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DEEPENING REGIONAL ECONOMIC
INTEGRATION THROUGH CROSS-BORDER
PAYMENTS, FINTECH, INFRASTRUCTURE,
AND POLICY COORDINATION IN AFRICA

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Abstract

Historical evidence suggests that the AfCFTA has the largest free trade area in the world by number of participating countries, yet Africa remains significantly less regionally integrated than Europe, Asia, and the Americas. On this note, this paper argues that the observed integration deficit in Africa may have stemmed from the failure of the trade, financial, infrastructural, digital, and institutional systems that support economic activity to operate seamlessly across borders. It further argues that well-coordinated regional policies and digital financial integration represent some of the viable mechanisms through which trade, infrastructure, fintech, and cross-border payments can be interconnected. Moreover, consistent with this argument, evidence suggests that both digital adoption and financial inclusion have expanded in Africa, but infrastructure gaps, payment fragmentation, and regulatory divergence continue to constrain economic integration of the continent. Similarly, the empirical findings also support this argument by showing that stronger digital ecosystems are associated with higher regional integration in Africa. In addition, the combined digital-regional integration score was also found to be strongly associated with overall integration performance. However, this paper observes that part of this relationship arises from overlap among the components used in constructing the measure. Also, this paper identifies cybersecurity threats, unequal digital participation, data-governance concerns, and financial contagion as risks that must be managed as integration deepens. Therefore, this paper concludes that deeper regional integration in Africa will require investments in digital and physical infrastructure, interoperable payment systems such as PAPSS, regulatory harmonisation, and stronger regional institutions, as well as improved policy coordination. This is important because such measures could strengthen trade, productivity, financial inclusion, regional value chains, and economic resilience across Africa.

Keywords: Regional integration; digital integration; cross-border payments; fintech; digital infrastructure; Africa.

JEL: F15; F36; O33; G23; O55.

1.0 Introduction

Historical evidence shows that regional economic integration has become a developmental imperative across many regions. However, the interaction effects of geopolitical fragmentation, supply-chain reconfiguration, climate risks, digital disruption, and financial volatility have become an important influence on the extent of regional economic integration (IMF, 2023; Farrell & Newman, 2023). However, regional integration in Africa is not simply about expanding trade; it is a strategy for enlarging markets, improving productivity, supporting industrialisation, strengthening resilience, and increasing the continent's bargaining power in global economic governance. Thus, the launching of the African Continental Free Trade Area (AfCFTA) has created the institutional framework for a unified continental market. However, the operational

systems needed to translate the development promise of AfCFTA into trade, investment, and productive integration were found to be significantly weak. This is so, regardless of the potential for AfCFTA to be the largest free trade area in the world (UNCTAD, 2026), bringing together the 55 member countries of the African Union into a single market for goods and services.

The foregoing suggests that economic integration in Africa is very promising if countries show the political commitment required for its actualisation. It can be said that the AfCFTA marks the beginning of a journey, not the end of the road. This is because, so far, only negotiations on goods, services and dispute settlement have been concluded. However, critical protocols on investment, competition, IPR and e-commerce are pending. Thus, when compared to the depth of integration in other regions such as the EU, the Americas and Asia, the continent is far from realising this objective. For example, intra-African trade accounted for only 16.84 per cent of total trade in 2024 (UNCTAD, 2025). This is far below what was achieved by the Americas (54.22 per cent), Asia (58.51 per cent) and the EU (67.16 percent).

Nevertheless, available evidence also indicates that the gap in intra-African trade extends beyond trade to include disparities in infrastructure, finance, digital connectivity, institutional frameworks, and policy coordination. For example, more than half of the African population lacks access to power, and other infrastructure required for connectivity falls far short of global standards (World Bank, 2023). Furthermore, it has been shown that Africa requires between \$130 and \$170 billion each year to fund infrastructure development, while the financing gap is up to \$108 billion (UNECA, 2024). These barriers tend to increase transaction costs, limit regional value chains, and make it difficult for African firms to trade with neighbouring countries, despite formal commitments to market opening (World Bank, 2023; AUC, 2025; Afreximbank, 2024). Moreover, evidence shows that the presence of an infrastructure deficit is associated with a 2 per cent decrease in growth and about 40% loss in productivity in Africa (UNECA, 2024).

Against this backdrop, ***this paper hypothesises that the integration deficit in Africa may have originated from the failure of the trade, financial, infrastructural, digital, and institutional systems that support economic activity to operate seamlessly across borders.*** This also suggests that the integration challenge may be fundamentally rooted in a systems integration challenge. In addition, ***this study also argues that digital financial integration can be a potent instrument for linking trade, infrastructure, fintech, cross-border payments, and policy coordination in Africa.*** This is plausible because financial inclusion on the continent has expanded, and digital innovation

is increasingly promoting regulatory harmonisation on the continent. However, this paper also acknowledges that there is the presence of a mismatch between the continental market opening initiatives and the financial, digital, infrastructural, legal, and institutional systems required to support a truly integrated African economy.

However, ***this paper additionally argues that attaining higher levels of digital financial integration is central to closing this gap***, for several reasons. First, its attainment provides the mechanism through which trade integration, infrastructure development, fintech innovation, cross-border payments, and policy coordination can reinforce one another. Second, the presence of efficient payment systems reduces the cost of commerce. Third, the emergence of fintech has expanded access to finance for households and firms. Fourth, the attainment of better digital infrastructure also improves connectivity and information flows. Finally, the presence of harmonised regulation tends to strengthen interoperability and trust. Moreover, evidence suggests that regional payment initiatives such as the Pan-African Payment and Settlement System (PAPSS) demonstrate how digital financial infrastructure can reduce dependence on external settlement systems, support local currency transactions, and improve the practical implementation of AfCFTA (Tembo & Okoro, 2021; Kouty, 2024).

This paper, therefore, treats digital financial integration not as a narrow financial-sector reform, but as one of the core potential instruments for deepening regional economic integration in Africa. In addition, ***this paper examines how digital financial integration, cross-border payments, fintech ecosystems, digital infrastructure, and policy coordination can help Africa move from treaty-based integration to fully operational economic integration***. However, the paper also recognises that deepening economic integration will create new challenges, such as ***cybersecurity risks, data governance disputes, financial contagion, regulatory arbitrage, and uneven distribution of gains***. In this light, ***this paper points out that the policy challenge in Africa is therefore twofold. First, Africa must remove the barriers that fragment its markets. Second, Africa should build institutions capable of managing the risks associated with deeper interdependence***. Thus, the following are the objectives of this paper:

- i. It examines the current state of integration in Africa.
- ii. It examines the role of digital financial integration as a connector across sectors, and the implications for development and emerging markets.

- iii. It then concludes with policy recommendations for building a more connected, competitive, and resilient African economy.

2.0 Why Integration Matters in an Era of Geoeconomic Fragmentation

Recent efforts of African *suggests that the integration agenda of the continent is unfolding as the global economy is becoming increasingly fragmented*. For example, geopolitical tensions, trade-policy uncertainty, friend-shoring and supply-chain restructuring *are redirecting trade and investment towards politically aligned countries*. In addition, foreign direct investment is also becoming more *concentrated among geopolitical partners*, thus leaving many emerging and developing economies *vulnerable to the vagaries of the relocation of capital and technology-intensive activities* (Ahn et al., 2023). It has been shown that trade-policy uncertainty may also further discourage firms from undertaking investment, entering export markets and developing cross-border supply chains (Handley & Limão, 2022). *This is because rising uncertainty increases the value of postponing irreversible business decisions*.

It should be noted that *these developments make African regional integration important for both economic transformation and resilience*. Moreover, evidence suggests that geoeconomic fragmentation can affect economies through interconnected channels of trade, capital flows, technology diffusion, payment systems and reserve-currency arrangements, with developing economies likely to face relatively greater costs (Norrington, 2024). However, *the presence of stronger regional markets, payment systems, infrastructure and policy coordination can reduce excessive dependence on external economic systems and improve Africa's capacity to absorb global shocks*. In this context, the AfCFTA should be viewed not only as a market-opening initiative but also as a platform for building regional resilience. However, *the evidence found in this paper shows that trade integration in Africa has advanced more rapidly than infrastructure, productive and digital integration. In this light, regional resilience will therefore depend on whether market liberalisation is supported by interoperable payments, reliable infrastructure, stronger regional value chains and coordinated regulatory institutions*.

In addition, the international evidence supports this argument. For example, a review by Norrington(2024) finds that advancing regional integration can partly shield economies from the negative effects of geoeconomic fragmentation. In addition, Ahn et al. (2023) similarly find that

FDI fragmentation may disproportionately affect emerging and developing economies through reduced capital accumulation and weaker technology transfers.

3.0 Stylised Facts: Africa's Integration Deficit and Need for Digital Financial Integration

The previous section shows that despite the decades of policy efforts, *Africa has continued to have lower levels of regional integration than other major economic regions*. One of the most visible indicators of the severity of this deficit is the relatively low level of intra-African trade. Table 1 indicates that Intra-African trade accounted for only 16.84 per cent of total trade in 2024. This is relatively low when compared with 58.5 per cent in Asia and 68.1 per cent in Europe. *This evidence establishes Africa as the least trade-integrated continent after Oceania*. One reason for this could be the differences between raw material exports and manufactured goods imports. Thus, if Africa pursues Agenda 2063 rigorously, intra-African trade will further improve.

Table 1: Intra-Regional Trade Share by Region (%) from 2010 to 2024

Year	Africa	Americas	Asia	Europe	Oceania	Intensity Africa VS Americas	Intensity Africa VS Asia	Intensity Africa VS Europe
2019	16.71	54.02	59.53	67.95	5.79	30.93	28.07	24.59
2020	17.48	52.54	58.52	68.08	5.63	33.27	29.87	25.68
2021	15.06	53.36	58.65	68.63	4.47	28.22	25.68	21.94
2022	14.63	54	58.45	68.17	4.18	27.09	25.03	21.46
2023	15.77	54.45	57.77	67.15	4.44	28.96	27.30	23.48
2024	16.84	54.22	58.51	67.16	4.85	31.06	28.78	25.07
The intensity is computed by comparing Africa's intra-regional trade share with the intra-regional trade share of another region.								
$\text{Intensity (Africa Vs Region)} = \left(\frac{\text{Africa}}{\text{Comparator Region}} \right) \times 100 \text{ \& } \text{Africa Vs Asia} = \left(\frac{16.84}{58.51} \right) \times 100 = 28.78$								

Source: Authors' computation using data from UNCTAD (2025).

In addition, Figure 1 indicates that the African trade integration intensity is significantly far below that of the Americas, Asia and Europe between 2019 and 2024. However, Figure 1 also shows that there was an improvement after 2022, *but the intensity in 2024 was still only about 31% of the Americas, 29% of Asia and 25% of Europe. This evidence implies that the African integration problem may be structural*. One of the implications of this finding is that *trade agreements alone are not enough; stronger payment systems, infrastructure, logistics, regulatory harmonisation and policy coordination are needed for AfCFTA to translate into higher intra-African trade*.

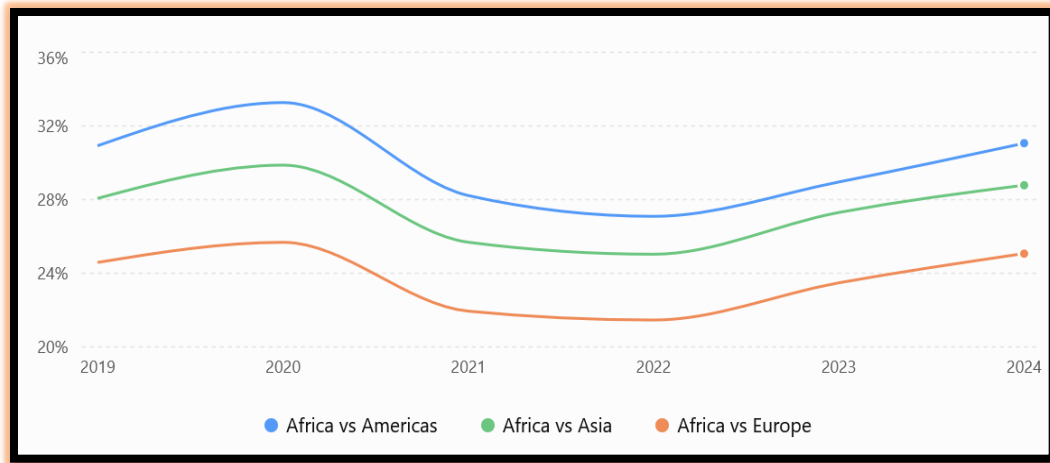


Figure 1: Africa's Trade Integration Intensity Relative to Other Regions (2019–2024). **Source:** Authors' Computation

Similarly, Figure 2 shows that the deficit was consistently highest relative to Europe, followed by Asia and then the Americas. This finding indicates that Africa's intra-regional trade integration is furthest from the European level of integration and relatively closer to the Americas, although the gap remains substantial. In addition, the pattern also shows that the deficit widened in 2021 and 2022. This suggests that Africa's relative trade integration performance weakened during those years when compared with other major regions. However, the deficit began to narrow again in 2023 and 2024. In 2024, Africa's deficit stood at 68.94 per cent relative to the Americas, 71.22 per cent relative to Asia and 74.93 per cent relative to Europe.

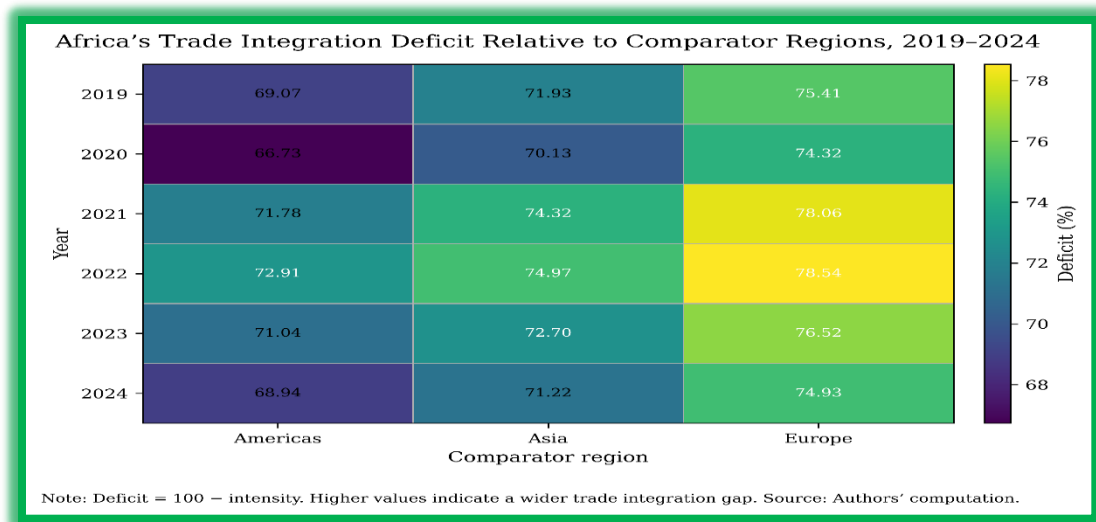


Figure 2: Africa's Distance (Deficit) from Global Regional Trade Integration Benchmarks, 2019–2024. **Note:** The heatmap shows the size of Africa's trade integration deficit relative to the Americas, Asia and Europe. The deficit is computed as: Deficit=100–Intensity. A higher percentage means a wider gap between Africa and the comparator region.

In addition, Table 2 shows that ***regional integration in Africa is highly uneven across all its dimensions***. It reports that trade integration has the highest average score of 0.648. This evidence reflects significant progress in trade liberalisation and market access initiatives in Africa. Furthermore, Table 2 indicates that infrastructure integration (0.220), macroeconomic integration (0.39), and productive integration (0.193) are substantially weaker. In addition, the standard deviation of the Composite Regional Integration (ARII) was found to be 0.117, with a minimum value of 0.094 and a maximum value of 0.678. ***This evidence suggests that there is the presence of strong imbalance across all dimensions of integration in Africa.*** One of the implications of this finding is that it points out that trade reforms may have advanced faster than the supporting systems required to sustain deeper integration. Also, this finding supports ***one of the central arguments of this paper that Africa has made greater progress in opening markets than in developing the systems required to support operational integration.***

The following facts support the above hypothesis. First, Table 2 indicates that average electricity access stands at 59.87, and internet usage averages only 43 per cent. This evidence suggests that a considerable proportion of the African population remains outside the basic electricity and digital networks needed to support cross-border payments, fintech adoption, digital trade, and deeper regional integration. They also show that ***infrastructure constraints limit Africa's connectivity.***

Table 2: Pooled Descriptive Statistics of Integration and Infrastructure Indicators

Variable	Mean	Std. Dev.	Minimum	Maximum
Electricity Access (%)	59.87	26.33	5.40	100.00
Internet Users (%)	43.18	23.50	6.67	91.20
Mobile Connectivity Index	46.37	14.10	12.68	73.98
Logistics Performance Index	2.78	0.41	2.08	3.80
Trade Integration (ARII)	0.648	0.345	0.000	1.000
Infrastructure Integration (ARII)	0.220	0.167	0.009	0.898
Productive Integration (ARII)	0.193	0.135	0.046	1.000
Macroeconomic Integration (ARII)	0.390	0.129	0.029	0.790
Composite Regional Integration (ARII)	0.378	0.117	0.094	0.678
Infrastructure–Digital Integration Intensity Index	0.514	0.174	0.083	0.873
Digital Regional Integration Score	0.449	0.122	0.126	0.731

Note: (1) The Core Infrastructure–Digital Integration Intensity Index (IDII Core) captures electricity access, internet usage, mobile connectivity and logistics performance. The Extended IDII additionally incorporates broadband penetration. (2) The Digital Regional Integration Score combines digital readiness indicators with regional integration measures. (3) The Composite Africa Regional Integration Index (ARII) measures the average performance across the dimensions of trade integration, infrastructure integration, productive integration, macroeconomic integration, and free movement of people.

Source: Authors' computations using ARII, World Development Indicators, and GSMA.

In addition, the estimated large standard deviations (26.33 and 23.50) indicate substantial disparities across countries. ***Consistent with the previous findings, this evidence suggests that digital readiness is highly uneven in Africa.*** However, Table 2 also demonstrates that ***some countries may have achieved near-universal electricity access and advanced digital ecosystems, but others continue to face severe infrastructure deficits.*** This evidence is indicated by the maximum of 91.20 (73.98) per cent and the minimum of 6.67 (12.68) per cent for internet users (mobile connectivity), respectively. Also, the statistics in Table 2 also show that the average Infrastructure–Digital Integration Intensity Index score is 0.514. ***This suggests that Africa has achieved only moderate progress in building the digital and infrastructure foundations necessary for deeper regional integration.*** Furthermore, Table 2 reports that the Digital Regional Integration Score averages 0.449. ***This indicates considerable room for improvement in linking digital readiness to broader integration outcomes on the continent.*** Additional statistics from Table 3 support these findings.

In Table 3, we report the panel descriptive statistics for the infrastructure indicators to show within-country variation and between-country variation¹. The results indicate that differences across the countries tend to be substantially larger than changes within countries over time. For example, Table 3 shows that the between-country variation in electricity access is 27.49. This value was found to be almost four times larger than the within-country variation (7.23). In addition, this paper also observes a similar pattern for internet usage and mobile connectivity (Table 3). ***These findings suggest that the challenge of integration in Africa is driven less by short-term fluctuations and more by persistent structural differences in infrastructure and digital readiness across the countries.***

Table 3: Panel Descriptive Statistics for Infrastructure Indicators

Variable	Mean	Between SD	Within SD
Electricity Access (%)	50.73	27.49	7.23
Internet Users (%)	26.21	17.37	13.68
Mobile Connectivity Index	38.56	13.30	5.72
Logistics Performance Index	2.86	0.31	0.30

Source: Authors' computations using data from World Development Indicators.

Finally, the evidence presented in this section suggests that Africa has made greater progress in opening its markets than in developing the systems required to support a full operational integration. This is important given that evidence also demonstrates that achieving higher levels of regional integration can generate significant development benefits for African

countries (World Bank, 2023). In addition, empirical evidence shows that adequate infrastructure and the full implementation of the AfCFTA could increase the intra-African trade volume from 15 per cent to 33 per cent. However, the analysis in this section also points out that the challenge is not whether integration works in Africa, but how to deepen and accelerate it. Moreover, the evidence presented in this section supports the central hypothesis of this paper that ***the integration deficit of Africa is a reflection of the weaknesses across interconnected systems rather than isolated sectors. Thus, addressing these weaknesses would require coordinated efforts across payments, fintech, infrastructure, institutions, and policy frameworks.*** This allows Africa to have higher opportunities for industrialisation, specialisation, and economies of scale.

4.0 Digital Financial Integration, Regional Integration and Economic Resilience in Africa

This section builds on the preceding evidence of the integration deficit in Africa to examine how digital financial integration can support regional economic transformation and strengthen resilience to external shocks.

4.1 Digital Financial Integration in Africa

The evidence presented so far emphatically shows that Africa is one of the least integrated continents. Also, its infrastructure and digital connectivity deficits are among the most severe constraints. However, ***this paper observes that digital financial integration has emerged as one of the most transformative developments in Africa's economic landscape over the past two decades. This is because the rapid diffusion of mobile technologies, expansion of digital payment systems, the growth of fintech ecosystems, and increasing adoption of digital financial services have fundamentally altered how individuals, firms, and governments participate in financial markets today.*** Also, it should be noted that while traditional integration efforts tend to focus primarily on reducing tariffs and facilitating trade, ***digital financial integration was often found to address the financial and transactional barriers that have historically constrained regional economic integration.***

It is also important to note that ***digital financial integration in this context refers to the increasing interconnectedness and harmonisation of financial systems, digital payment platforms, fintech ecosystems, and regulatory frameworks across national borders.*** The attainment of this type of integration is important, given that it would enable individuals and firms to transfer funds, access financial services, invest, borrow, and conduct commercial transactions across jurisdictions with minimal friction. In addition, ***this integration involves interoperable***

payment systems, digital banking platforms, mobile money ecosystems, fintech innovations, digital identity systems, and harmonised regulatory frameworks. In this light, these developments can create the foundations for a more connected regional economy capable of promoting trade, investment, and economic transformation. Also, the significance of attaining a higher level of digital financial integration is particularly pronounced in Africa. This is because traditional financial systems have historically excluded large segments of the population due to high costs, limited branch networks, and geographic barriers. However, recent records show that digital technologies have begun to overcome many of these constraints by enabling financial services to be delivered through mobile devices and digital platforms. As a result, ***this paper argues that digital finance has become one of the most dynamic components of economic transformation in Africa.*** Moreover, the evidence presented in Table 4 points to the scale of this transformation in Africa.

Table 4: Financial Inclusion Indicators (%) in Africa

Indicator	Value
Account Ownership	58.2
Formal Bank Account Ownership	37.8
Mobile Money Ownership	40.0
Digital Payment Usage	50.6
Merchant Digital Payments	19.5

Source: Authors' computation using Global Findex Database (2024)

Table 4 ***suggests that financial inclusion has expanded significantly more than financial integration in Africa.*** As the table shows, adult account ownership reached 58.2 per cent and mobile money account ownership reached 40 per cent in 2024. This evidence reflects the growing role of digital finance in economic activity on the continent. ***One of the implications of this finding is that Africa is being positioned among global leaders in mobile money adoption and also demonstrates the continent's capacity for financial innovation.*** Also, Table 4 further shows that digital payment usage exceeded 50 per cent, while formal bank account ownership is only 37.8 per cent, and that merchant digital payment usage stands at 19.5 per cent. This evidence implies that while financial inclusion has improved substantially across the continent, ***financial systems remain fragmented and cross-border interoperability remains limited.*** Moreover, evidence indicates that financial interoperability in Africa is limited (Swift, 2025). For example, ***it was reported that payment traffic in Africa has grown by over 8% annually on average from 2018 to 2024. Furthermore, the volume of payment messages has increased by 57% compared to 2018*** (Swift, 2025).

In addition, the literature has also identified several potential channels through which digital financial integration could support regional economic integration. First, the presence of an integrated financial system can reduce transaction costs by enabling faster and more efficient payments. Second, they also improve access to financial services and capital, thereby supporting entrepreneurship and investment. Third, they facilitate cross-border trade by simplifying payment processes and reducing dependence on external currencies (Swift, 2025). Finally, it has been shown that digital financial systems improve information flows, enhance transparency, and strengthen financial intermediation (Asongu et al., 2020; Evans, 2019). Thus, it contributes to productivity growth and economic transformation.

Theoretically, the foregoing channels also have their support from regional integration, financial integration, and endogenous growth models. For example, the ***regional integration theory*** predicts that a reduction in transaction barriers would enhance trade, investment, and economic interdependence (Kumar et al, 2014). Similarly, the lessons from ***financial integration theory*** suggest that the presence of interconnected financial markets improves capital allocation efficiency, increases liquidity, and facilitates capital mobility (Bhattacharya et al, 2018). In addition, ***endogenous growth theory*** highlights the role of technological innovation and financial development in productivity and long-term growth. Collectively, a ***plausible argument can be made that these theoretical perspectives suggest that achieving digital financial integration can strengthen intra-African trade, deepen regional cooperation, and also accelerate economic transformation under the AfCFTA framework***. This is because trade liberalisation can only achieve its full potential when businesses can conduct transactions efficiently across borders. However, ***the presence of payment delays, high transfer costs, currency conversion challenges, and fragmented financial systems can significantly reduce the benefits of market integration***. Thus, achieving a deeper regional integration requires building an integrated ecosystem in which trade, finance, infrastructure, digital technologies, and policy coordination reinforce one another.

Finally, ***this section concludes that the next phase of financial transformation in Africa requires a shift from inclusion to interoperability***. In addition, the analysis points out that mobile money platforms, digital wallets, banks, and payment systems must become increasingly interconnected across borders. Also, this paper notes that the regulatory frameworks, payment standards, digital identities, and data governance arrangements must also become more harmonised. This is because ***the objective is no longer to connect individuals to financial services,***

but to connect African markets through integrated digital financial systems that are capable of supporting trade, investment, financial inclusion, and sustainable economic development. This transition is particularly important given the complexity of the payment ecosystem in Africa. This arrangement spans 54 countries, 42 currencies, and more than 30 instant payment systems (Swift, 2025). Although this diversity reflects a dynamic and rapidly evolving financial landscape, *this study also highlights the importance of strengthening cross-border interoperability.* This is because the growing adoption of digital payment systems and mobile money has already expanded financial inclusion, facilitated cross-border transactions, connected businesses, and integrated previously unbanked populations into the formal financial system (Swift, 2025). *Therefore, this paper argues that the next stage of integration in Africa may require linking these domestic systems across borders to create a seamless continental financial ecosystem that supports the objectives of AfCFTA.*

4.2 Digital Financial Integration as a Resilience Mechanism

It should be noted that *digital financial integration can strengthen economic resilience while also improving transaction efficiency.* In a fragmented global economy, *African countries may remain vulnerable to exchange-rate volatility, disruptions to external payment channels, capital-flow reversals and supply-chain shocks.* In addition, *the shocks of Geoeconomic fragmentation may also extend to the international monetary system* through changes in capital flows, payment systems, reserve currencies and financial safety arrangements (Norrington, 2024). However, *the presence of interoperable regional payment systems can reduce some of these vulnerabilities by supporting faster settlement, expanding local-currency transactions and providing alternative channels for cross-border commerce.* In this context, *PAPSS is particularly relevant.* This is because it can reduce the need to route intra-African payments through external currencies and correspondent banks. This may lower transaction costs, reduce settlement delays and improve the continuity of regional trade during periods of external financial disruption.

However, this paper also observes that *payment integration alone cannot generate resilience.* This is because *its benefits depend on reliable electricity and broadband infrastructure, interoperable digital identities, adequate liquidity arrangements, effective cybersecurity and coordinated financial regulation.* This is also consistent with the argument of this paper about *systems integration: payment systems, fintech platforms, infrastructure and regulation must operate together if digital financial integration is to support regional trade and*

economic stability. In this light, ***digital financial integration should therefore be viewed as part of a wider regional resilience architecture***. Moreover, by linking banks, fintech firms, mobile money operators, customs systems and regulators across borders, African economies can reduce fragmentation and maintain trade and financial activity during periods of global uncertainty. This is especially important because policy uncertainty can delay investment and disrupt firms' participation in international markets and supply chains (Handley & Limão, 2022).

5.0 Frictions and Enablers of Digital Financial Integration in Africa

The analysis in the previous sections suggests that ***the problem of integration is not tariffs alone, but rather that the systems supporting the region's trade, finance, and infrastructure have failed to operate seamlessly across borders***. In addition, the evidence suggests that Africa continues to face substantial challenges in translating policy commitments (AfCFTA) into deeper economic integration. However, Table 5 indicates that existing infrastructure gaps, fragmented financial systems, limited productive integration, and regulatory inconsistencies continue to constrain cross-border economic activity. From Table 5, ***the evidence suggests that Africa's integration deficit is not primarily the result of tariffs or trade barriers alone, but rather the inability of the trade, financial, infrastructural, digital, and institutional systems that undermine economic activity to operate seamlessly across borders***.

Table 5: Core Pillars of Digital Financial Integration

Pillar	Friction (Constraint)	Enabler (Progress)
Cross-border payments	Routed outside Africa in third-country currencies; high costs and delays	PAPSS enables local-currency settlement and reduces dependence on external systems
Fintech ecosystems	Regulatory fragmentation, limited interoperability, confined to national borders	Mobile money ownership at 40% (2024); global leader in digital financial services
Digital infrastructure	Uneven connectivity, electricity deficits, and low broadband penetration	Investments in fibre, data centres, and digital ID systems are expanding.
Regulatory coordination	Divergent licensing, consumer protection, and data governance rules	AfCFTA Digital Trade Protocol offers a harmonisation platform

Source: Authors' compilation

In addition, the analysis in Table 5 shows that cross-border payment systems, fintech ecosystems, digital infrastructure, and regulatory coordination constitute the core pillars of digital financial integration in Africa. However, the evidence also indicates that progress in any one area is unlikely to yield significant integration outcomes unless it is accompanied by advances in the others. For example, efficient payment systems require digital infrastructure, fintech innovation

depends on supportive regulations, and regional markets require interoperable institutions. In this light, achieving deeper regional integration will require adopting a systems approach that strengthens connectivity across these interdependent pillars. Furthermore, the analysis in this section reinforces the central argument of this paper that *Africa's integration deficit arises less from tariffs or trade barriers alone and more from the failure of the systems supporting economic activity to operate seamlessly across borders*. Therefore, this paper argues that achieving digital financial integration is a critical mechanism for connecting trade, finance, infrastructure, technology, and policy coordination in Africa. By strengthening interoperability across these systems, Africa can accelerate the implementation of the AfCFTA, deepen its regional markets, enhance financial inclusion, and build a more resilient and competitive continental economy.

6.0 Data and Estimation Strategy

The empirical analysis in this paper uses a cross-sectional dataset covering 48 African countries. The choice of these countries was made based on the presence of sufficiently complete information and data availability. In addition, the dataset also combines the most recent observations available for electricity access, internet usage, mobile connectivity, logistics performance, and broadband penetration, as well as regional integration indicators. This paper also notes that because reporting years differ across data sources, the analysis should be interpreted as a comparison across countries during a broadly similar recent period rather than as a balanced panel dataset. Finally, Ordinary Least Squares (OLS) estimation is employed to examine whether countries with stronger digital readiness also exhibit stronger regional integration outcomes.

6.1 Empirical Evidence: Digital Integration and Regional Integration in Africa

The evidence presented in the previous sections indicates that *Africa's integration challenge is fundamentally a systems integration challenge. This implies that the observed low integration of the African economy reflects weaknesses in the digital, financial, infrastructural, and institutional systems that support cross-border economic interaction*. In this regard, this section aims to assess this proposition through an empirical analysis conducted using indicators of digital infrastructure, financial inclusion, and regional integration across African countries. More specifically, the empirical analysis examines whether countries with stronger digital ecosystems

also have stronger regional integration outcomes. In this light, Table 6 reports correlation results for the estimated relationship between digital integration and regional integration in Africa.

Table 6: Selected Correlation Coefficients

Variables	Correlation
IDII Core and ARII Composite	0.342
IDII Extended and ARII Composite	0.369
Digital Regional Integration Score and ARII Composite	0.738
IDII Core and Infrastructure Integration	0.709
IDII Core and Internet Usage	0.932
IDII Core and Mobile Connectivity	0.939
Note: (1) Extended Infrastructure–Digital Integration Intensity Index (IDII) is used to capture more advanced digital infrastructure capabilities by adding broadband penetration. (2) Core Infrastructure–Digital Integration Intensity Index (IDII) used to capture digital infrastructure capabilities, and it excludes broadband penetration. (3) It should be noted that the correlation of 0.738 between the Digital Regional Integration Score and ARII Composite is partly mechanical because ARII Composite is included in the construction of the combined score. The correlation is therefore useful for descriptive benchmarking but should not be treated as an independent empirical relationship.	

Source: Authors' computations.

From Table 6, the results reveal there is a positive association between digital integration and regional integration in Africa. More specifically, Table 6 indicates *that the strongest relationship is between the digital regional integration and the overall African regional integration* (ARII Composite Index). This evidence is indicated by the estimated correlation coefficient of 0.738. *This evidence suggests that countries that have stronger digital ecosystems are more likely to consistently record higher regional integration outcomes.* In addition, Table 6 also indicates that there is a moderate and positive relationship between the infrastructure–digital integration intensity index and the overall regional integration of 0.342. More importantly, the estimates from Table 6 indicate that digital readiness has a stronger relationship with infrastructure integration of 0.709. *This evidence suggests that infrastructure is one of the main channels through which digital integration influences broader regional integration outcomes in Africa.* One of the important implications of these findings is that *they point out that digital infrastructure, connectivity, and financial interoperability are increasingly becoming important determinants of regional integration performance in Africa.* This paper also acknowledges that the extremely high correlations between IDII Core and internet usage (0.932), and between IDII Core and mobile connectivity (0.939) should be interpreted cautiously. This is because these indicators are constituent components of the index itself. Consequently, these estimates largely reflect the construction of the index rather than independent empirical relationships.

In addition, the results derived from the simple ordinary least squares regression model also provide empirical support for the findings based on the correlation analysis. Table 7 reports the estimation from the regression model.

Table 7: Digital Integration and Regional Integration

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
	ARII Composite	ARII Composite	ARII Composite	Trade Integration	Infrastructure Integration
IDII Core	0.234*			0.139	0.672***
	(0.095)			(0.290)	(0.098)
IDII Extended		0.302**			
		(0.112)			
Digital Regional Integration Score			0.726***		
			(0.098)		
Constant	0.255***	0.250***	0.051	0.574***	-0.128*
	(0.052)	(0.050)	(0.046)	(0.159)	(0.054)
N	48	48	48	48	48
R ²	0.117	0.136	0.544	0.005	0.503
Adjusted R ²	0.098	0.117	0.534	-0.017	0.492
RMSE	0.114	0.113	0.082	0.349	0.119

Notes: Standard errors are reported in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively. In addition, the estimates are based on Ordinary Least Squares regressions using cross-sectional observations for 48 African countries. Also, Model 3 should be interpreted cautiously because the Digital Regional Integration Score includes the ARII Composite among the components used in constructing the measure. Its relatively high coefficient and explanatory power therefore partly reflect overlap among the underlying components rather than a fully independent relationship.

Source: Author's computation

The results presented in Table 7 have produced several important findings. First, Model 1 shows that improvements in digital and infrastructure readiness (IDII Core) are positively associated with overall regional integration (ARII Composite). This evidence is indicated by the coefficient on the infrastructure–digital integration intensity index (IDII Core), which is positive and statistically significant at the 5 per cent level. However, Table 7 and Model 2 report that the relationship becomes stronger when broadband connectivity is incorporated into the index (IDII Extended). This evidence suggests that ***advanced digital infrastructure plays an important role in supporting regional integration in Africa***. In addition, Table 7 reports that the strongest impact was found to emerge from the digital regional integration results. From Table 7, the coefficient of the digital regional integration score was found to be positive and highly significant. In addition, ***Model 3 reports a strong positive relationship between the Digital Regional Integration Score and ARII Composite, with an R² of 0.544. However, this result should be interpreted cautiously because the ARII Composite is a component of the Digital Regional Integration Score. The***

relatively high explanatory power therefore partly reflects the construction of the composite measure. Accordingly, Model 3 is used primarily to assess the internal consistency of the combined index and to support cross-country benchmarking, rather than to establish an independent effect of digital integration on regional integration.

In addition, the above *evidence suggests that digital integration is not merely associated with regional integration but constitutes one of its most important enabling factors*. However, the estimation results from Model 4 indicate that digital readiness does not have a statistically significant relationship with trade integration alone. This finding is particularly important from a policy perspective. This is because this *finding suggests that the presence of digital infrastructure, while necessary, may not be sufficient to drive intra-African trade*. This finding also implies *that trade integration depends on the presence of complementary reforms such as payment interoperability, logistics improvements, customs modernisation, regulatory harmonisation, and trade facilitation measures*.

Further analysis of the estimates from Table 7 (Model 5) shows that digital readiness has a strong positive relationship with infrastructure integration. This evidence is indicated by its coefficient of 0.672 and an R^2 of 0.503. *This evidence indicates that countries that have a stronger digital infrastructure also tend to perform significantly better in regional infrastructure integration. This finding also points out the existence of a mutually reinforcing relationship between digital and physical infrastructure development in Africa.*

Finally, it should be noted that the above findings have three implications for the integration agenda of Africa. First, one of the implications is that the evidence suggests that *digital integration matters in Africa*. This is because the analysis shows that African Countries that have stronger digital ecosystems tend to consistently record higher regional integration outcomes. In this light, *this evidence supports the argument that digital financial integration is not merely a complementary reform but a central pillar of the integration agenda of Africa*. Second, another implication is that evidence suggests that *infrastructure remains one of the most important transmission channels in Africa*. This is because the analysis shows that improvements in internet access, mobile connectivity, logistics performance, and electricity access contribute directly to stronger regional integration outcomes in Africa. This also implies that closing the infrastructure gap is essential for translating AfCFTA commitments into tangible economic outcomes. Third, the evidence implies that *trade integration requires a broader systems approach*. This is because the

absence of a significant relationship between digital readiness and trade integration suggests that market-opening initiatives alone cannot generate deeper integration. In this context, ***digital infrastructure must be complemented by efficient cross-border payment systems, fintech innovation, regulatory harmonisation, transport connectivity, and stronger policy coordination across the continent.***

In summary, the findings from this section provide empirical support for the central proposition of this paper: The integration challenge of Africa is fundamentally a systems integration challenge. Also, digital financial integration can serve as one of the critical mechanisms linking trade, infrastructure, fintech, payments, and policy coordination. Thus, ***efforts to deepen regional integration in Africa must focus not only on reducing trade barriers but also on building the digital, financial, and institutional systems that enable markets to function effectively across borders.***

6.2 Empirical Results Interpretation and Limitations

The empirical results of this paper identify cross-country associations rather than causal effects. In this regard, this paper acknowledges that reverse causality remains possible. This is because countries that are more regionally integrated may also have stronger incentives to invest in digital infrastructure and financial interoperability. Furthermore, omitted variables such as income levels, institutional quality, market size, governance effectiveness, geography, and political stability may simultaneously influence both digital readiness and regional integration. Consequently, this paper cautioned that its findings should be interpreted as exploratory evidence consistent with the systems integration hypothesis rather than definitive causal estimates. In addition, Model 3 should be interpreted as a composite benchmarking exercise. This is because the Digital Regional Integration Score incorporates the ARII Composite directly. Its high R^2 therefore reflects both substantive association and definitional overlap.

7.0 Implications of Digital Financial Integration

The empirical evidence presented in Section 6 shows that digital readiness is positively associated with regional integration outcomes in Africa. In addition, the strongest independent relationship is observed for infrastructure integration, while the combined Digital Regional Integration Score provides a descriptive benchmarking measure rather than an independent causal estimate. In addition, the result shows that digital readiness strongly predicts infrastructure integration. In this

light, this section builds on those findings by exploring what the attainment of higher levels of digital financial integration means for development within Africa and for the emerging market economies.

7.1 Implications for Development

This paper notes that digital financial integration is not merely a financial-sector reform but it is also a broader development strategy. In this regard, Table 8 summarises the six main development channels through which higher levels of digital financial integration generates development al impact. Also, Table 8 reports key evidence and important caveats for each of the channels. Overall, Table 8 shows that ***digital financial integration in Africa advances inclusion, and productivity, resilience, as well as sustainable development across the continent.***

Table 8: Development Implications of Digital Financial Integration

Channel	Impact	Key Evidence / Caveat
Financial inclusion	Account ownership at 58.2%; mobile money at 40% (2024)	Needs merchant acceptance, credit access, and consumer protection
Productivity	Reduces transaction costs; strengthens intermediation; supports SMEs	Network effects amplify gains as ecosystems integrate
Macroeconomic resilience	Diversifies payment channels; PAPSS reduces external dependence	Requires cybersecurity and regulatory cooperation
Inclusive growth	Lowers barriers for women, youth, rural populations, and informal traders	Targeted policies needed to address digital divides
Human capital & health	Enables knowledge exchange, skills mobility, and regional health coordination (e.g., REDISSE)	Long-term gains depend on education and training
Climate resilience	Digital finance improves access to agricultural finance, market info, and risk tools	Infrastructure must be climate-resilient

Source: Authors' compilation.

7.2 Implications for Emerging Markets

This paper notes that the attainment of higher levels of integration in Africa matters beyond the continent. This is because a market of 1.4 billion people often creates opportunities for the Global South. In this light, Table 9A identifies five major strategic opportunities that the digital financial integration of African economies presents for the emerging economies, ranging from trade to governance. From Table 9A, ***the finding suggests for policy that digital financial integration of Africa is not merely a regional project. Also, it is a strategic opportunity for strengthening the South–South cooperation, and supply-chain resilience, as well as a more multipolar global economy.***

Table 9A: Strategic Opportunities for Emerging Markets from Africa's Integration

Dimension	Opportunity for Emerging Markets
South-South trade & investment	Stronger linkages with India, Brazil, Indonesia, Türkiye, and Gulf economies
Supply chain diversification	Manufacturing, agro-processing, digital services, renewables, critical minerals
Financial cooperation	PAPSS offers lessons for local-currency settlement and payment interoperability
Digital trade & innovation	Cross-regional collaboration in fintech, e-commerce, digital identity, and cybersecurity
Global governance	Stronger collective voice in G20, BRICS, climate finance, and development reform

Source: Authors' compilation.

In addition, the recent increases in *geoeconomic fragmentation heighten the need for regional mechanisms that can sustain trade and financial activity during external shocks*. In this light, Table 9B shows how digital financial integration can strengthen resilience through regional payment alternatives, local-currency settlement and stronger financial and regulatory coordination. Table 9B indicates that by *supporting cross-border payments, digital infrastructure and fintech interoperability, such integration can reduce vulnerability to currency, payment, supply-chain and banking disruptions while also promoting growth and economic resilience*.

Table 9B: Resilience Benefits of Digital Financial Integration

Shock	Fragmented System	Integrated System
Currency volatility	High exposure	Lower exposure
Payment disruption	Delays	Alternative routing
Supply chain shock	National response	Regional coordination
Banking stress	Limited liquidity	Regional support
Geopolitical fragmentation	Vulnerable	More resilient

Source: Authors' compilation.

Furthermore, these resilience benefits (Table 9B) are especially important for emerging markets because geoeconomic fragmentation is increasing the value of regional payment alternatives, diversified supply chains and coordinated responses to external shocks.

8.0 Risks and Emerging Challenges in a More Integrated Africa

The empirical analysis demonstrates that stronger digital readiness is associated with stronger regional integration outcomes. However, this paper also observes that the presence of greater interconnectedness tends to create new channels through which shocks can spread across borders. Consequently, the same systems that facilitate cross-border payments, financial interoperability, and digital trade may also transmit shocks of cybersecurity threats, financial contagion, operational

disruptions, and governance challenges. In this light, this section examines some of the key risks and the governance frameworks needed to manage them as presented in Table 10.

Table 10: Key Risks of Deeper Regional Integration and Mitigation Priorities

Risk	Description	Mitigation Priority
Financial contagion	Liquidity shortages, bank failures, and cyber incidents spread across borders	Regional surveillance, macroprudential regulation, and crisis-management frameworks
Cybersecurity	Interconnected systems increase exposure to attacks, fraud, and data breaches	Common security standards, information-sharing networks, coordinated response
Uneven gains	Benefits accrue first to stronger economies, firms, and institutions	Regional adjustment funds, SME support, skills development programmes
Regulatory arbitrage	Firms exploit differences in national rules, undermining stability	Harmonised frameworks, transparent dispute-settlement mechanisms
Digital exclusion	Rural populations, women, and low-income households are left behind	Inclusive infrastructure, digital literacy programmes, targeted policies
Data governance	Cross-border data flows raise privacy, security, and sovereignty concerns	AfCFTA Digital Trade Protocol as a coordination platform
Climate risks	Extreme weather disrupts telecoms, energy, and transport networks	Climate-resilient infrastructure standards + adaptation investments

Source: Authors' compilation.

From Table 10, *the major emerging risks are classified into three categories: (1) financial system risks (contagion, cybersecurity); (2) distributional risks (uneven gains, digital exclusion); and (3) governance risks (regulatory arbitrage, data governance, climate)*. From Table 10, this paper observes that *the emerging risks are not only technical (financial contagion, cyber) but also political (uneven gains) and environmental (climate)*. *This diversity of the risks categories implies that no single institution can manage all of them. Therefore, a coordinated, multi-layered governance framework is required.*

The foregoing suggests that *achieving greater interconnectedness can increase exposure to cross-border shocks, governance challenges, and unequal development outcomes across the continent. Thus, one of the implications is that the success of the integration agenda of Africa will depend not only on expanding connectivity but also on establishing robust governance frameworks capable of managing emerging risks*. Also, the analysis points out that *the challenge is not whether Africa should integrate more deeply, but how integration can be governed effectively*. In this context, this paper argues that the objective should be resilient integration that is deep enough to generate productivity gains, innovation, and transformation, yet robust enough to absorb shocks, manage risks, and distribute benefits broadly across the continent.

9. Conclusion and Policy Recommendations

This paper argues that the integration challenge of Africa is fundamentally systemic. This is because evidence shows that trade liberalisation is advancing with the AfCFTA; however, the infrastructure base remains weak. In addition, the analyses show that financial inclusion has increased to 58 per cent of adults, but cross-border interoperability still lags. Similarly, this paper observes that digital innovation has flourished, with 40 per cent mobile money adoption, but regulatory harmonisation across 54 countries has not kept pace. Also, the evidence shows that bottlenecks existing in other areas dampen gains made in others. ***Based on this evidence, this paper maintains that digital financial integration is fundamental in ensuring that payments, fintech, infrastructure, and regulation are integrated into a coherent system in Africa.*** However, this paper also acknowledges that ***in an era of increasing geoeconomic uncertainty, digital financial integration should be viewed not only as a mechanism for improving efficiency but also as a strategic instrument for strengthening Africa's economic resilience.*** This is because by deepening cross-border payment interoperability, digital infrastructure, fintech ecosystems, and regulatory coordination, the analysis points out that African economies can reduce fragmentation, strengthen regional value chains, and enhance their capacity to absorb external shocks while advancing the objectives of the AfCFTA. Finally, the findings of this paper lead to the following recommendations:

- i. There should be continuous expansion of PAPSS for local currency settlements and fully digitise customs procedures to reduce administrative barriers. In this regard, Afreximbank and national customs authorities should lead this aspect. In addition, the African countries should speed up negotiations on the remaining protocols of AfCFTA, especially customs procedures.
- ii. There should be increased investment in broadband connectivity, fibre-optic networks, data centres, and regional energy and transport corridors. The African Development Bank and national governments should lead in this aspect.
- iii. Private investors should consider a shift in focus from financial access to interoperability. This would promote seamless interaction among banks, mobile money operators, and fintech platforms. Also, there should be the deployment of interoperable digital identity systems. In this aspect, central banks and mobile network operators should lead.

- iv. Increased harmonisation of regulatory standards for digital payments, consumer protection, data governance, and cybersecurity using the AfCFTA Digital Trade Protocol. In addition, there should be the establishment of regional regulatory sandboxes. In this aspect, the African Union Commission and national regulators should lead.
- v. The governments should embed digital financial integration within their broader national development strategies. In addition, they should invest in digital and financial literacy to ensure all citizens can participate. In this area, the finance ministries, central banks and education ministries should lead.

10.0 Discussion Questions for the Forum

Section 8 concludes that digital financial integration is one of the central pillars of the integration agenda of Africa and proposes five policy actions. However, ***moving from evidence to action requires confronting two additional issues: the feasibility of implementation and the financing of Africa's infrastructure gap.*** These issues are not merely theoretical. ***They will determine whether the technical recommendations proposed in this paper can be translated into practical reforms. Therefore, this section presents discussion questions to guide EMF deliberations.*** The aim is to invite participants to draw on their country experiences, institutional mandates and private-sector networks in order to identify practical pathways for accelerating digital financial integration in Africa.

10.1 Implementation Feasibility and Institutional Coordination

African countries have demonstrated a strong formal commitment to regional integration through the African Continental Free Trade Area (AfCFTA). Historically, the operational phase of the AfCFTA was launched at the 12th Extraordinary Summit of the African Union in Niamey, Niger, on 7 July 2019. This paper observes that almost all African Union member states have signed the Agreement, while a large majority have ratified it. In this regard, ***this level of participation shows that the main challenge is not the absence of political support for integration, but the difficulty of translating continental commitments into effective domestic and regional implementation.*** In this context, ***deeper digital financial integration will depend on how countries align payment systems, financial regulations, digital infrastructure, data governance rules, consumer protection frameworks and cross-border supervisory arrangements.*** However, this paper recognises that implementation may vary across countries. This is because of the differences in

infrastructure readiness, regulatory capacity, fiscal space, institutional quality and the maturity of financial and digital systems. Therefore, ***the policy challenge is to design a reform pathway that allows countries to move together where possible, while recognising their differences in national readiness.***

Table 11: Implementation Constraints and Coordination Challenges for Digital Financial Integration

Category	Examples	Main Implementation Challenge
Large economies with established financial centres	Nigeria, South Africa	Managing concerns over loss of gateway rents from cross-border payments and financial intermediation
Countries with weak regulatory institutions	Some fragile and low-capacity states	Limited ability to enforce harmonised standards and supervise cross-border digital finance
Countries with dual or externally anchored currencies	Zimbabwe, some CFA franc states	Currency-management concerns and the need to protect existing monetary arrangements
State-influenced financial sectors	Varied across regions	Caution over opening domestic payment systems to cross-border competition
Countries with weak digital infrastructure	Several low-connectivity economies	Limited readiness to participate fully in interoperable payment and digital finance systems

Source: Authors' compilation.

Questions for EMF Discussion:

- i. What forms of technical assistance, phased implementation or targeted support could help countries with weaker regulatory and digital systems participate more effectively?
- ii. Which regional body, such as the AfCFTA Secretariat, Afreximbank, the African Union Commission or the regional economic communities, is best placed to coordinate implementation and mediate conflicting national priorities?
- iii. Is a multi-speed approach acceptable, where a coalition of ready countries proceeds first, while others join later?
- iv. What safeguards would be needed to avoid creating a two-tier digital financial space?
- v. How can larger economies and smaller economies both benefit from cross-border payment integration without creating perceptions of unequal gains?

10.2 Financing the Infrastructure Gap

The analysis shows that ***Africa requires between US\$130 billion and US\$170 billion annually for infrastructure, with a financing deficit of up to US\$108 billion.*** In addition, digital infrastructure, including fibre networks, data centres, broadband connectivity and cross-border payment infrastructure, is a critical part of this requirement. ***Closing this gap is therefore central to the success of digital financial integration.*** This is because without reliable energy, broadband

connectivity and interoperable infrastructure, payment systems, fintech platforms and digital trade arrangements will remain fragmented. In this light, Table 12 compares *three financing models and a hybrid proposal for addressing the infrastructure gap. The hybrid approach refers to a layered model that combines a Pan-African Digital and Energy Infrastructure Fund for cross-border projects, country-level blended finance for national backbone infrastructure, and commercial investment for last-mile connectivity and digital platforms.*

Table 12: Financing Models for Africa’s Infrastructure Gap

Model	Key Advantage	Key Disadvantage
Blended finance	Mobilises private capital and reduces investment risk	Can involve high transaction costs and complex structuring
Sovereign green or digital bonds	Can attract ESG-focused investors	May be difficult for countries with weak credit ratings or high debt risk
Pan-African infrastructure fund	Can finance regional public goods and cross-border infrastructure	Requires strong political commitment and credible governance
Hybrid financing model	Combines continental, national and private-sector financing channels	Requires strong coordination across institutions, countries and investors

Source: Authors’ compilation.

Questions for EMF Discussion:

- i. Should a new infrastructure fund be housed within an existing institution such as the AfDB or Afreximbank, or should it be established as a standalone vehicle with independent governance?
- ii. How should currency risk be managed when project revenues are earned in multiple African currencies? Can PAPSS provide a model for local-currency settlement of infrastructure returns?
- iii. Can PAPSS evolve beyond a payment platform to become a strategic resilience mechanism that reduces Africa's exposure to external payment disruptions, reserve-currency dependence, and geoeconomic fragmentation?
- iv. What de-risking instruments, including guarantees, political risk insurance and subordinated debt, have worked best for digital infrastructure in Africa, and how can they be scaled regionally?
- v. Should infrastructure financing be linked to climate adaptation standards? How would this affect project costs, timelines and investor appetite?
- vi. How can private-sector actors, including fintech firms, telecom companies, banks and institutional investors, be brought into the financing structure without weakening public-interest objectives?

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ⁱ It should be noted that although panel descriptive statistics are presented to distinguish between-country and within-country variation in digital infrastructure indicators. Also, the empirical estimations reported subsequently use the latest available country observations. This approach was adopted because the composite regional integration measures and several digital indicators are not consistently available as balanced annual series across African countries. Consequently, the panel decomposition serves a descriptive purpose, whereas the regression analysis adopts a cross-sectional framework.