 2025). This fragmentation complicates the claim that Fayda has fully achieved legal identity for its registrants.

4.3 SDG 1.3: Social Protection Systems

SDG Target 1.3 calls for the implementation of "nationally appropriate social protection systems and measures for all" (United Nations, 2015). Fayda's integration with Ethiopia's Productive Safety Net Programme (PSNP) and urban PSNP directly addresses this target by improving the targeting, verification, and delivery of social assistance (World Bank, 2023, 2026).

The mechanism through which Fayda contributes to SDG 1.3 is primarily reduced leakage. Prior to digital ID, Ethiopia's social protection programs faced challenges of duplicate registrations, ghost beneficiaries, and fraud—challenges documented in the KAF (2023) report, which noted that the absence of a centralized identity registry allowed individuals to maintain multiple identities across programs. Fayda's biometric verification addresses these vulnerabilities by establishing the principle of "one person, one identity," ensuring that each beneficiary is uniquely identified and that transfers reach intended recipients (Ethiopian National ID Program, 2023).

The World Bank (2023) project appraisal explicitly identified reduced fraud and leakage in social protection as a primary expected outcome, noting that Fayda provides "the ability, for the first time, to uniquely identify and securely verify individuals" (p. 8). This capability extends beyond PSNP to health insurance enrollment, pension administration, and emergency

humanitarian assistance, though, as Table 4 indicates, integration across these domains remains uneven.

Figure 4 presents the graduated integration of Fayda across five Ethiopian social protection programs, revealing a clear implementation hierarchy. The Productive Safety Net Programme (PSNP) and Urban PSNP have achieved full operational status (100%), employing biometric verification and beneficiary deduplication to reduce leakage and ensure transfers reach intended recipients (World Bank, 2023, 2026). Health Insurance Enrollment is partially integrated (65%), with identity verification operational for enrollment processes (World Bank, 2025b). Emergency Humanitarian Assistance remains in pilot phase (30%), despite Ethiopia's recurrent climate shocks demanding rapid beneficiary identification (World Bank, 2025b). Pension Administration, requiring life verification and payment authentication, remains largely unintegrated (15%) and formally planned (Fayda National ID, 2025). This uneven progression indicates that while Fayda has been successfully embedded in flagship safety net programs, comprehensive social protection coverage, particularly for the elderly and crisis-affected populations, remains an unrealized objective requiring accelerated rollout.

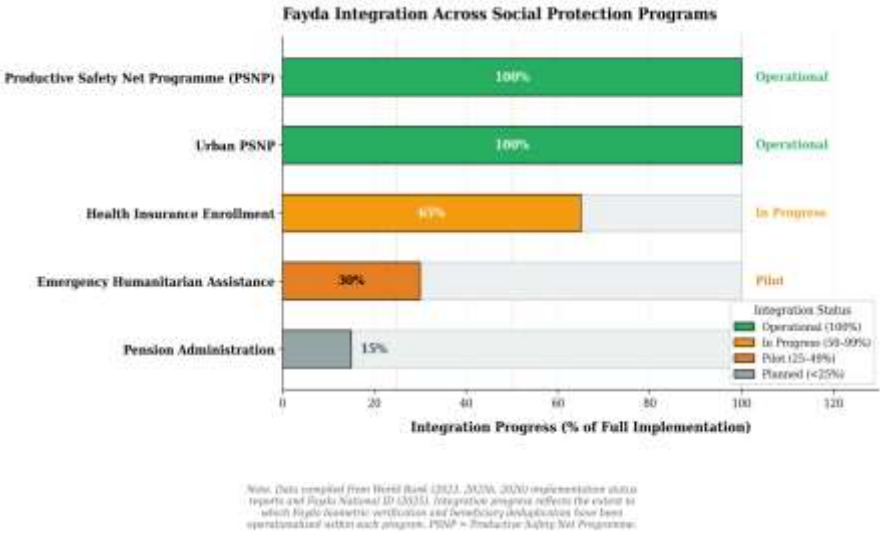


Figure 4: Fayda Integration Across Social Protection Programs

4.4 SDG 5: Gender Equality

SDG Target 5.1 calls for ending "all forms of discrimination against all women and girls everywhere," while Target 5.a emphasizes women's equal rights to economic resources (United Nations, 2015). Fayda's gender-inclusive design and its measurable impact on female financial inclusion position it as a significant contributor to these targets.

The gender gap in Ethiopian identity documentation was substantial prior to Fayda. Survey data from the ID4D-Findex 2022 round indicated that women were approximately 15 percentage points less likely than men to possess a Kebele ID, with women significantly more likely to cite lack of required documentation as a barrier (World Bank, 2024). This identity gap translated directly into financial exclusion: without formal identification, women could not open bank accounts, access credit, or receive digital payments in their own names.

Fayda has begun to reverse this pattern. The program's explicit target of 50 percent female enrollment has driven targeted outreach through women's networks, female registration officers, and accessible registration events (World Bank, 2024, 2025a). As of March 2026, women and girls constituted 41.4 percent of Fayda registrants, up from 40.7

percent in September 2025 (World Bank, 2026). While this remains below the aspirational target, the trajectory demonstrates progress.

The financial inclusion implications are significant. The World Bank (2025a) reports that biometric ID integration has accelerated female account ownership in Ethiopia by nearly 40 percentage points, closing long-standing gaps in mobile money access. This finding aligns with global evidence that digital ID disproportionately benefits women, who are more likely to lack documentation and more likely to be excluded from formal financial systems (Women's World Banking, 2026a). As the World Bank (2025a) concluded, "Fayda is closing the gender gap, empowering women to access social protection payments, open bank accounts, access loans, and fully participate in the economy."

4.5 SDG 8.10: Financial Inclusion

SDG Target 8.10 calls for strengthening "the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all" (United Nations, 2015). Fayda's contribution to this target operates through two mechanisms: cost reduction for financial service providers and identity verification for previously excluded populations.

The cost reduction mechanism is quantifiable. Electronic Know-Your-Customer (eKYC) onboarding costs have fallen by approximately 90 percent, from several dollars per verification to cents per API call (Biometric Update, 2026; Integrated Biometrics, 2026). For financial institutions, this translates into customer acquisition cost reductions of 4 to 48 percent and transaction cost savings of 23 to 49 percent (Integrated Biometrics, 2026). These savings lower the economic threshold for serving low-income customers, expanding the addressable market for financial services.

The identity verification mechanism addresses the demand-side barrier of documentation. Prior to Fayda, the absence of verifiable identity prevented millions of Ethiopians from opening accounts, accessing credit, or participating in digital payments. The integration of Fayda with over 150 public and private institutions, including banks, microfinance institutions, and mobile money providers, has begun to remove this barrier (Integrated Biometrics, 2026; World Bank, 2026). The National Bank of Ethiopia's mandate for Fayda-based account harmonization, beginning in January 2026, further accelerates this integration (Biometric Update, 2025).

Figure 5 presents five financial inclusion indicators associated with Fayda implementation, demonstrating substantial progress toward SDG 8.10. The most pronounced achievement is eKYC cost reduction, reaching 90%, which dramatically lowers barriers for financial service providers (Integrated Biometrics, 2026). Institutional integrations exceed 150, indicating ecosystem-wide adoption across public and private sectors (Biometric Update, 2026). Female account ownership has increased by 40 percentage points, closing historical gender gaps in formal finance (World Bank, 2025a, 2026). Transaction cost savings range from 23–49%, while customer acquisition cost reductions span 4–48%, reflecting variable but consistent efficiency gains (Integrated Biometrics, 2026). Collectively, these indicators demonstrate Fayda's capacity to reduce operational friction, expand institutional participation, and advance gender-inclusive financial access, core objectives of SDG 8.10 on universal financial service access.

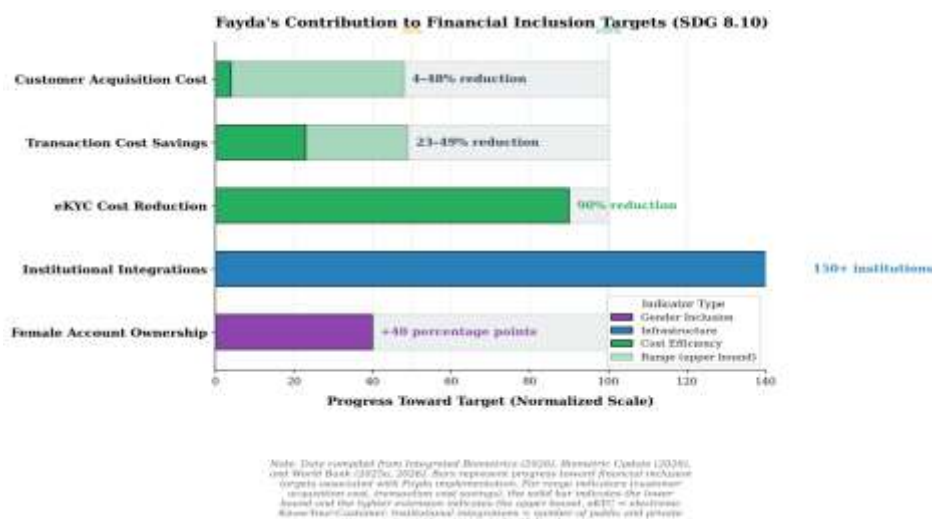


Figure 5: Fayda's Contribution to Financial Inclusion Targets

4.6 SDG 9.c: ICT Access and Infrastructure

SDG Target 9.c calls for significantly increasing "access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020" (United Nations, 2015). While Fayda is not primarily an ICT access program, its infrastructure investments contribute to this target by expanding the digital ecosystem upon which internet access depends.

The most direct contribution is the mobile registration infrastructure developed for Fayda. Integrated Biometrics' Kojak scanner, deployed in Fayda registration kits, operates in direct sunlight, extreme temperatures, and without electrical connection—enabling registration in areas beyond the reach of fixed infrastructure (Integrated Biometrics, 2026). These kits have been deployed across Ethiopia's diverse terrain, from "dusty deserts to tropical forests," extending the geographic footprint of digital service delivery.

Beyond registration, Fayda's integration with digital payment systems and mobile applications contributes to the broader digital ecosystem. The resident portal and mobile application, with over 335,000 downloads as of March 2026, provide a platform through which citizens can manage their identity credentials and access digital services (World Bank, 2026). While these figures remain modest relative to the population, they represent foundational infrastructure upon which broader digital access can be built.

4.7 SDG 10.2: Social Inclusion

SDG Target 10.2 calls for empowering and promoting "the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status" (United Nations, 2015). Fayda's explicit principle of "Leave no one behind"—echoing the SDG framework's central pledge, positions the system as a direct contributor to this target (Ethiopian National ID Program, 2023).

The most significant manifestation of this commitment is the inclusion of refugees in the Fayda system. Through the tripartite agreement between NIDP, UNHCR, and RRS, refugees are enrolled in the national ID system on par with nationals (UNHCR, 2025). As of March 2026, 191,335 refugees had received Fayda numbers, including 9,619 Sudanese refugees registered as part of the emergency response (Development Action Platform, 2025; World Bank, 2026). This inclusion represents a significant departure from the historical exclusion of

refugees from national systems and directly operationalizes the 2019 Refugee Proclamation's commitments.

The inclusion of host community members, 205,570 registered as of March 2026, further reflects a deliberate strategy to mitigate tensions between refugees and hosting populations (World Bank, 2026). By extending Fayda to both groups, the program avoids the creation of a two-tier identity system that could exacerbate social divisions.

However, the gap between principle and practice requires scrutiny. As subsequent sections demonstrate, the populations most in need of inclusion—remote rural residents, pastoralist communities, and persons with disabilities—remain underrepresented in Fayda registration (World Bank, 2025b). The system's foundational principle of "Leave no one behind" thus remains aspirational rather than fully realized.

4.8 Synthesis: Fayda's Cross-Cutting SDG Contributions

The evidence reviewed in this section demonstrates that Fayda contributes to at least six SDGs through interconnected mechanisms. The system's foundational function—providing legal identity, directly addresses SDG 16.9, while its integration with social protection, financial services, and digital infrastructure creates cascading effects across poverty reduction, gender equality, and economic inclusion.

Figure 6 illustrates Fayda's cascading contributions across six Sustainable Development Goals, structured as a hierarchical flowchart. SDG 16.9 (legal identity for all) serves as the foundational enabler, directly feeding three intermediate outcomes: SDG 1.3 (social protection systems), SDG 5 (gender equality), and SDG 8.10 (financial inclusion) (World Bank, 2023, 2026). These intermediate outcomes converge on SDG 10.2 (social inclusion), reflecting Fayda's role in extending protection to refugees, IDPs, and women (UNHCR, 2025; World Bank, 2026). Finally, SDG 10.2 feeds into SDG 9.c (ICT access and digital infrastructure), acknowledging that sustained inclusion requires foundational connectivity (Integrated Biometrics, 2026). This configuration demonstrates that digital ID functions not as an isolated intervention but as cross-cutting infrastructure whose developmental dividends propagate across multiple SDG domains simultaneously, with legal identity as the indispensable entry point.

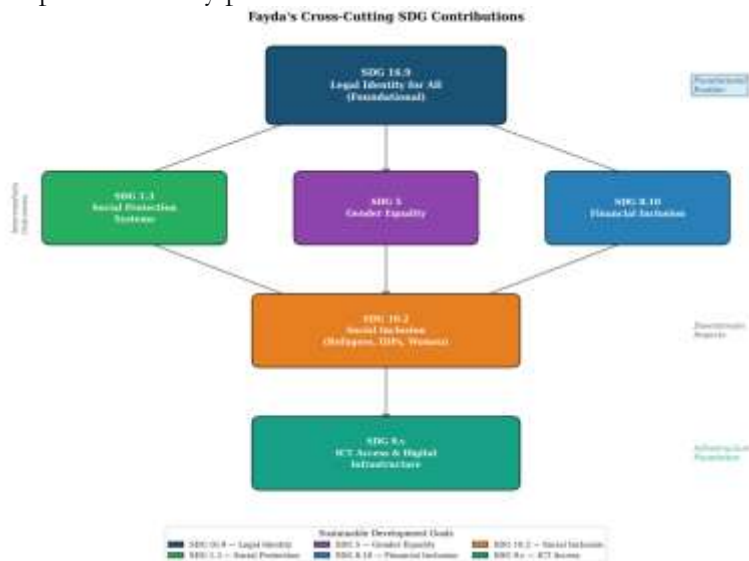


Figure 6: Fayda's Cross-Cutting SDG Contributions

4.9 The Perils: Governance, Privacy, and Exclusion Risks

a. Mission Creep and De Facto Mandatory Enrollment

A critical tension animates Ethiopia's Fayda system: while the Digital ID Proclamation describes registration as voluntary, the system has become functionally compulsory for participation in modern economic and social life. The National Bank of Ethiopia mandated Fayda for new bank accounts in Addis Ababa beginning in January 2025, with nationwide extension planned, followed by mandatory account harmonization for existing holders (Biometric Update, 2025). Ethio Telecom requires Fayda for SIM card registration, the Ministry of Revenue mandates it for new Tax Identification Numbers, and school registration will require Fayda from 2026 (Integrated Biometrics, 2026). As the NIDP's executive director candidly acknowledged, "Digital ID is not optional; it is a necessity" (Biometric Update, 2025). This configuration creates a governance paradox. A system that is nominally voluntary becomes coercive when alternative identity verification pathways are systematically eliminated. The Paradigm HQ (2025) assessment explicitly characterizes this as "mission creep," noting that "a Fayda ID will be mandatory to access banking, taxation, and education services, which is coercive" and recommending that "the government should allow individuals to access basic services using their kebele ID". The World Bank's own qualitative research anticipated this risk, recommending that Ethiopia "continue promoting enrollment in Fayda ID based on incentives rather than obligations, ensuring that alternative methods for identity verification remain available". This recommendation has not been implemented.

The Voluntary-Mandatory Paradox in Fayda Enrollment



Figure 7: The Voluntary-Mandatory Paradox in Fayda Enrollment

Figure 7 illustrates the governance paradox at the heart of Ethiopia's Fayda system: a legally voluntary program (Proclamation No. 1284/2023) that has become functionally compulsory for economic and social participation (Biometric Update, 2025; Paradigm HQ, 2025). Tier 1 documents the nominal legal framework, including consent procedures and the theoretical right to refuse. Tier 2 reveals the functional reality: Fayda is mandatory for banking (January 2025), telecommunications, taxation, education, and social protection payments (Integrated Biometrics, 2026; World Bank, 2026). Tier 3 identifies the resulting exclusion risks disproportionately borne by remote rural residents, the elderly, persons with disabilities, pastoralists, and refugees (World Bank, 2023, 2025b). The widening base visually represents how mandatory requirements propagate exclusion as alternative verification pathways are eliminated—a critical governance concern for digital public infrastructure.

4.10 Data Protection and Surveillance Concerns

Fayda collects extensive biometric and demographic data: ten fingerprints, dual iris scans, facial images, full name, gender, address, and date of birth (Ethiopian National ID Program, 2023). While the NIDP protocol explicitly prohibits collection of religion, ethnicity, and birthplace data, a deliberate design choice to mitigate discrimination risks; the system's centralization creates inherent vulnerabilities that protocol-level safeguards cannot fully address.

The World Bank's environmental and social risk assessment acknowledged "potential risks that identification could be used as a tool for discrimination or to infringe on, or deny individual or collective rights" (World Bank, 2023). This acknowledgment is significant given Ethiopia's challenging human rights landscape. The CAIDP AI Index (2026) reports that "fears remain that the Digital ID Program holds the potential to become a tool of mass surveillance in a country with a historically challenging human rights landscape". While "mass datavelliance" is not yet confirmed, the Paradigm HQ (2025) assessment notes that "it is unclear whether mass datavelliance is underway" and recommends that "it would have been more beneficial to the public if an independent body or the funding organisation had conducted an audit to ensure that the processes align with existing legislation" .

Ethiopia's data protection framework remains incomplete. The draft Personal Data Protection Proclamation was approved by the Council of Ministers, but parliamentary ratification and the establishment of an independent Personal Data Protection Commission remain pending (World Bank, 2025b). Until robust, independent oversight is operational, the system relies substantially on self-governance through the NIDP's internal protocols. This governance gap is particularly consequential given the concentration of sensitive biometric data within a single state-run entity that has recently been corporatized under Ethiopian Investment Holdings (Ethiopian Investment Holdings, 2026).

Table 5. Data Protection and Governance Risks in Fayda

Risk Category	Current Status	Governance Gap	Source
Legal Framework	Proclamation 1284/2023 enacted; Personal Data Protection Proclamation pending	Parliamentary ratification outstanding	World Bank, 2025b
Independent Oversight	Personal Data Protection Commission not yet established	Self-governance by NIDP/Faydaverse	Paradigm HQ, 2025
Data Minimization	Religion, ethnicity, birthplace excluded from collection	Protocol-level, not statutory	Ethiopian National ID Program, 2023
Consent Mechanisms	Consent forms signed; tokenization and data-sharing alerts available	Enforcement dependent on NIDP	World Bank, 2023
Surveillance Risk	Potential for mission creep beyond service delivery	No independent audit conducted	CAIDP, 2026; Paradigm HQ, 2025
Political Governance	"Substantial" risk rating maintained	Executive concentration; limited checks	World Bank, 2026

Note. Data compiled from World Bank implementation reports, independent governance assessments, and Ethiopian legal documents.

Table 5 systematically identifies six governance risk categories within Ethiopia's Fayda system, revealing a pattern of legal foundations without enforcement mechanisms. While Proclamation 1284/2023 establishes a statutory basis, the Personal Data Protection Proclamation remains unratified, and the independent Data Protection Commission has not been established—leaving the system effectively self-governed by NIDP/Faydaverse (World Bank, 2025b; Paradigm HQ, 2025). Data minimization protections (excluding religion, ethnicity, and birthplace) operate at protocol level rather than statutory guarantee, rendering them vulnerable to administrative revision (Ethiopian National ID Program, 2023). Consent mechanisms exist but depend on NIDP enforcement (World Bank, 2023). Critically, no independent audit has assessed surveillance risk, despite documented concerns about mission creep (CAIDP, 2026). The World Bank's persistent "Substantial" political governance rating reflects executive concentration with limited institutional checks (World Bank, 2026a).

4.11 Exclusion Risks for Vulnerable Populations

The World Bank project appraisal identified specific exclusion risks: "some groups can be denied identification or associated services and rights because they lack internet connectivity/devices, digital literacy/digital skills, or due to technology" (World Bank, 2023). This risk is particularly acute for populations that were already marginalized under the Kebele system.

Remote and pastoral populations face the most significant barriers. More than 77 percent of Ethiopians live in rural areas, and only about 61 percent of rural Ethiopians currently possess any form of ID . While the NIDP has deployed mobile registration kits powered by battery or solar power to reach remote communities, the gap between target and achievement remains substantial. The World Bank (2025b) implementation report indicates that as of March 2025, no registrations had been recorded in remote and hard-to-reach areas, despite a target of 7.2 million registrations in such areas by 2028. This data gap suggests that the most vulnerable populations may be the last to benefit from a system that is already becoming mandatory for service access.

Persons with disabilities face compounded barriers. The World Bank's qualitative research documented that the NIDP has implemented special handling procedures for individuals whose biometrics cannot be captured due to disability or impairment, and training for registration agents has been tailored to improve interactions with people who have intellectual or cognitive disabilities . However, these accommodations remain the exception rather than the norm, and registration center accessibility, including ramps, shade, seating, and expedited services—remains inconsistent.

Women face distinct barriers related to mobility, time poverty, and social norms. The World Bank's gender diagnostic found that women were significantly more likely to cite lack of required documentation and travel distance as barriers to registration . The use of female registration officers and community mobilization through women's networks has partially addressed these barriers, but the 41.4 percent female enrollment rate (against a 50 percent target) indicates that substantial gender gaps persist (World Bank, 2026).

4.12 Institutional Sustainability and Political Economy

The NIDP's transition into a state-owned enterprise, Faydaverse, represents a significant institutional evolution with implications for governance and accountability. Established on 4 August 2026 and joining the Ethiopian Investment Holdings (EIH) portfolio; the same sovereign wealth fund that owns Ethio Telecom and Ethiopian Airlines, Faydaverse operates with a mandate to "combine public purpose with operational agility and commercial

sustainability" (Ethiopian Investment Holdings, 2026). This corporatization model is intended to provide long-term operational sustainability beyond donor funding cycles and to position Ethiopia as a regional DPI exporter, with memoranda of understanding signed with Mozambique and implementation activity in Zambia .

Table 6. Fayda Institutional Evolution and Governance Implications

Milestone	Date	Institutional Form	Governance Implication	Source
NIDP established	2021	Government program	Executive branch oversight	Biometric Update, 2026
Proclamation No. 1284/2023	2023	Legal framework	Statutory basis; voluntary registration	Ethiopian National ID Program, 2023
World Bank project approval	December 2023	Donor-supported program	World Bank risk oversight	World Bank, 2023
Faydaverse established	August 2026	State-Owned Enterprise	EIH portfolio governance; commercial mandate	Ethiopian Investment Holdings, 2026
Regional DPI export	2026	SOE with international operations	Cross-border data governance challenges	Biometric Update, 2026

Note. Data compiled from Ethiopian Investment Holdings (2026), Biometric Update (2026), and World Bank project documents.

Table 6 traces Fayda's institutional trajectory from a government program (2021) through legal formalization (Proclamation No. 1284/2023) to its current configuration as a state-owned enterprise under Ethiopian Investment Holdings (Ethiopian Investment Holdings, 2026; Ethiopian National ID Program, 2023). Each transition has introduced distinct governance implications. The initial arrangement placed the NIDP directly within executive branch oversight (Biometric Update, 2026). World Bank approval in December 2023 added donor risk oversight, though the project has consistently maintained a "Substantial" political governance rating (World Bank, 2023, 2026). The establishment of Faydaverse in August 2026 introduces commercial imperatives alongside public mandates, while its regional DPI export activities create cross-border data governance challenges not addressed by existing Ethiopian law (Biometric Update, 2026).

However, corporatization raises questions about accountability and public interest orientation that require scrutiny. The transition separates the program's policy role from a more commercially oriented operator, though Faydaverse remains state-owned. The EIH governance framework, while providing investment expertise and portfolio support, introduces a commercial logic that may prioritize revenue generation, through eKYC fees, credential issuance, and international advisory services—over the public interest mission of universal identity coverage. Public details have not yet established how revenue will be divided among government services, private integrations, and international operations .

The World Bank's Systematic Operations Risk-Rating Tool has consistently rated "Political and Governance" risk as "Substantial" throughout project implementation (World Bank, 2025b, 2026). This rating reflects recognition that the project's success depends on political stability and governance quality beyond the technical system itself. In a context where

the same executive branch controls the NIDP, the EIH portfolio, and the regulatory apparatus, the institutional checks that would ordinarily ensure accountability, independent oversight, legislative scrutiny, judicial review, remain underdeveloped.



Figure 8: Governance Architecture and Accountability Gaps

Figure 8 illustrates the hierarchical concentration of Fayda governance within Ethiopia's executive branch, revealing a vertical chain of authority from the Prime Minister's Office through Ethiopian Investment Holdings (EIH) to Faydaverse, the state-owned enterprise operating the system (Ethiopian Investment Holdings, 2026). Policy oversight flows downward to EIH, which exercises portfolio governance over Faydaverse—the same sovereign wealth fund that owns Ethio Telecom and Ethiopian Airlines (Ethiopian Investment Holdings, 2026). Critically, the accountability gaps panel identifies five institutional deficits: no independent Data Protection Commission, limited legislative scrutiny, no independent data protection audit, underdeveloped judicial review, and executive concentration across policy and operations (Paradigm HQ, 2025; World Bank, 2026). The concentration-of-power indicator on the right visually reinforces how governance remains vertically integrated, with no horizontal checks to ensure independent oversight.

4.13 Discussion

a. The Dual Character of Digital ID as Development Infrastructure

Ethiopia's Fayda experience offers a paradigmatic case for the broader global conversation on digital public infrastructure (DPI). The system demonstrates that foundational digital identity can deliver genuine economic and social dividends: reduced transaction costs, expanded financial inclusion, targeted social protection, and refugee integration (World Bank, 2026; Integrated Biometrics, 2026). The speed of scaling, from 3 million registrations in September 2023 to nearly 50 million by early 2026 is remarkable in comparative perspective, positioning Ethiopia among the fastest-scaling digital ID systems on the African continent (World Bank, 2026; Ethiopian Investment Holdings, 2026).

Yet the perils are equally instructive and demand analytical attention. The transformation of a legally voluntary system into a de facto requirement for basic services, the concentration of sensitive biometric data without fully operational independent oversight, and the persistent risk of excluding those who cannot navigate digital registration processes all represent governance failures in waiting (Paradigm HQ, 2025; CAIDP, 2026; World Bank, 2023). These are not merely technical shortcomings but reflect deeper questions about the

political economy of digital infrastructure in contexts characterized by executive dominance and limited institutional checks.

The Fayda case thus illuminates a fundamental tension in DPI scholarship: digital infrastructure is not inherently transformative, inclusive, or equitable (T20 South Africa, 2024). As the T20 Communiqué (2024) emphasizes, "adding layers to the 'digital stack' without governance frameworks that address fundamental digital inequalities (and the structural inequalities that determine those outcomes) will worsen existing inequalities and injustices rather than alleviate them". The resolution of this paradox lies not in abandoning digital ID but in governing it as public infrastructure, subject to the same standards of transparency, accountability, and independent oversight that democratic societies demand of other essential systems.

b. Governance Imperatives: Five Pillars for Accountable Digital ID

The evidence reviewed in this article supports five interconnected governance imperatives for transforming Fayda from a technology project into accountable public infrastructure.

First, an independent data protection authority with enforcement powers, not merely advisory capacity. Ethiopia's Personal Data Protection Proclamation was approved by Parliament in 2024, establishing a legal framework for lawful processing, purpose limitation, and data subject rights (World Bank, 2025b; Gebeyehu, 2026). However, the Ethiopian Communications Authority (ECA) is charged with enforcement, and its independence from executive influence remains uncertain (Gebeyehu, 2026; CAIDP, 2026). The African Union's Interoperability Framework for Digital ID explicitly recommends that an "independent Supervisory Body to be established by Member States may be necessary to ensure that participating entities remain compliant with the rules laid down by the Trust Framework" and that this body "should be empowered to receive and act upon complaints by IDC-ID holders affected by poor practice, data breaches, identity fraud, or other incidents". Ethiopia's governance architecture lacks this independent supervisory capacity, creating a structural accountability deficit.

Second, transparent grievance mechanisms with independent oversight. Fayda's current grievance mechanism handles approximately 30,000 cases daily, a volume that suggests both the system's scale and the prevalence of user concerns (World Bank, 2026). While this mechanism represents a promising start, its independence from the NIDP/Faydaverse operational hierarchy is unclear. The World Bank's qualitative research documented that the NIDP has implemented special handling procedures for individuals whose biometrics cannot be captured and has provided training for registration agents on interactions with persons with disabilities (World Bank, 2024). However, these accommodations remain exceptional rather than systemic. Independent grievance mechanisms, operated outside the executive branch and with authority to compel remedies are essential for building the trust upon which digital ID systems depend. As DIAL (2025) emphasizes, "Without trust, people will actively or constructively quit using the system as intended. In other words, the system will fail".

Third, statutory limits on mandatory use that preserve alternative pathways for service access. The Paradigm HQ (2025) assessment explicitly characterizes Fayda's de facto mandatory status as "mission creep," noting that "despite initial claims that the kebele ID could still be used, a Fayda ID will be mandatory to access banking, taxation, and education services, which is coercive". The organization recommends that "the government should allow individuals to access basic services using their kebele ID". This recommendation aligns with

broader DPI principles emphasizing that digital systems should expand, not restrict, access to essential services. The World Bank's own project appraisal recommended that Ethiopia "continue promoting enrollment in Fayda ID based on incentives rather than obligations, ensuring that alternative methods for identity verification remain available" (World Bank, 2023). This recommendation has not been implemented, and the governance gap between principle and practice remains substantial.

c. Fourth, periodic independent audits of system security, bias, and exclusion

The Paradigm HQ (2025) assessment notes that "it would have been more beneficial to the public if an independent body or the funding organisation had conducted an audit to ensure that the processes align with existing legislation, and that the data is not misused or transformed to augment mass surveillance repression". The CAIDP (2026) AI Index similarly reports that "fears remain that the Digital ID Program holds the potential to become a tool of mass surveillance in a country with a historically challenging human rights landscape". While the NIDP has conducted a self-assessment using DIAL's Digital ID Assessment tool, a notable step toward transparency, self-assessment cannot substitute for independent audit (DIAL, 2025). The World Bank's identity management systems analyses recommend "independent experts to consult on technology systems, legal experts to help develop frameworks for data protection and privacy" as essential components of robust identity governance (World Bank, 2018).

d. Fifth, clear data minimization and purpose limitation enforceable through law, not just protocol.

Fayda's founding law and protocol documents establish important principles: the Proclamation holds that "only the data needed to prove identity should be collected," and the system deliberately excludes sensitive categories such as ethnicity, religion, health records, and criminal history (Ethiopian National ID Program, 2023; Gebeyehu, 2026). However, these protections operate at protocol level rather than as statutory guarantees enforceable through independent judicial review. The corporatization of Fayda into Faydaverse introduces commercial incentives that may pressure these boundaries. As Gebeyehu (2026) warns, "Once a system earns its keep from the number of identity checks it processes, the people who run it acquire an interest in more checks, more integrations and more data. This interest need not be sinister to be real". The logging of behavioural and transactional records—timestamps, device fingerprints, access histories, location traces—that gather around every authentication creates a data trail far exceeding what is necessary for identity verification. Statutory purpose limitation, enforced through independent oversight, is essential to prevent mission creep in the commercial as well as the security domain.

Table 7. Five Governance Imperatives for Accountable Digital ID

Imperative	Current Status	Governance Gap	Recommended Action
Independent Data Protection Authority	ECA charged with enforcement; independence uncertain	No dedicated DPA with enforcement powers	Establish independent DPA per AU Framework
Transparent Grievance Mechanisms	30,000 daily cases; NIDP-operated	Independence from operational hierarchy unclear	Independent redress mechanism with remedy authority
Statutory Limits on Mandatory	Fayda mandatory for banking,	No alternative pathways	Statutory provision for

Use	telecom, tax, education	preserved	alternative ID acceptance
Independent Audits	Self-assessment completed; no independent audit	No external security, bias, or exclusion audit	Periodic independent audits with public reporting
Statutory Data Minimization	Protocol-level protections; sensitive categories excluded	Not enforceable through law	Statutory purpose limitation; judicial review

Note. Data compiled from Paradigm HQ (2025), DIAL (2025), World Bank (2023, 2024), Gebeyehu (2026), and African Union (2022).

Table 7 synthesizes five governance imperatives for transforming Fayda from a technology project into accountable public infrastructure. Each imperative reveals a consistent pattern: formal mechanisms exist, but independence and enforceability remain absent. The Ethiopian Communications Authority is charged with data protection enforcement, yet its independence from executive influence is uncertain, and no dedicated Data Protection Authority with enforcement powers exists as recommended by the African Union (2022) Interoperability Framework. Grievance mechanisms handle 30,000 daily cases but remain NIDP-operated, raising questions about independence from the operational hierarchy (World Bank, 2026). Fayda's mandatory status across banking, telecom, taxation, and education lacks statutory provision for alternative identification pathways (Paradigm HQ, 2025). Self-assessment has been completed, but no independent audit of security, bias, or exclusion has been conducted (DIAL, 2025; Paradigm HQ, 2025). Finally, protocol-level data minimization protections remain unenforceable through law, leaving purpose limitation dependent on administrative discretion rather than judicial review (Ethiopian National ID Program, 2023; Gebeyehu, 2026).

e. The Corporatization Dilemma: Public Purpose and Commercial Logic

The transition of the National ID Program into Faydaverse, a state-owned enterprise under Ethiopian Investment Holdings, represents a significant institutional evolution with implications that extend beyond Ethiopia's borders. The restructuring aims to provide long-term operational sustainability beyond donor funding cycles and to position Ethiopia as a regional DPI exporter, with memoranda of understanding signed with Mozambique and implementation activity in Zambia (Ethiopian Investment Holdings, 2026; Biometric Update, 2026).

This corporatization model is not unique to Ethiopia. The African Union's Interoperability Framework anticipates that "trusted authorities can either issue the credentials themselves or mandate another entity with a more adequate skillset (e.g., ICT agency, private sector)". However, the Framework also emphasizes that "the protection of individuals should be paramount" and that the Supervisory Body "should act as a champion of individuals and their rights". Ethiopia's current governance architecture lacks this independent champion.

The concern is not cost recovery per se. A public service that pays part of its own way is defensible, and the shift away from donor dependency addresses legitimate sustainability concerns. The concern is rather subtler: the alignment of commercial incentives with identity system operations. Gebeyehu (2026) articulates this with precision: "Once a system earns its keep from the number of identity checks it processes, the people who run it acquire an

interest in more checks, more integrations and more data" . This interest need not be sinister to be consequential. Over time, it can quietly shape decisions about what is collected and stored, how long data is retained, and how far identity extends into everyday transactions.

The EIH portfolio structure, which includes Ethio Telecom, Ethiopian Airlines, and Faydaverse, creates additional governance complexities. When the same sovereign wealth fund owns the telecommunications provider, the national airline, and the digital identity system, the boundaries between public service obligations and commercial imperatives become blurred. The Ethiopian Communications Authority, charged with data protection enforcement, operates in a regulatory environment where the regulated entities are owned by the same state investment vehicle that owns the identity system. This concentration of ownership and regulatory authority raises questions about the institutional independence necessary for effective oversight.

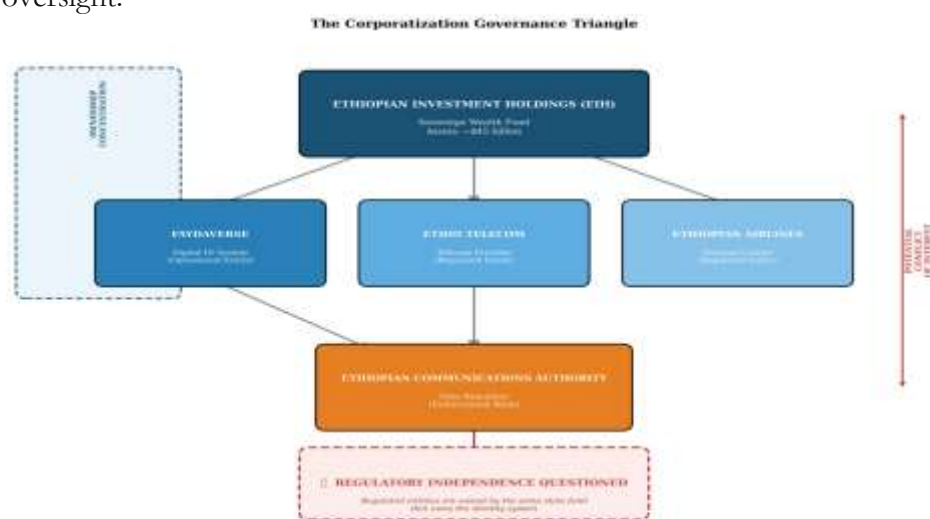


Figure 9: The Corporatization Governance Triangle

Figure 9 illustrates the corporatization governance triangle, showing how the concentration of ownership (EIH) and regulatory authority (ECA) within the executive branch creates structural questions about independence. Data from Ethiopian Investment Holdings (2026), Gebeyehu (2026), and CAIDP (2026).

f. Toward a Governed DPI Framework: Theoretical and Policy Implications

The Fayda case contributes to a growing body of evidence that DPI governance requires more than technical standards and legal frameworks. It requires institutional independence, transparent accountability mechanisms, and a normative commitment to inclusion that is enforceable rather than aspirational.

The T20 South Africa (2024) communiqué on DPI governance offers a framework that resonates with the Ethiopian experience: "For DPIs to fulfil their promise of equitable inclusion, a governance framework of common principles and standards is essential. The foundational principles of democratic governance are freedom (liberty), equity and justice" . These principles are notably absent from many DPI governance frameworks, which tend to emphasize data protection and cybersecurity as the primary governance concerns. While these are necessary conditions, the T20 argues, "they are not adequate conditions for the creation of a trusted enabling environment".

The African Union's Interoperability Framework provides continental-level guidance that Ethiopia could leverage. The Framework establishes that digital ID systems should "empower all African citizens with control over their personal data, including the ability to selectively disclose only the information required for a particular transaction". It calls for "an independent Supervisory Body" with authority to "receive and act upon complaints" and to serve as "the focal point for mechanisms of redress". Ethiopia's domestic governance framework does not yet meet these continental standards.

The World Bank's identity management systems analyses across 17 African countries identified recurring governance challenges that Fayda exemplifies: limited legal and regulatory frameworks, insufficient institutional capacity, and inadequate attention to accessibility barriers (World Bank, 2018). The analyses recommend "independent experts to consult on technology systems, legal experts to help develop frameworks for data protection and privacy" as essential components of robust identity governance. These recommendations remain relevant for Ethiopia's next phase of implementation.



Figure 10: Governance Maturity Model for Digital ID Systems

Figure 10 presents a governance maturity model for digital ID systems, positioning Ethiopia between Levels 2 (Functional) and 3 (Transparent) based on evidence from World Bank (2023, 2025b, 2026), DLAL (2025), and Paradigm HQ (2025).

g. The Path Forward: From Technology Project to Public Infrastructure

The resolution of Fayda's paradox—its simultaneous promise and peril—lies not in abandoning digital ID but in governing it as public infrastructure. This requires a normative shift in how the system is conceptualized: from a technology project to be implemented to a public utility to be governed.

The distinction is consequential. Technology projects are evaluated by metrics of coverage, efficiency, and technical performance. Public infrastructure is evaluated by metrics of equity, accountability, and public trust. Fayda has excelled by the former metrics: nearly 50 million registrations, 150+ institutional integrations, 90 percent eKYC cost reduction (Integrated Biometrics, 2026). Its performance by the latter metrics remains unproven.

The World Bank's decision to support Fayda through the "Digital ID for Inclusion and Services Project" reflects recognition that identity systems are instruments of inclusion, not merely administrative tools (World Bank, 2023). The project's development objective, "to increase access to and use of a robust and inclusive foundational ID system for service

delivery and social protection", embeds this normative orientation (World Bank, 2023). However, the project's own risk assessments have consistently rated "Political and Governance" risk as "Substantial," acknowledging that the project's success depends on factors beyond technical implementation (World Bank, 2025b, 2026).

The governance imperatives outlined in this section are not radical. They reflect international best practices articulated by the African Union, the World Bank, and DPI governance scholars. They are, however, politically demanding. They require the executive branch to accept independent oversight of a system it controls. They require legislative engagement with a system that has largely been developed through executive action. They require judicial mechanisms capable of reviewing administrative decisions about identity and data. In short, they require the institutional checks that distinguish governed public infrastructure from executive technology projects.

The Fayda experience will be watched closely across Africa and beyond, not only for what it achieves but for how it governs what it builds. The system's ultimate legacy may depend less on the number of registrations it achieves than on the accountability mechanisms it establishes, or fails to establish, for the 50 million Ethiopians whose biometric data it holds.

V. Conclusion

Ethiopia's Fayda digital ID system stands at a critical juncture, embodying both the transformative promise and the governance perils of digital public infrastructure. The evidence synthesized in this review substantiates Fayda's developmental dividends: a 90 percent reduction in eKYC costs, a 40 percentage point gain in female account ownership, the extension of legal identity to 191,335 refugees, and projections of 7 percent GDP growth. These outcomes affirm that foundational digital identity can accelerate financial inclusion, streamline social protection, and advance multiple Sustainable Development Goals.

Yet the same system that empowers also concentrates power. Fayda's de facto mandatory character, spanning banking, taxation, telecommunications, and education; its extensive biometric data holdings, and its governance within executive-controlled institutions create risks that cannot be dismissed as hypothetical. The peril is not that Fayda will fail technically, but that it will succeed in ways that entrench exclusion or enable surveillance. As Gebeyehu (2026) cautions, a system that earns its keep from identity checks acquires an interest in more checks, more integrations, and more data, an interest that need not be sinister to be consequential.

The path forward requires treating digital ID not as a technology project but as public infrastructure, subject to the same standards of transparency, accountability, and independent oversight that democratic societies demand of other essential systems. Ethiopia's Fayda experience will be watched closely across Africa and beyond, not only for what it achieves but for how it governs what it builds.

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