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The AfCFTA, FDI Composition, and Structural Transformation: A Sector-Level Panel Analysis of African Economies

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Abstract

The effective implementation of the African Continental Free Trade Area (AfCFTA) is expected to significantly reshape investment dynamics and production structures across Africa. While its capacity to boost overall foreign direct investment (FDI) inflows is widely acknowledged, the importance of FDI composition in driving structural transformation remains underexplored. This study examines the differentiated effects of disaggregated FDI on sectoral value-added and employment shares, while also analyzing how AfCFTA-induced trade liberalization moderates these relationships. Using a dynamic panel estimated through the Generalized Method of Moments (GMM) on a novel dataset covering 40 African countries and 20 sectors from 2003 to 2023, the results reveal strong heterogeneity in the developmental impact of FDI. The findings show that manufacturing and market-seeking services FDI have a positive and statistically significant effect on structural transformation, enhancing both sectoral value-added and employment shares. In contrast, extractive FDI does not contribute to these outcomes and may even crowd out manufacturing activity in certain specifications. Moreover, a positive and significant interaction between intra-African tariff reductions (used as a proxy for AfCFTA implementation) and non-extractive FDI suggests that trade integration amplifies the transformative potential of productive investment by fostering larger markets and regional value chains. These results imply that the benefits of AfCFTA are not automatic and require complementary domestic policies focused on improving institutional quality, infrastructure, and human capital to effectively channel FDI toward high-value, high-linkage sectors.

Keywords: African Continental Free Trade Area (AfCFTA); Foreign Direct Investment (FDI) Composition; Structural Transformation; Sectoral Analysis; Panel Data; Africa.

Introduction

Structural transformation, the reallocation of economic activity from low-productivity to high-productivity sectors—remains a fundamental challenge for sustainable development in Africa (McMillan et al., 2014). Despite recent growth, many African economies are characterised by the persistent dominance of informal services and volatile primary commodity exports, with limited expansion of higher-value-added manufacturing

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(Rodrik, 2016). The launch of the African Continental Free Trade Area (AfCFTA) in 2021 represents a historic opportunity to alter this trajectory by creating a single market of over 1.3 billion people. A principal anticipated channel is the attraction of foreign direct investment (FDI), lured by larger economies of scale and the potential for regional production networks (World Bank, 2020).

However, the literature on FDI and growth presents a paradox. While aggregate FDI is often promoted as a catalyst for development, empirical evidence on its benefits, particularly in Africa, is mixed (Adams, 2009). A growing consensus suggests that the *composition* of FDI—whether it is resource-seeking, market-seeking, or efficiency-seeking—is a critical determinant of its developmental impact (Hailu, 2010; Alfaro, 2017). Extractive, resource-seeking FDI, while a significant revenue source, often operates in enclaves with limited backward and forward linkages to the domestic economy. Conversely, FDI in manufacturing and certain services sectors holds greater potential for technology transfer, skill upgrading, and integration into global and regional value chains.

This paper addresses a significant gap in the literature by conducting a sector-level panel analysis of the relationship between FDI composition, the AfCFTA, and structural transformation in Africa. We pose two central research questions: (1) How does the sectoral composition of FDI inflows affect indicators of structural transformation (sectoral value-added and employment shares) across African economies? (2) Does the trade liberalisation fostered by the AfCFTA moderate this relationship, enhancing the transformative potential of certain FDI types?

Our contribution is threefold. First, we move beyond aggregate analysis to utilise a disaggregated, sector-level dataset on FDI stocks, allowing us to distinguish between different types of capital inflows. Second, we explicitly model the moderating role of AfCFTA implementation by constructing a time-varying proxy for intra-African trade liberalisation. Third, we provide nuanced policy insights, arguing that the success of AfCFTA hinges not merely on attracting more FDI, but on attracting the *right kind* of FDI and building domestic capabilities to benefit from it.

The remainder of the paper is structured as follows. Section 2 reviews the relevant literature. Section 3 outlines the empirical methodology and describes the data. Section 4 presents and discusses the results. Section 5 concludes with policy implications and avenues for future research.

Literature Review

Structural Transformation and the African Context

Theoretical models of structural transformation, from Lewis (1954) to more recent multi-sector approaches, argue that economic development involves the progressive reallocation of labour, capital and productive resources from traditional low-productivity agriculture toward modern industry and, at a later stage, toward high-productivity services. In this

perspective, structural transformation is not simply a change in sectoral shares; it is a productivity-enhancing process through which economies diversify, upgrade technologies, create better jobs and reduce dependence on primary commodities. However, Africa's development trajectory has often diverged from this classical pattern. Several empirical studies describe the continent's experience as one of "premature deindustrialisation" or "growth without transformation", where GDP growth has not been accompanied by a strong expansion of manufacturing employment, industrial capabilities or productivity-enhancing reallocation.

Recent empirical evidence confirms this diagnosis. Rodrik (2016) shows that many developing economies, including African countries, reached their peak manufacturing shares at lower income levels than early industrialisers. McMillan, Rodrik and Sepúlveda (2017) also find that structural change in Africa has been weaker than in Asia, with labour often moving from agriculture into informal and low-productivity services rather than into manufacturing. More recently, Nguimkeu (2024), using panel data for 45 African countries, shows that episodes of industrialisation and deindustrialisation in Sub-Saharan Africa are highly uneven, and that manufacturing has not played the same growth-driving role observed historically in East Asia. Similarly, the African Development Bank (2024) stresses that Africa's structural transformation remains slow and incomplete, despite improved macroeconomic resilience and growth recovery.

Empirical work also highlights the sectoral nature of Africa's transformation problem. In many countries, the decline of agriculture's employment share has not been matched by a proportional rise in modern manufacturing. Instead, labour has shifted toward urban informal trade, transport, personal services and other activities with limited productivity gains. Evidence from Ethiopia, for example, shows that strong GDP growth between 2000 and 2022 was accompanied by an incomplete transformation process: labour moved out of agriculture, but mainly into low-productivity informal services, while manufacturing employment remained limited despite industrial policy efforts. This pattern suggests that services-led growth can support transformation only when services are tradable, technology-intensive and connected to productive value chains, such as ICT, logistics, finance and business services.

Overall, the African context shows that structural transformation depends not only on the movement of labour across sectors, but also on the quality of the destination sectors. When labour shifts from agriculture to low-productivity informal services, the transformation process remains shallow. By contrast, when resources move toward manufacturing, agro-processing, tradable services and technology-intensive activities, structural change can generate stronger productivity gains, employment upgrading and export diversification. This is why the composition of investment,

particularly foreign direct investment, becomes central: extractive FDI may reinforce commodity dependence, while manufacturing and modern services FDI can contribute more directly to productive diversification and long-term transformation.

FDI Composition and Spillover Channels

The impact of FDI is not monolithic. Dunning's OLI paradigm categorises FDI by motive: resource-seeking, market-seeking, efficiency-seeking, and strategic asset-seeking. Empirical studies suggest that spillovers—technology diffusion, skill transfers, and demonstration effects—are more likely from market- and efficiency-seeking FDI embedded in the local economy (Javorcik, 2004). Resource-seeking FDI, concentrated in capital-intensive extractive industries, typically generates fewer employment and linkage opportunities, and its benefits are highly dependent on fiscal policy and institutional quality (Arezki et al., 2017). Recent work by Newman et al. (2023) confirms that FDI in manufacturing has stronger positive effects on domestic firm productivity in Africa than FDI in other sectors.

The recent empirical literature on foreign direct investment (FDI) in Morocco and comparable economies highlights the structural role of these flows in driving productive transformation, while emphasizing their sectoral heterogeneity and conditional effects. The works of Hamid Fayou (2024, 2025, 2026) contribute to this strand by employing advanced econometric frameworks (System GMM, ARDL, and gravity models estimated by PPML) to examine the transmission channels linking FDI to growth, exports, and structural change. In his sectoral analyses, Fayou (2025) demonstrates that FDI does not generate uniform effects; rather, its impact depends on factors such as value chain integration, human capital, and institutional quality. For instance, in the Moroccan manufacturing sector, ARDL-based results reveal a long-run relationship between FDI and industrial performance, but with differentiated effects depending on technological absorption capacity and export orientation. This approach challenges the conventional view of an automatic FDI-growth nexus and underscores the importance of local conditions in maximizing economic spillovers.

Furthermore, the empirical contributions of Hamid Fayou (2023, 2026) extend the analysis by incorporating geopolitical, sectoral, and infrastructural dimensions. His gravity-based studies (Fayou, 2023) show that FDI flows are strongly shaped by transaction costs, economic agreements, and diplomatic dynamics, as illustrated in the case of Morocco–Israel relations following the Abraham Accords. Similarly, his research on mega-events and infrastructure investment (Fayou, 2026) identifies a significant attractiveness effect, particularly in sectors such as construction, tourism, and telecommunications, with positive but heterogeneous elasticities. However, Fayou (2026) also highlights the risk

of temporary effects ("cliff effects") and the need for complementary policies to ensure the sustainability of FDI inflows. Overall, his work provides a nuanced understanding of FDI as a conditional driver of structural transformation, shaped by complex interactions between public policy, economic structures, and global dynamics.

The AfCFTA: Expected Impacts and Investment Dynamics

The African Continental Free Trade Area (AfCFTA) aims to progressively eliminate tariffs on approximately 97% of goods and significantly reduce non-tariff barriers, including regulatory fragmentation, customs inefficiencies, and logistical bottlenecks. While early analyses have primarily focused on trade creation and welfare gains (e.g., Signé, 2020), a growing body of empirical literature highlights that its most transformative effects may operate through investment channels. By expanding market size from fragmented national economies into a continental market of over 1.3 billion consumers, the AfCFTA directly addresses the structural constraint often described as the "tyranny of small markets," which has historically limited industrial scaling and discouraged large-scale investment in Africa.

Recent empirical studies confirm that deeper regional integration significantly enhances FDI attractiveness. Using a structural general equilibrium framework, Bouët et al. (2021) show that the AfCFTA could increase intra-African trade by more than 30% and stimulate foreign direct investment inflows, particularly in manufacturing and tradable services. Similarly, the World Bank (2020, 2023) estimates that the agreement could boost real income by up to 7% by 2035, partly through increased investment linked to improved market access and reduced trade costs. Empirical gravity-based analyses (e.g., Abrego et al., 2020) also suggest that trade agreements in Africa have historically had positive but modest effects on trade flows, implying that the AfCFTA's broader scope—especially regarding services, investment, and competition policy—could generate stronger and more sustained investment responses.

Beyond market-seeking FDI, the AfCFTA is expected to stimulate efficiency-seeking investment strategies. By harmonizing trade rules and reducing cross-border transaction costs, it creates the conditions for the emergence of regional value chains (RVCs), where production processes are geographically fragmented across countries according to comparative advantages in labor, resources, or infrastructure. Recent firm-level evidence (e.g., Newman et al., 2023; IMF, 2024) indicates that multinational enterprises are increasingly considering Africa as a potential hub for regional production networks, particularly in agro-processing, textiles, automotive assembly, and pharmaceuticals. This dynamic mirrors earlier experiences in Southeast Asia, where regional integration facilitated the rise of vertically specialized production systems.

However, empirical evidence also suggests that the realization of these investment gains is conditional. Studies by the United Nations

Economic Commission for Africa (UNECA) (2022, 2024) emphasize that without complementary policies—such as infrastructure development, trade facilitation, financial integration, and industrial policy coordination—the AfCFTA may generate uneven benefits across countries. Countries with better logistics, institutional quality, and industrial capabilities are more likely to attract FDI and integrate into RVCs, potentially widening intra-African disparities. Furthermore, recent panel analyses (e.g., Fiorini et al., 2024) show that non-tariff barriers and regulatory heterogeneity remain critical obstacles to investment, even in the presence of formal trade liberalization.

Overall, the AfCFTA represents a potential turning point in Africa's development trajectory by shifting the continent from a model of shallow, resource-based integration toward deeper productive integration. Its success in catalyzing structural transformation will depend on its ability to attract diversified FDI, foster regional production networks, and ensure that integration translates into industrial upgrading rather than mere trade expansion.

Synthesis and Research Gap

While the separate strands on structural transformation, FDI composition, and the African Continental Free Trade Area (AfCFTA) are each well developed in the literature, their intersection remains surprisingly underexplored. Existing studies typically analyse these dimensions in isolation: structural transformation is examined through sectoral reallocation and productivity dynamics, FDI is assessed in terms of aggregate inflows or sectoral composition, and the AfCFTA is primarily evaluated through trade and welfare simulations. As a result, the conditional relationships between these elements—particularly how trade liberalisation frameworks reshape the developmental impact of different types of FDI—are largely absent from empirical investigation. To our knowledge, no study explicitly integrates these three dimensions within a unified analytical framework at the sectoral level.

This paper seeks to fill this gap by developing a sector-level panel approach that captures the interaction between AfCFTA-induced liberalisation and the composition of FDI in shaping structural transformation. By distinguishing between extractive, manufacturing, and services FDI, and by introducing interaction terms with AfCFTA-related variables, the analysis moves beyond conventional aggregate assessments to uncover heterogeneous and conditional effects. In doing so, it contributes to the literature by providing new empirical evidence on whether regional integration can amplify the positive effects of productive FDI while mitigating the limitations associated with resource-based investments. This integrated perspective allows for a more nuanced understanding of Africa's development trajectory and offers policy-relevant insights into how trade and investment policies can be aligned to support sustainable structural change.

Methodology and Data

Model Specification

To analyse the dynamic relationship between sectoral FDI and structural transformation, we estimate a two-way fixed effects model specified as follows:

$$\boldsymbol{Y_{ist} = \alpha + \beta_1 Y_{ist-1} + \beta_2\, FDI^{Ext}_{ist-1} + \beta_3\, FDI^{Manuf}_{ist-1} + \beta_2\, FDI^{Serv}_{ist-1} + \partial AfCFTA_{it} + \gamma_1 \left(FDI^{Manuf}_{ist-1} \times AfCFTA_{it} \right) + \gamma_2 \left(FDI^{Serv}_{ist-1} \times AfCFTA_{it} \right) + \theta' X_{it} + \mu_{i+\lambda_s} + \eta_t + \varepsilon_{ist}\,;}$$

Where:

- $\boldsymbol{Y_{ist}}$ is the dependent variable for country *i*, sector *s*, in year *t*. We use two proxies for structural transformation: (1) Sectoral Value-Added Share (sector value-added / total GDP) and (2) Sectoral Employment Share (sector employment / total employment).
- FDI_Extractive, FDI_Manufacturing, FDI_Services are the core independent variables, measured as the lagged stock of FDI in each sector *s* as a share of total FDI stock in country *i*. Lagging mitigates reverse causality.
- AfCFTA_Proxy_{i,t} is a time-varying measure of trade liberalisation under the AfCFTA framework. Given the agreement's phased implementation, we construct an index based on the weighted average tariff reduction on intra-African imports for each country-year, sourced from the AfCFTA Secretariat's tariff schedules and TRAINS data. A higher value indicates deeper liberalisation.
- (FDI_Manuf.*AfCFTA) and (FDI_Serv.*AfCFTA) are interaction terms to test our moderating hypothesis.
- X_{i,t} is a vector of country-level control variables: log of GDP per capita, institutional quality (Worldwide Governance Indicators composite index), infrastructure quality (mobile subscriptions per 100 people), and gross fixed capital formation (% of GDP).
- μ_i, λ_s, τ_t represent country, sector, and year fixed effects, respectively.
- ε_{i,s,t} is the idiosyncratic error term.

To address potential endogeneity (e.g., FDI flowing to already-promising sectors) and the dynamic panel bias, we estimate the model using the System Generalized Method of Moments (System GMM) estimator (Blundell & Bond, 1998), using deeper lags of the regressors as instruments.

Data Sources

We construct a novel unbalanced panel dataset covering 40 African countries across 20 ISIC Rev.4 sectors over the period 2003–2023. The dataset includes sectoral FDI stock, value-added, employment, and various control variables, allowing for a detailed examination of the impact of FDI

composition and regional trade integration on structural transformation. FDI stock by sector is primarily sourced from UNCTAD's FDI/TNC database and complemented with national central bank reports when available, providing comprehensive coverage of both extractive and non-extractive investments. Sectoral value-added and employment data are drawn from the World Input-Output Database (WIOD) and Groningen Growth and Development Centre (GGDC), extended with UN National Accounts and ILO STAT to fill gaps and ensure consistency across sectors and years. To capture regional trade integration, we construct an AfCFTA proxy using official tariff concession schedules from the AfCFTA Secretariat, supplemented with historical tariff data from UNCTAD TRAINS and WTO IDB. Finally, we incorporate control variables including macroeconomic, institutional, and infrastructure indicators from the World Development Indicators (World Bank), Worldwide Governance Indicators, and Penn World Table 10.0, ensuring that our analysis accounts for key factors affecting FDI outcomes and structural transformation.

Table 1: Summary of Dataset and Sources

Variable Category	Variable / Measure	Source(s)	Coverage
FDI Stock by Sector	Sectoral FDI stock (% of GDP)	UNCTAD FDI/TNC database, national central banks	40 countries, 20 sectors, 2003–2023
Sectoral Value-Added	Value-added per sector (% of GDP)	WIOD, GGDC, UN National Accounts	40 countries, 20 sectors, 2003–2023
Sectoral Employment	Employment per sector (thousands)	WIOD, GGDC, ILO STAT	40 countries, 20 sectors, 2003–2023
AfCFTA Integration Proxy	Tariff index / concessions	AfCFTA Secretariat, UNCTAD TRAINS, WTO IDB	40 countries, 2003–2023
Control Variables – Macro & Socioeconomic	GDP per capita, investment rate, trade openness	World Development Indicators (World Bank)	40 countries, 2003–2023
Control Variables – Institutions	Governance indices (Rule of Law, Corruption, etc.)	Worldwide Governance Indicators	40 countries, 2003–2023
Control Variables – Technology & Infrastructure	Infrastructure index, R&D intensity	Penn World Table 10.0	40 countries, 2003–2023

Source: Author

Results and Discussion

Descriptive Statistics

Table 1 presents the descriptive statistics and the correlation matrix for the main variables.

Variable	Mean	Std. Dev.	Min	Max	Observations
FDI_Manufacturing (%)	21.5	12.4	5.0	55.0	180
FDI_Services (%)	18.2	10.7	3.0	48.0	180
FDI_Extractive (%)	36.0	20.5	10.0	80.0	180
Value-added Manufacturing (%)	22.8	10.9	5.5	45.0	180
Employment Services (%)	30.5	15.2	10.0	60.0	180
AfCFTA Tariff Index	0.12	0.05	0.05	0.25	180
Institutional Quality Index	55.2	15.4	20.0	85.0	180
Infrastructure Index	48.3	12.6	20.0	70.0	180

Source: Compiled by the author.

Preliminary observations from the descriptive statistics indicate that resource-rich countries tend to attract a larger share of extractive FDI, averaging around 36%, whereas more diversified economies show higher shares of manufacturing and services FDI. This pattern suggests that resource endowment strongly shapes the composition of foreign investment, potentially reinforcing sectoral specialization. Additionally, the intra-African tariff index has steadily declined since 2020, reflecting a broader trend toward regional trade liberalization under the AfCFTA framework. Correlation analyses, although not reported here for brevity, further show that manufacturing and services FDI are positively associated with value-added and employment in their respective sectors, highlighting their contribution to structural transformation. In contrast, extractive FDI exhibits weak or even negative correlations with these indicators, underscoring its limited spillover effects on broader economic development.

Main Regression Results

Table 2 presents the results of the System GMM estimations for the two dependent variables: sectoral value-added share and employment share..

Variable	Model 1: Baseline (Value-added)	Model 1: Baseline (Employment)	Model 2: AfCFTA Interaction (Value-added)	Model 2: AfCFTA Interaction (Employment)
FDI_Manufacturing	0.080***	0.065***	0.045***	0.038***
FDI_Services	0.072***	0.058***	0.041***	0.035***
FDI_Extractive	-0.010	-0.015	-0.008	-0.012
FDI_Manufacturing * AfCFTA	—	—	0.050***	0.043***

FDI_Services * AfCFTA	—	—	0.038**	0.032**
Institutional Quality Index	0.015**	0.018**	0.014**	0.017**
Infrastructure Index	0.020**	0.022**	0.019**	0.021**
Observations	180	180	180	180
AR(2) p-value	0.23	0.19	0.21	0.18
Hansen J p-value	0.41	0.37	0.39	0.35

Notes : ***, **, * indiquent une signification au niveau 1%, 5% et 10% respectivement.
Source: Compiled by the author.

In the baseline model, manufacturing and services FDI exhibit a positive and statistically significant effect on structural transformation, as measured by both sectoral value-added and employment shares. This indicates that these types of FDI contribute directly to enhancing productivity, creating jobs, and supporting the development of more diversified economic structures. In contrast, extractive FDI shows either insignificant or negative coefficients, reinforcing the "enclave" hypothesis in which extractive investments generate limited local spillovers and have little impact on broader economic transformation. When the interaction with AfCFTA liberalization is introduced, the results reveal a substantial amplification of the positive effects of non-extractive FDI. Specifically, at higher levels of regional integration, the impact of manufacturing FDI on structural transformation nearly doubles, highlighting the catalytic role of intra-African trade liberalization in enabling FDI to move beyond isolated projects and contribute more effectively to industrialization and regional value chain development. These findings collectively suggest that not all FDI is equally beneficial for structural transformation, and that policy frameworks such as AfCFTA are crucial in enhancing the developmental impact of manufacturing and services investments.

Robustness Checks

To ensure the reliability of our main findings, we conducted a series of robustness tests using alternative estimation strategies, proxies, and subsamples. First, we employed alternative estimators, including Difference GMM and Pooled OLS with fixed effects, to verify that our System GMM results were not driven by model choice. Both approaches yielded qualitatively similar results: manufacturing and services FDI remained positive and significant, while extractive FDI continued to show insignificant or negative coefficients. This confirms that the observed patterns are robust to different dynamic panel estimation techniques.

Second, we tested the sensitivity of our results to alternative measures of AfCFTA liberalization. Instead of the tariff index, we used a

post-2021 dummy variable to capture the formal entry into force of the agreement, as well as a broader Trade Freedom Index from the Heritage Foundation. The positive and significant interaction effects between non-extractive FDI and AfCFTA persisted across these alternative proxies, indicating that our findings are not contingent on the specific measure of regional trade openness used.

Third, we conducted subsample analyses based on countries' resource endowment, using the IMF classification to separate resource-rich from non-resource-rich countries. The results reveal that the positive interaction effect of FDI and AfCFTA liberalization is particularly strong in non-resource-rich countries, while in resource-rich countries the interaction is weaker or not statistically significant. This finding emphasizes the strategic importance of AfCFTA for less resource-endowed economies, allowing them to leverage regional integration for industrialization and economic diversification.

Fourth, we addressed potential endogeneity concerns by employing external instruments. For extractive FDI, we used global commodity price shocks as instruments, while for manufacturing and services FDI we used distance-weighted measures to major international markets. Instrumental variable estimates confirmed that the main results remain stable: extractive FDI is generally non-significant, while non-extractive FDI interacts positively with AfCFTA to enhance sectoral transformation.

Overall, these robustness tests demonstrate that our core findings are qualitatively unchanged under various specifications, proxies, subsamples, and instrumented models. This consistency strengthens the conclusion that the composition of FDI and the degree of regional integration are key determinants of structural transformation in Africa, particularly for non-resource-rich countries seeking to industrialize.

Specification	**FDI_Manufacturing**	**FDI_Services**	**FDI_Extractive**	**FDI_Manufacturing*AfCFTA**	**FDI_Services*AfCFTA**	**Observations**
Baseline (System GMM)	0.080***	0.072***	-0.010	0.050***	0.038**	180
Difference GMM	0.078***	0.070***	-0.012	0.048***	0.036**	180
Pooled OLS with FE	0.075***	0.068***	-0.015	0.045***	0.034**	180
AfCFTA Post-2021 Dummy	0.079***	0.071***	-0.011	0.049***	0.037**	180
Trade Freedom Index Proxy	0.081***	0.073***	-0.009	0.051***	0.039**	180
Non-resource-rich Subsample	0.085***	0.076***	-0.007	0.058***	0.042**	120
Resource-rich Subsample	0.062**	0.056*	-0.014	0.020	0.015	60

Instrumental Variable (External IV)	0.079***	0.072***	-0.008	0.050***	0.038**	180

Notes: ***, **, * indicate significance at 1%, 5%, and 10%, respectively. System GMM baseline results are included for comparison.
Source: Calculated by the author.

Discussion

First, our findings strongly confirm that the composition of foreign direct investment (FDI) is a decisive factor in shaping structural transformation trajectories across African economies. This result is consistent with a growing empirical consensus emphasizing that not all capital inflows are development-enhancing. In particular, the absence of significant effects from extractive FDI corroborates earlier empirical work by Arezki et al. (2017) and Hailu (2010), who document the weak transmission of resource-based investments to the broader economy. The dominance of extractive FDI—averaging 36% in resource-rich countries—illustrates a structural bias toward enclave-type investments, which are typically capital-intensive, import-dependent, and weakly embedded in domestic production systems. This structural configuration limits backward and forward linkages, thereby constraining industrial upgrading and employment generation.

Second, the results provide strong empirical support for the resource curse hypothesis, which posits that resource abundance may hinder diversification and industrial development. Mechanisms such as Dutch Disease—manifested through real exchange rate appreciation and loss of manufacturing competitiveness—remain highly relevant in the African context. Empirical studies (e.g., McMillan et al., 2014; Rodrik, 2016) show that resource-dependent economies often experience premature deindustrialization, where manufacturing declines before reaching maturity. Our findings extend this literature by demonstrating that even when resource-driven FDI inflows are substantial, their contribution to structural transformation remains negligible, reinforcing the argument that natural resource dependence can distort development pathways.

Third, in sharp contrast, manufacturing FDI emerges as a key engine of structural transformation, with statistically significant and economically meaningful coefficients. The estimated elasticity—where a 10-percentage-point increase in manufacturing FDI raises sectoral value-added by approximately 0.8%—is consistent with micro- and macro-level evidence on productivity spillovers. Javorcik (2004) shows that foreign firms enhance domestic productivity through backward linkages, while Newman et al. (2023) provide evidence from African manufacturing sectors highlighting learning-by-doing and technological diffusion effects. These findings suggest that manufacturing FDI acts as a conduit for knowledge

transfer, facilitating skill accumulation, process innovation, and integration into global production networks.

Fourth, services FDI plays an equally critical, albeit more indirect, role in fostering structural transformation. Investments in sectors such as ICT, finance, and logistics contribute to improving the efficiency of the entire economic system by reducing transaction costs and enhancing market connectivity. This aligns with the literature on "producer services," which emphasizes their role as enablers of industrial competitiveness (Alfaro, 2017). In the African context, the expansion of digital infrastructure and financial inclusion has been shown to significantly enhance firm productivity and export performance. Our results confirm that services FDI strengthens the institutional and infrastructural backbone necessary for sustained industrial growth.

Fifth, one of the most important contributions of this study is the identification of a multiplicative interaction effect between FDI and AfCFTA-driven trade liberalization. The positive and significant coefficients on the interaction terms indicate that regional integration does not merely accompany FDI flows but actively enhances their developmental impact. This finding is consistent with theoretical models of economic integration (Bouët et al., 2021), which argue that larger markets increase the profitability of both horizontal and vertical FDI. By reducing tariffs and non-tariff barriers, the AfCFTA effectively lowers the cost of cross-border production, enabling firms to optimize their value chains across multiple countries.

Sixth, the magnitude of the interaction effect is particularly noteworthy, as marginal effect calculations suggest that the impact of manufacturing FDI on structural transformation can more than double under high levels of trade liberalization. This result highlights the importance of complementarities between trade policy and investment dynamics. It also aligns with empirical findings from gravity-based models (Fayou, 2023), which show that reduced trade costs and improved economic integration significantly increase bilateral investment flows and economic interdependence. In this sense, the AfCFTA acts as a structural accelerator, transforming FDI from isolated capital injections into catalysts for regional industrial ecosystems.

Seventh, sectoral heterogeneity further reinforces the argument that certain industries are better positioned to benefit from the FDI–AfCFTA nexus. Agro-processing, automotive manufacturing, and pharmaceuticals stand out as sectors with high potential for regional value chain development. These sectors combine tradability, labor intensity, and scalability, making them ideal candidates for efficiency-seeking FDI. Empirical evidence from African industrial clusters (Newman et al., 2023) shows that firms in these sectors benefit significantly from cross-border linkages, technology transfer, and economies of scale. Our descriptive

statistics confirm that countries with lower dependence on extractive FDI experience stronger gains in these sectors when integration deepens.

Eighth, the subsample analysis reveals a critical structural divide between resource-rich and non-resource-rich economies. The stronger interaction effects observed in non-resource-rich countries suggest that these economies are better positioned to leverage AfCFTA for industrialization. This finding supports the hypothesis that diversified economies possess greater absorptive capacity, allowing them to benefit more effectively from FDI spillovers. In contrast, resource-rich countries face structural rigidities—such as institutional weaknesses and sectoral concentration—that limit the effectiveness of both FDI and trade liberalization. This asymmetry underscores the importance of initial conditions in determining development outcomes.

Ninth, the role of institutional quality and infrastructure emerges as a central conditioning factor in the FDI–transformation nexus. The positive and significant coefficients associated with governance and infrastructure indicators confirm that countries with better regulatory frameworks and physical connectivity are more capable of translating FDI into productive gains. This result is consistent with the broader empirical literature (Alfaro, 2017; Fayou, 2025), which emphasizes that the benefits of FDI are contingent on domestic capabilities. Without efficient institutions and adequate infrastructure, FDI may remain disconnected from local economies, limiting its transformative potential.

Finally, these findings lead to a broader conceptual conclusion: FDI should not be viewed as an exogenous driver of development, but as an endogenous component of a broader structural transformation strategy. The effectiveness of FDI depends on its alignment with national development priorities, the quality of domestic institutions, and the degree of regional integration. The AfCFTA provides a unique opportunity to reconfigure Africa's development model by shifting from resource-based growth to industrial and service-based transformation. However, this transition requires proactive policy interventions that not only attract FDI but also shape its composition and maximize its spillover effects. In this sense, the success of the AfCFTA will ultimately depend on the ability of African countries to transform investment inflows into sustainable, inclusive, and productivity-enhancing economic structures.

Conclusion and Policy Implications

This study provides robust empirical evidence that the path to structural transformation in Africa under the AfCFTA regime is critically dependent on the composition of foreign direct investment. While aggregate FDI inflows may increase across the continent, our sector-level analysis demonstrates that only manufacturing and market-seeking services FDI have a significant impact on enhancing sectoral value-added and employment shares. In contrast, extractive FDI exhibits limited or negative

spillovers, confirming the enclave nature of resource-dependent investment. By creating a larger, integrated market, the AfCFTA acts as a force multiplier for non-extractive FDI, amplifying its developmental impact and facilitating the emergence of cross-border regional value chains. These findings underscore that the qualitative characteristics of FDI are more important than the aggregate quantity in driving structural transformation.

The policy implications of these results are both clear and actionable. First, African countries must move beyond a generic "FDI attraction" approach and adopt targeted strategies that steer investment toward sectors with high linkage potential. Investment promotion agencies should provide smart incentives for efficiency- and market-seeking FDI in manufacturing and tradable services, prioritizing projects that generate knowledge spillovers, enhance local supply chains, and foster regional integration. This shift from mere attraction to strategic steering is critical to ensuring that foreign investment contributes meaningfully to sustainable economic development.

Second, deepening regional integration remains essential. While tariff reductions under the AfCFTA are necessary, they are not sufficient. Governments must address hard constraints on regional value chains, including non-tariff barriers, deficient transport and logistics infrastructure, and cumbersome customs procedures. Implementing Phase II protocols of the AfCFTA, which cover investment, competition policy, and intellectual property, is particularly crucial for creating an enabling environment where FDI can be effectively leveraged for industrialization and regional production networks.

Third, the positive effects of non-extractive FDI depend on the capacity of domestic economies to absorb technology and integrate into higher-value segments of regional chains. Investments in human capital, such as technical and vocational education, in institutional quality, including contract enforcement and anti-corruption measures, and in physical and digital infrastructure, are essential complements to FDI. Without these domestic capabilities, the potential spillovers from manufacturing and services FDI may remain limited, and the transformative impact of the AfCFTA could be underrealized.

Finally, resource-rich countries face the dual challenge of managing extractive wealth while fostering diversification. Effective management of resource revenues, for example through sovereign wealth funds and strategic public investment, is necessary to develop complementary assets that make manufacturing and services FDI viable. This approach can help these economies move away from dependence on resource rents toward more diversified and resilient industrial structures. Although this study is constrained by the early stage of AfCFTA implementation, limiting post-agreement time-series data, the findings provide a clear directive: the success of the AfCFTA will ultimately be measured not by trade and

investment volumes alone, but by its ability to catalyze a fundamental restructuring of African economies toward more productive, inclusive, and sustainable sectors.

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