China–Africa Relations: The Implications of Chinese Loans, Imports, and FDI For the Demand for Chinese Migrant Workers

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https://doi.org/10.56201/ijebm.vol.12.no11.2026.pg1.22

Abstract

Despite the rapid expansion of Chinese economic engagement in Africa, there remains a critical lack of empirical clarity regarding how different financial drivers specifically dictate the demand for transnational labor. This study addresses the glaring gap in the literature concerning the distinct labour demand elasticities associated with loans, natural resource trade, and foreign direct investment when analyzed collectively across the entire continent. The primary objective is to evaluate the individual and collective impacts of Chinese loans, resource imports, and outward foreign direct investment on the flow of Chinese migrant workers to thirty-two African host states. The methodology employs a dynamic panel data linear model using annual data spanning from 2011 to 2022. This approach effectively accounts for endogeneity and cross-sectional dependence among the selected countries from both Sub-Saharan Africa and the Middle East and North Africa regions. Findings reveal a statistically significant negative correlation between Chinese loans and the number of migrant workers, suggesting a localization paradox where maturing projects increasingly substitute expatriates with local labour to minimize costs. Conversely, China's import of natural resources from Africa exerts a significant positive influence on labor demand, reinforcing the resource-for-infrastructure model which requires foreign technical experts for specialized extraction machinery. FDI exhibits a generally insignificant effect on total labor numbers but maintains a specific positive association with labour services. The study concludes that Chinese labour demand is not monolithic but structurally determined by specific trade and finance modalities. As Chinese firms gain experience and establish technical advantages on the continent, the relationship is shifting from mass labour importation toward technical specialization and workforce localization. Policy recommendations include strengthening local labour quotas through targeted localization mandates and negotiating binding knowledge transfer clauses in resource-backed deals. Furthermore, African states must improve institutional quality to protect domestic workers and diversify financial engagements to foster inclusive industrial growth.

Keywords: *China–Africa relations, Chinese migrant workers, Chinese development finance (loans), Resource-for-infrastructure (RFI), FDI*

Introduction

The economic architecture of Sub-Saharan Africa has been fundamentally restructured over the past two decades by the unprecedented expansion of Chinese engagement, a phenomenon characterized by a complex "trinity" of development finance, strategic trade, and foreign direct investment (FDI) (Haroz, 2011; Ogroh, 2024). Historically, this relationship evolved from a foundation of ideological solidarity during the Cold War—exemplified by the TAZARA Railway project of the 1970s—to a modern era of pragmatic, market-driven interaction under the "Going Out" (*zou chu qu*) strategy and the subsequent Belt and Road Initiative (BRI) (Abubakar, 2025; Oya & Schaefer, 2019; Wingo, 2018). Since 2009, China has maintained its status as Africa's largest bilateral trading partner, with total bilateral trade volumes now exceeding $250 billion annually, representing more than 13% of the continent's total trade (Ogroh, 2024; UNCTAD, 2023). This engagement is underpinned by staggering capital flows; between 2000 and 2018, African governments received approximately $148 billion to $152 billion in Chinese loans, primarily directed toward large-scale infrastructure in the transport and power sectors (Abubakar, 2025; Adeniran, 2020; CARI, 2024). Parallel to these debt flows, Chinese FDI has surged, with the stock increasing from just $0.62 billion in 2003 to over $26 billion a decade later, involving over 10,000 Chinese firms operating across the continent (McKinsey, 2017; Sun, 2017). Nigeria stands as a primary hub for this activity, representing 34% of China's total infrastructure finance commitments in Sub-Saharan Africa, totaling approximately $5.4 billion, and hosting a significant contingent of Chinese nationals, with official figures recording over 6,035 Chinese contract workers in the country by 2024 (CARI, 2025; Haroz, 2011). As these economic ties deepen, they have facilitated a massive movement of people, with the total Chinese migrant population in Africa now estimated between one and two million (Mohseni-Cheraghlou & Aladekoba, 2023). While official figures for formal contract workers peaked at over 263,000 in 2015 before a period of decline, recent data from 2024 shows a rebound to approximately 90,793 formal workers, signaling a renewed focus on strategic mega-projects (CARI, 2025; Nyabiage, 2025).

Despite the rapid closing of Africa's infrastructure gap, a central point of contention exists regarding the demand for Chinese migrant workers and the perceived displacement of local labour, leading to persistent accusations of "new colonialism" (Ogroh, 2024; Sautman & Hairong, 2015). This study addresses a critical problem: how the specific structures of Chinese loans, the import of natural resources, and FDI individually and collectively dictate the flow of transnational labour. First, the impact of Chinese loans on labour demand is inextricably linked to the "tied" nature of Chinese development finance, where concessional loans often carry requirements for at least 50% procurement from Chinese companies and the selection of Chinese contractors (Besada, 2008; GOV.UK, 2021). These agreements frequently mandate a specified percentage of Chinese personnel for technical and managerial roles, justified by firms as necessary to ensure the speed, efficiency, and quality required for massive projects like the Standard Gauge Railways in Kenya and Nigeria (Chiyemura, 2021; Haroz, 2011; Wingo, 2018). Second, the demand for labour is driven by China's import of Africa's natural resources, often managed through the "Angola Model" of resource-for-infrastructure swaps (Abubakar, 2025; Martuscelli, 2020). These deals require the construction of sophisticated extraction and transport infrastructure—such as oil pipelines in Niger and hydroelectric plants in Nigeria—which necessitates an influx of Chinese technical experts familiar with the specialized equipment and management protocols used by state-owned

enterprises (SOEs) (Abubakar, 2025; Mohseni-Cheraghlou & Aladekoba, 2023). Third, Chinese FDI, while increasingly directed toward labour-intensive manufacturing hubs like Ethiopia, remains reliant on Chinese labour for "strategically critical" positions (Chiyemura, 2021; McKinsey, 2017). This reliance is driven by perceived local skills shortages and a preference for the "dormitory labour regime," a system where Chinese workers live on-site to facilitate high productivity and the extreme overtime flexibility required to remain competitive in global value chains (Oya & Schaefer, 2019; Ozawa, 2015; Pun & Smith, 2007).

There remains a glaring gap in the literature concerning the distinct labour demand elasticities associated with loans, resource extraction, and investment respectively. Most existing research remains polarized between narratives of "South-South solidarity" and "exploitation," often relying on anecdotal evidence that ignores the micro-level drivers of transnational labour migration (Fei & Liao, 2020; Oya & Schaefer, 2019; Sautman & Hairong, 2015). Furthermore, a significant discrepancy exists between public perception—which often assumes Chinese firms "only hire Chinese"—and empirical surveys indicating that local hiring rates actually range between 74% and 95% depending on the sector and country (Chiyemura, 2021; Oya & Schaefer, 2019; Sautman & Hairong, 2015). This study is justified by the urgent need for African policymakers to understand the labour implications of their financial choices to ensure that the "Business of Diplomacy" translates into inclusive growth and technical knowledge transfer (Kodzi, 2018; Wissenbach & Wang, 2017). While nations like Nigeria have implemented stricter labour policies and localization mandates to protect domestic workers, others remain relaxed, potentially sacrificing long-term job creation for rapid infrastructure delivery (Development Reimagined, 2020; Ogroh, 2024). By isolating the impacts of tied loans, resource-backed financing, and FDI-led technical transfers, this research aims to clarify how African states can exercise their agency to maximize local employment outcomes and mitigate the vulnerabilities of both African and Chinese workers (Development Reimagined, 2020; Oya & Schaefer, 2019; Power, 2012). The ultimate objective of this article is to provide data-driven insights that clarify these dynamics, ensuring that future Sino-African engagements move beyond the extraction of resources and toward the meaningful development of human capital and sustainable industrialization.

The paper proceeds as follows. First, we review the relevant theoretical and empirical literature related to the core themes of this study. Section 3 presents a comprehensive discussion of the methodology, including data sources, variable definitions, and the methods of data analysis. This is followed by an empirical examination of how China's aid to Africa, its imports from Africa, and outward FDI flow to Africa influence the flow of Chinese migrant workers to the continent. The concluding section synthesizes the discussion and analysis, offering an overall assessment of the impact of China's aid architecture on workforce localization and highlighting the strategic role African leaders must play moving forward.

2. Literature Review

2.1 Theoretical Literature Review

2.1.1 Chinese Loans and the Demand for Chinese Migrant Workers

The intersection of Chinese development finance and transnational labour migration is theoretically grounded in the frameworks of tied aid conditionality, resource-for-infrastructure (RFI) logic, and neoclassical labour market theory. These theories explain how the structural arrangements of Chinese loans generate a specific demand for Chinese migrant workers (L_{ch}) within African host economies.

a) Tied Aid and "Conditionality with Chinese Characteristics"

A fundamental theoretical lens is the theory of tied development finance. Unlike the policy-based conditionality of Western institutions, Chinese finance integrates export and resource security interests directly into loan structures (Wingo, 2018). This is conceptualized as "Conditionality with Chinese Characteristics," where concessional loans are "tied" to the procurement of Chinese goods and the selection of Chinese contractors (Wingo, 2018; Haroz, 2011).

Mathematically, the demand for Chinese labour (L_{ch}) is a derived demand from the contract requirements. Chinese state policy often mandates a minimum procurement threshold from Chinese firms (Wingo, 2018):

$$C_{ch} \geq 0.5 \times V \quad (1)$$

where V is the total project contract value and C_{ch} is the value awarded to Chinese firms. Because these firms typically utilize a "total package" model—providing their own materials and technical staff—the demand for Chinese workers becomes a structural requirement of the loan itself (Haroz, 2011; Wingo, 2018).

b) The Resource-for-Infrastructure (RFI) Model

The RFI model, or "Angola Model," provides a theoretical framework for resource-backed lending where loans are guaranteed by future commodity streams (Martuscelli, 2020; Halland et al., 2014). This serves as a risk-mitigation strategy in environments with low credit ratings (Abubakar, 2025; Jureńczyk, 2020). Theoretically, the demand for Chinese workers in RFI projects is driven by the imperative of technical efficiency and speed (Abubakar, 2025). To ensure timely resource extraction and loan repayment, firms prefer Chinese expatriates familiar with the management protocols of State-Owned Enterprises (SOEs) over local labor, which may be perceived as lacking specific technical skills (Chiyemura, 2021; McKinsey, 2017).

c) Neoclassical Labour Market Theory and Displacement

From a neoclassical perspective, the impact of Chinese workers is analyzed via a production function where output Q depends on capital (K), native labour (L_n), and migrant labor (L_m):

$$Q = f(K, L_n, L_m) \quad (2)$$

The displacement hypothesis suggests that if Chinese and African workers are substitutes, an increase in L_m will depress local employment (Sibanda, 2008). The displacement effect (β) is measured as (Johnson, 1980, as cited in Sibanda, 2008):

$$\beta = \frac{\partial E_{1D}}{\partial E_{1M}} \quad (3)$$

where E_{1D} is native employment and E_{1M} is immigrant labor? While critics argue β is high, empirical literature suggests localization rates of 74–95%, indicating that Chinese labour may instead act as a complement in technical and managerial roles (Oya & Schaefer, 2019; Sautman & Hairong, 2015).

d) Linkage Theory and the Multiplier Effect

Finally, Hirschman's Linkage Theory explains how tied loans can create "enclave" economies with weak backward linkages (UNCTAD, 2010; Gov.uk, 2021). The demand for Chinese workers represents a leakage (m_L) in the local economic multiplier:

$$\Delta Y = \frac{1}{s + m_L + m_G} \Delta I \quad (4)$$

where ΔY is the change in national income, I is the loan-funded investment, and s is the marginal propensity to save (Commonwealth iLibrary, 2010)? By mandating Chinese labour, loans increase m_L, thereby reducing the project's capacity to stimulate domestic human capital development (Kodzi, 2018).

2.1.2 Natural Resource Imports and the Demand for Chinese Migrant Workers

The theoretical nexus between China's import of natural resources and the demand for Chinese migrant workers is primarily explained through the Resource-for-Infrastructure (RFI) model and derived demand theory. These frameworks elucidate how the strategic pursuit of resource security necessitates an influx of transnational labour to manage the technical and temporal requirements of extraction-related infrastructure.

a) The Resource-for-Infrastructure (RFI) and "Angola Model"

The "Angola Model" serves as the dominant theoretical framework for understanding resource-backed engagement. In this model, loans for infrastructure are secured against future streams of natural resources, such as oil or minerals (Abubakar, 2025; Martuscelli, 2020; Ndinga-Muvumba & Corkin, 2009). Theoretically, this functions as a risk-mitigation strategy for Chinese lenders operating in resource-rich but governance-poor environments (Abubakar, 2025; Jureńczyk, 2020). Mathematically, the relationship can be represented by a trade-off where the total value of infrastructure provided (V_{inf}) is balanced by the net present value of future resource exports (E_r):

$$V_{inf} = \sum_{t=1}^{n} \frac{E_{r,t}}{(1+r)^t} \quad (5)$$

where r is the discount rate and n are the loan tenure (Stellenbosch University, 2006). The demand for Chinese migrant workers (L_{ch}) is an endogenous requirement of this model. To ensure that the "repayment" (resource extraction) begins promptly, Chinese state-owned enterprises (SOEs) prioritize speed and technical efficiency, often mandating the use of their own experienced personnel to meet tight construction deadlines (Abubakar, 2025; Chiyemura, 2021; Haroz, 2011).

b) Derived Demand and Technical Complexity

From a neoclassical perspective, the demand for Chinese labour is a derived demand from the production of extraction-related capital. If the production of sophisticated infrastructure (e.g., oil pipelines, hydroelectric dams) requires a specific technology level (T), and if local labour (L_n) and Chinese labor (L_{ch}) are imperfect substitutes due to a "skills gap" (G_s), the firm's labour demand function becomes:

$$L_{ch} = f(Q, T, G_s, \tau) \quad (6)$$

where Q is the project scale and τ is the time constraint (project speed) (Oya & Schaefer, 2019; Ozawa, 2015). Chinese firms frequently argue that the high technical complexity of resource-linked projects, such as the Standard Gauge Railway or mining facilities in the DRC, necessitates Chinese expatriates who are already familiar with the specific equipment and management protocols of the parent firm (Chiyemura, 2021; McKinsey, 2017; UNCTAD, 2010).

2.1.3 Chinese FDI and the Demand for Chinese Migrant Workers

The relationship between China's outward Foreign Direct Investment (FDI) and the demand for Chinese migrant workers is theoretically rooted in the eclectic paradigm of international production, the Flying Geese (FG) model of industrial transmigration, and labour process theory. These frameworks explain how FDI serves as a vehicle for a "package" of resources that often necessitates the movement of transnational labor to protect firm-specific advantages and manage technical complexities.

a) FDI as a Resource Package and Ownership-Specific Advantages

Theoretically, FDI is defined as a cross-border transfer of a resource package, which includes capital (K), technology (T), and management or marketing expertise (M) (Odozi, 1995; Ayenagbo, 2015). This can be expressed as:

$$FDI = f(K, T, M) \quad (7)$$

According to Hymer's Theory of International Operations (1960), a firm must possess "ownership-specific advantages" (A_f) to overcome the "cost of being alien" (C_a) in a foreign market (Sauvant & Chen, 2014; Ozawa, 2015). For Chinese firms, these advantages are often embedded in their specialized management protocols and technical knowledge. To ensure the successful replication of their production models, Chinese firms frequently import their own "technical human capital" to safeguard these advantages, particularly when local labour markets suffer from a skills gap (G_s) (Chiyemura, 2021; McKinsey, 2017). Thus, the demand for Chinese workers (L_{ch}) becomes an endogenous response to the need to minimize C_a while maximizing the efficiency of M and T.

b) The Flying Geese (FG) Model and Industrial Transmigration

The Flying Geese theory, restated by Ozawa (2015) based on Akamatsu (1935), provides a dynamic framework for understanding the relocation of labor-intensive manufacturing from "lead" to "follower" economies. As labor costs rise in China, the lead goose, factories are transplanted to lower-wage regions like Sub-Saharan Africa (Ozawa, 2015). Theoretically, this process follows a "three-jump" evolutionary progression:

$$\text{Trade} \rightarrow \text{Local Processing} \rightarrow \text{Industrial Clustering} \quad (8)$$

In the initial processing and clustering phases, the demand for Chinese migrant workers is driven by the need for speed and the lack of a disciplined local industrial workforce (Ozawa, 2015). While the FG model suggests that 85 million manufacturing jobs could eventually migrate to Africa (Lin & Wang, 2014), the current phase remains reliant on Chinese "entrepreneurial settlers" and technical expatriates to manage the initial setup of these factories (Ozawa, 2015; Oya & Schaefer, 2019).

c) Labour Segmentation and the Dormitory Labour Regime

From a Labour Process Theory perspective, the demand for Chinese workers is linked to the "Dormitory Labour Regime" (Pun & Smith, 2007). This regime involves housing workers on-site to ensure extreme productivity and overtime flexibility (Oya & Schaefer, 2019). In a production function where output (Q) depends on capital (K), native labour (L_n), and Chinese migrant labour (L_{ch}):

$$Q = f(K, L_n, L_{ch}) \quad (9)$$

Chinese managers often view L_{ch} and L_n as imperfect substitutes due to perceived differences in work ethics and technical familiarity (Oya & Schaefer, 2019; Tang & Eom, 2019). This leads to a segmented labor market where Chinese FDI creates high-skill demand for expatriates and low-

skill demand for locals (Oya & Schaefer, 2019). Empirical data supports this association, showing that Chinese FDI, contract revenues, and labor flows generally move proportionally over time (Development Reimagined, 2020).

2.2 Empirical Literature

Empirical scholarship reveals a robust and proportional correlation between the volume of Chinese loans and the demand for Chinese migrant workers across the African continent. Development Reimagined (2020) and the China Africa Research Initiative (CARI, 2025) observe that the number of Chinese contract workers in Africa peaked at 263,696 in 2015, a milestone that coincided precisely with the peak of Chinese bilateral lending and contract revenues. This association is fundamentally structural; Wingo (2018) utilizes a country-year panel dataset (2000–2015) and Tobit models to demonstrate that Chinese concessional loans—characterized by "Conditionality with Chinese Characteristics"—frequently mandate that at least 50% of procurement be sourced from Chinese firms, thereby acting as a direct driver for the selection of Chinese contractors and technical personnel. In Nigeria, which represents 34% of China's infrastructure finance commitments in Sub-Saharan Africa, these loans have funded mega-projects such as the Abuja–Kaduna Railway and various gas-fired power stations, leading to a significant concentration of over 6,035 formal Chinese contract workers by 2024. While Guo and Jiang (2021) utilize a difference-in-differences approach (2000–2014) across 10 countries to show that Chinese aid projects significantly increase local employment by two to three percentage points during construction, they also confirm the persistent demand for Chinese expatriates in technical and managerial roles. This is supported by the work of Oya and Schaefer (2019), who, through large-scale surveys in Angola and Ethiopia, find that Chinese firms hire Africans for up to 90% of unskilled roles but reserve "strategically critical" positions for Chinese nationals to ensure project speed and adherence to firm-specific protocols. Further empirical contributions from Brautigam and Hwang (2016), Adeniran (2020), and Dollar (2016) emphasize that infrastructure financing is the primary channel through which these labour flows are institutionalized. Studies by Strange et al. (2013), Dreher et al. (2018), and Landry (2018) further refine this by correlating high project values in sectors like transport and energy with a higher density of transnational labour. Additionally, the works of Fei and Liao (2020), Dalibi and Bello (2017), and Isaksson and Kotsadam (2018) highlight how the contract-based nature of these loan-funded projects creates a "mobile" Chinese workforce that relocates according to the project timeline.

The demand for Chinese migrant labour is further intensified by China's import of Africa's natural resources, a relationship frequently managed through the "Angola Model" of resource-for-infrastructure (RFI) swaps. Under these agreements, reviewed extensively by Martuscelli (2020) and Abubakar (2025), loans for infrastructure are secured against future streams of commodities such as oil, minerals, and timber. Empirical analysis of these RFI deals in countries like Angola, the DRC, and Niger shows that the technical complexity of extraction-related infrastructure—including oil pipelines and deep-water ports—necessitates an influx of Chinese technical experts. Ndinga-Muvumba and Corkin (2009) and Jureńczyk (2020) document that the 2004 oil-backed credit line to Angola specifically required the construction of infrastructure by Chinese firms, which brought in thousands of workers to meet tight reconstruction deadlines. Wegenast et al. (2017, 2019), utilizing geocoded data on mining rights across 21 Sub-Saharan countries, find a paradoxical relationship where proximity to Chinese-operated mines is sometimes associated with higher local unemployment, suggesting an "enclave" labour model where technical niches are filled by Chinese expatriates. This "enclave" theory is supported by Power (2012) and Mihalyi et

al. (2022), who argue that the capital-intensive nature of resource extraction projects in Angola and Ghana fails to provide sustainable local employment compared to the high demand for foreign specialists. Scholars such as Zweig and Bi (2005), Taylor (2006), and Alves (2013) emphasize that resource security interests dictate a "total package" delivery method that prioritizes Chinese labour to ensure extraction efficiency. Further empirical weights are provided by Stein and Uddhammar (2021) and Zafar (2007), who track the regional distribution of imports, showing that countries like Angola, which accounts for one-third of Chinese oil imports from Africa, host the highest concentrations of Chinese workers. Additional insights from Busse et al. (2014), Landry (2018), and Kabemba (2016) suggest that the lack of transparency in resource-backed agreements often obscures the true volume of migrant labour required for extraction-related projects.

The flow of Chinese Foreign Direct Investment (FDI) to Africa serves as a third critical driver, functioning as a "resource package" that bundles capital, technology, and management expertise. McKinsey (2017) and Oya and Schaefer (2019) provide the most comprehensive empirical evidence on this front, surveying over 1,000 Chinese firms and finding that while localization rates are high (89% on average), FDI brings a higher ratio of Chinese workers per dollar compared to loans, particularly in manufacturing. Ozawa (2015) and Lin and Wang (2014) frame this through the "Flying Geese" theory, suggesting that as labour costs rise in China, labour-intensive manufacturing is transplanted to African hubs like Ethiopia. However, current empirical findings show that Chinese firms still rely on "entrepreneurial settlers" and "technical human capital" to protect their firm-specific advantages. In Nigeria, Chen et al. (2016) and Sun et al. (2017) document how FDI in the telecom sector (Huawei/ZTE) and manufacturing (Ogun-Guangdong FTZ) creates a specific demand for Chinese expatriates to manage sophisticated production methods. Ayenagbo (2015) uses panel data for 23 African countries to confirm that Chinese FDI significantly increases Chinese exports to Africa, which in turn necessitates Chinese labour to install and maintain imported machinery. Coniglio et al. (2015) and Adeniran (2020) further demonstrate that FDI stock doubled between 2012 and 2017, reaching nearly $40 billion, with a substantial portion directed toward the services sector, where Chinese expatriates remain dominant in senior management. The works of Kodzi (2018), Abebe et al. (2022), and Cheru and Oqubay (2019) emphasize that while FDI creates thousands of manufacturing jobs, the "dormitory labour regime" preference of Chinese managers continues to drive the specific demand for Chinese nationals. Finally, studies by Sinkala and Zhou (2014), Mavungu (2024), and Rounds and Huang (2017) indicate that the demand for migrant workers under FDI is highly sensitive to host-country labour policies, with "relaxed" environments attracting a higher ratio of foreign to local labour.

Despite the proliferation of studies, there remains a significant gap in the literature concerning the distinct labour demand elasticities associated with loans, natural resource imports, and FDI when analyzed collectively across the entire African continent. Most existing empirical reviews are either case-specific—focusing on salients like Angola or Ethiopia—or rely on cross-sectional snapshots that fail to capture the long-term temporal shifts in labour demand. For instance, Kodzi (2018) is limited by a small sample size in East Africa, and Oya and Schaefer (2019) focus only on two contrasting contexts. This current study is justified by its comprehensive selection of countries from all regions of Africa and its adoption of the dynamic panel data econometric technique. This methodology addresses the critical issue of endogeneity—noted by Guo and Jiang (2021)—by accounting for time-invariant unobserved country characteristics and the lagged effects of financial flows on labour migration. By isolating the impacts of tied loans, resource-backed financing, and FDI-led technical transfers within a dynamic framework, this research provides the empirical clarity needed for African policymakers to exercise their agency.

Ultimately, this article aims to bridge the discrepancy between public perception and data, ensuring that the "Business of Diplomacy" translates into sustainable human capital development for the continent.

4. Methodology

4.1 Data and Variables

Data for this study covers the period 2011-2022 and thirty-two (32) African countries. A short panel was the case for this study. As shown in Table 1, the countries selected are drawn from both the MENA member countries and SSA. The selected period and units were due also due to availability of data for at least one of the key variables of interest. The key variables of interest are China's official development assistance (loan) to African countries, China's import from Africa, Chinese Outward FDI flow to Africa, and Chinese migrant workers in Africa. Data were sourced from the China Africa Research Initiative (CARI), United Nations Development Programme (UNDP), World Development Indicators (WDI), and World Governance Indicators (WGI). Details of the variables selected for this study are presented in Table 1.

4.2 Econometric Modeling Technique

4.2.1 Sequential two-stage Generalized Method of Moments (SGMM)

This paper examines how China's ODA, imports from Africa, and FDI flow to Africa influences the mobility of labourers of Chinese origin to Africa. The estimators of Chinese migrant workers are based on the sequential two-stage Generalized Method of Moments (GMM) econometric technique. The sequential two-stage GMM estimator is a widely used econometric technique for estimating dynamic panel data models, particularly when dealing with short panels—that is, datasets with a large number of cross-sectional units (*N*) and a small number of time periods (T). This method is especially useful when addressing issues of endogeneity, unobserved heterogeneity, and autocorrelation in panel data. This endogeneity bias is primarily due to the problem of reverse causality. The presence of such problems can lead to biased results when applying traditional estimation methods such as ordinary least-squares (OLS) estimators and fixed-effects estimators. To avoid this, the sequential two-stage GMM estimation methodology by Kripfganz and Schwarz (2015) was used in this study.

Consider the dynamic panel data model with units i = 1, 2, ..., *N*, and a fixed number of time periods $t = 1, 2, \ldots, T$, with $T \geq 3$:

$$y_{it} = \lambda y_{i,t-1} + \times'_{it}\beta + f_i'\gamma + e_{it}, \quad e_{it} = \alpha_i + u_{it} \qquad (10)$$

where $\times_{it}$is a $K_x \times 1$ vector of time-varying variables? The initial observations of the dependent variable, y_{i0}, and the regressors, x_{i0}, are assumed to be observed. $f_i$is a $K_f \times 1$vector of observed time-invariant variables that includes an overall regression constant, and $\alpha_i$is an unobserved unit-specific effect of the *i-th* cross section? In a strict sense, α_i is called a fixed effect if it is allowed to be correlated with all of the regressor variables x_{i0} and f_i, and it is a random effect if it is independently distributed.

This study is theoretically situated within Wingo's (2018) framework of "Conditionality with Chinese Characteristics," which posits that Chinese loans are "tied" to procurement mandates that create a structural requirement for Chinese technical and managerial labour. To address the impacts of resource-linked trade and FDI, this paper draw upon the Resource-for-Infrastructure (RFI) / "Angola Model" and Ozawa's (2015) reformulated Flying Geese model, which explains the transmigration of labour-intensive manufacturing and the initial reliance on "technical human capital" (Chinese expatriates) to protect firm-specific advantages. Methodologically, the adoption

of dynamic panel data linear models is modeled after Guo and Jiang (2021), who employ a difference-in-differences estimation with dynamic lags to capture how employment effects evolve over time. This study also aligns with the econometric specifications used in recent studies on Chinese import penetration, which utilize industry and year fixed effects and instrumental variables within a panel framework to establish causal relationships with employment. Furthermore, study build upon the multi-country panel datasets utilized by Ayenagbo (2015) and Wingo (2018), both of whom incorporate lagged variables to account for endogeneity when analyzing the determinants of Chinese financial and labour flows. Following the theoretical framework and empirical studies, this study estimates the total Chinese migrant workers in Africa equation as follow:

$$tcmw_{i,t} = \beta_0 + \beta_1 tcmw_{i,t-1} + \beta_2 tcmw_{i,t-2} + \beta_3 loan_{i,t} + \beta_4 cimp_{i,t} + \beta_4 cfdi_{i,t} + \beta_5 X_{i,t} + \varepsilon_{it} \quad (11)$$

where $tcmw_{i,t}$ represent total number of Chinese migrant workers in country *i* at time *t*; $tcmw_{i,t-1}$ and $tcmw_{i,t-2}$ represents one and two-periods lagged energy total number of Chinese migrant workers variables; $loan_{i,t}$ is the total Chinese loan disbursed to African countries; $cimp_{i,t}$ is the Chinese import from Africa; $cfdi_{i,t}$ is China's outward FDI flow to Africa; X_{it} is a vector explanatory variables, and ε_{it} is the error term.

Similarly, this study also estimate the equations (12 and 13) for the total Chinese migrant workers in contract projects and labour services as follows:

$$cmwp_{i,t} = \beta_0 + \beta_1 cmwp_{i,t-1} + \beta_2 cmwp_{i,t-2} + \beta_3 loan_{i,t} + \beta_4 cimp_{i,t} + \beta_4 cfdi_{i,t} + \beta_5 X_{i,t} + \varepsilon_{it} \quad (12)$$

$$cmwl_{i,t} = \beta_0 + \beta_1 cmwl_{i,t-1} + \beta_2 cmwl_{i,t-2} + \beta_3 loan_{i,t} + \beta_4 cimp_{i,t} + \beta_4 cfdi_{i,t} + \beta_5 X_{i,t} + \varepsilon_{it} \quad (13)$$

where $cmwp_{i,t}$ and $cmwl_{i,t}$ represent total number of Chinese migrant workers in contract projects and labour services, respectively, in country *i* at time *t*. The presence of a lagging dependent variables among the explanatory variables in each of the specified models (i.e., 2 and 3) implies a correlation problem between the lagging endogenous variable and the error term.

4.2.2 Postestimation tests

a) Arellano-Bond Test of Serial Correlation

Arellano-Bond (AR) tests are tests of serial correlation in the errors of a dynamic panel data model estimated by the Arellano-Bond method. The tests are based on the residuals of the first-differenced equation and check whether they are correlated with their own lags. The null hypothesis is that there is no autocorrelation of a given order. The tests can be performed up to the maximum lag order specified by the user. The tests are useful for assessing the validity of the instruments used in the estimation, as they should be uncorrelated with the errors. The tests can be implemented in various statistical software, such as Stata.

b) Sargan-Hansen Test

The Sargan-Hansen test is a test of overidentifying restrictions. The joint null hypothesis is that the instruments are valid instruments, i.e., uncorrelated with the error term, and that the excluded instruments are correctly excluded from the estimated equation. Under the null, the test statistic is distributed as chi-squared in the number of overidentifying restrictions. A rejection casts doubt on the validity of the instruments. For the efficient GMM estimator, the test statistic is Hansen's J statistic, the minimized value of the GMM criterion function.

5. Results and Discussions

5.1 Summary Statistics and Correlation Analysis

The study presents a summary of data sets, including variables such as total Chinese migrant workers (TCMW), total Chinese migrant workers in contract projects (CMWP), total Chinese migrant workers in labour services (CMWL), total Chinese loan disbursed (LOAN), Chinese import from Africa (CIMP), and China's outward FDI flow to Africa (CFDI). The result of the summary statistics presented in Table 1 shows the distribution and variability of the variables, avoiding problems with time series and cross-section data. The variables display considerable variation, suggesting the use of panel estimation techniques for identifying parameters of interest. The result of the pairwise correlation analysis is presented in Table 2. The correlation coefficients are within suitable ranges, confirming the choice of explanatory and instrumental variables. The highest correlation coefficients were 0.986 (TCMW → CMWP), and 0.902 (TCMW → CMWL). These coefficients do not pose any threat of multicollinearity as the variables were not included as explanatory variables at in any of the estimated models.

Table 1: Summary statistics: annual data (2011–2022; observations= 384).

Variable	Symbol	Source	Unit	Mean	Std. Dev.	Variance	Min	Max
Total Chinese Migrant Workers	TCMW	CARI	'000	3.795	6.216	50.526	0.000	50.526
Total Chinese Migrant Workers in Contract Projects	CMWP	CARI	'000	2.973	4.655	21.667	0.000	38.427
Total Chinese Migrant Workers in Labour Services	CMWL	CARI	'000	0.821	1.803	3.252	0.000	14.93
Total Chinese Loan Disbursed to African Countries	LOAN	CARI	$ US Billion	0.307	0.982	0.964	0.000	15.023
Chinese Import from Africa	CIMP	CARI	$ US Billion	1.962	4.596	21.123	0.000	33.562
Chinese Outward FDI to Africa	CFDI	CARI	$ US Billion	0.095	0.184	0.034	-0.815	1.046
Industry Value Added	ISVA	WDI	% Growth	4.056	11.899	141.586	-77.326	127.468
Corruption Control	CCTR	WGI	Index	-0.731	0.509	0.259	-1.646	0.776
Countries (N = 32)	Angola, Benin, Burkina Faso, Cameroon, Central African Republic, Congo, Congo DRC, Cote d'Ivoire, Djibouti, Egypt, Equatorial Guinea, Ethiopia, Gabon Ghana, Guinea, Kenya, Malawi, Mali, Mauritius, Mozambique, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, Togo, Uganda, Zambia, and Zimbabwe							

Note: CARI = China Africa Research Initiative; UNDP = United Nations Development Programme; WDI = World Development Indicators; WGI = World Governance Indicators

Source: Author's organization and computation, 2026

Table 2: Results of Correlation Matrix Analysis

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) TCMW	1.000							
(2) CMWP	0.986	1.000						
	(0.000)							
(3) CMWL	0.902	0.818	1.000					
	(0.000)	(0.000)						
(4) LOAN	0.439	0.432	0.397	1.000				
	(0.000)	(0.000)	(0.000)					
(5) CIMP	0.734	0.679	0.780	0.286	1.000			
	(0.000)	(0.000)	(0.000)	(0.000)				
(6) CFDI	0.184	0.186	0.154	0.100	0.183	1.000		
	(0.000)	(0.000)	(0.003)	(0.049)	(0.000)			
(7) ISVA	-0.027	-0.016	-0.054	0.026	-0.087	0.021	1.000	
	(0.592)	(0.756)	(0.295)	(0.606)	(0.088)	(0.688)		
(8) CCTR	-0.298	-0.313	-0.217	-0.099	-0.182	-0.066	0.101	1.000
	(0.000)	(0.000)	(0.000)	(0.052)	(0.000)	(0.195)	(0.048)	

Note: P-value of correlation coefficients in parenthesis (…)
Source: Author's organization and computation, 2026

5.2 Pre-estimation diagnostics tests

5.2.1 Cross-sectional Dependency (CD) Test

Table 3: Results of panel cross-sectional dependence test for variables selected in various estimators

Variables	Pesaran (2015, 2021) CD		Fan et. al. (2015) CDw+		Decision
	Statistics	P-value	Statistics	P-value	
TCMW	4.24***	0.000	617.76***	0.000	Strong CD
CMWP	4.68***	0.000	574.45***	0.000	Strong CD
CMWL	12.46***	0.085	690.64***	0.000	Strong CD
LOAN	3.76***	0.000	200.93***	0.000	Strong CD
CIMP	15.98***	0.000	524.55***	0.000	Strong CD
CFDI	0.30	0.762	281.00***	0.000	Strong CD
ISVA	6.33***	0.000	293.27***	0.000	Strong CD
CCTR	-0.12	0.903	678.62***	0.000	Strong CD

Note: ***, **, and * signifies p-values less than 0.01, 0.05, and 0.10 respectively.

Source: Author's computation, 2025.

The Cross-Sectional Dependence (CD) test serves as a critical preliminary test in panel data analysis, assessing whether disturbances in panel models exhibit cross-sectional independence—an assumption commonly made, particularly in models with large cross-sections (*N*).

The results of the CD tests conducted by Pesaran (2015, 2021) and Fan et al. (2015), as presented in Table 4.3, reveal significant cross-sectional dependence, leading to the rejection of the null hypothesis at the 1% significance level in at least one of the tests across all variables used in model estimation. This finding implies strong cross-sectional dependency, emphasizing the necessity of accounting for cross-unit lagged interdependence among the studied countries. Since cross-sectional dependence signals heterogeneity in the effects of study variables, a purely country-specific analytical approach may result in biased regional conclusions, reinforcing the need for methodological adjustments that capture interdependencies within the dataset.

5.2.2 Panel Unit Root Test

Since CSD test revealed cross-sectional dependence across units for the variables, indicating that the panel was heterogeneous for the variables. The study further examined the stationarity of the variables using second-generation panel unit root tests. The Pesaran Cross-Sectionally Augmented IPS (Pesaran CIPS) (Pesaran, 2007) is the choice of second-generation panel unit root test. The results presented in Table 4 indicate that while three of the variables (i.e., LOAN, CFDI, and ISVA) were stationary at levels (i.e., order of integration 0), the other five variables (TCMW, CMWP, CMWL, CIMP, and CCTR) became stationary only after first differencing (i.e., order of integration 1).

Table 4: Results of the second-generation panel unit root test for variables selected in various estimators

Variable	Second-generation Test: Pesaran's CIPS		
	Level	First Diff.	Order of Integration
TCMW	1.840	2.439**	I (1)
CMWP	2.036	2.986**	I (1)
CMWL	0.959	2.427**	I (1)
LOAN	3.151**		I (0)
CIMP	1.030	3.271**	I (1)
CFDI	2.911**		I (0)
ISVA	2.941**		I (0)
CCTR	1.884	2.855**	I (1)

Note 1: ** and * implies significance at 1% (i.e., p-value < 0.01) and 5% levels (i.e., p-value < 0.05) of significant errors respectively. **Note 2**: The rejection of the null hypothesis in the Pesaran's CIPS test is based on the absolute critical values 2.25 and 2.11 at 1% and 5% levels of significant errors respectively.
Source: Author's computation, 2025.

5.3 Impact of Chinese Loan, Import and FDI on Chinese Migrant Workers

The results presented in Tables 5 show the relative impact of China's loan to Africa, import from Africa, and FDI flow to Africa on the demand of Chinese migrant workers in African countries. Table 5 provides evidence on the response of total number Chinese migrant workers (Model 1), Chinese migrant workers employed in contract projects (Model 2), and Chinese migrant workers employed in engaged in labour services (Model 3). In Model 1, the estimates of the impact of Chinese loan (–0.298, $p < 0.01$) and China's imports from Africa (0.777, $p < 0.01$) indicate that while Chinese loan had a statistically significant negative effect, imports from Africa exert a significant positive influence on the total number of Chinese migrant workers in Africa. However, the estimates of the impact of Chinese FDI (1.003, $p > 0.05$) suggests an insignificant positive effect on the total number of Chinese migrant workers in Africa. Moreover, the result for Model 2 shows that the estimates of Chinese loan (-0.161, $p > 0.05$) and China's imports from Africa (0.444, $p < 0.01$) indicate that while Chinese loan had a slight statistically significant negative effect, imports from Africa exert a significant positive influence on the number of Chinese migrant workers employed in contract projects. However, the estimate of Chinese FDI (-0.048, $p > 0.05$) suggests an insignificant negative effect on the number of Chinese migrant workers employed in contract projects in Africa. Thirdly, the result for Model 3 shows that the estimates of Chinese loan (-0.010, $p > 0.05$) and China's imports from Africa (0.224, $p < 0.01$) indicate that while Chinese loan had an insignificant negative effect, imports from Africa exert a significant positive influence on the number of Chinese migrant workers employed in labour services. Additionally, the estimate of Chinese FDI (0.647, $p < 0.05$) suggests a insignificant positive effect on the number of Chinese migrant workers employed in labour services in Africa. Finally, on the control variables, control of corruption is found to significantly increase the total number of Chinese migrant workers in Africa, highlighting the role of institutional quality in shaping labour mobility.

The results of the post-estimation diagnostic tests corresponding to the estimators in Tables 5 are reported under each column for Models 1–3. For the Hansen J test of overidentifying restrictions, the test statistics in Table 5 for Models 1–5 (2.022, 3.496, and 1.198) are all statistically insignificant, with p-values exceeding the 0.05 threshold. This indicates a failure to reject the null hypothesis, thereby confirming that the instruments employed in estimating the impact of China's loan, imports from Africa, and China's FDI on the number of Chinese migrant workers across 32 African countries are jointly valid. Furthermore, the Arellano and Bond (1991) test for autocorrelation reveals that the AR (2) test statistics in Table 5 for Models 1–3 (–0.154,–0.381, and –0.952) are also statistically insignificant, with p-values greater than 0.05. This supports the null hypothesis of no second-order serial correlation in the differenced residuals. While first-order autocorrelation is expected and observed in dynamic panel models, the absence of second-order autocorrelation further validates the model specification. Collectively, these diagnostic results affirm the robustness of the estimation strategy and the reliability of the instruments used across all model specifications.

Table 5: Estimators for Examining the Impact of Total Chinese ODA on Chinese Migrant Workers (Dependent variables = Total Number of Chinese Migrant Workers, Chinese Migrant Workers in Contract Projects, and Chinese Migrant Workers in Labour Services)

Variables	Model*1*	Model*2*	Model*3*
$tcmw_{i,t-1}$	1.226***		
	(0.128)		
$tcmw_{i,t-2}$	1.222***		
	(0.097)		
$cmwp_{i,t-1}$		1.280***	
		(0.169)	
$cmwp_{i,t-2}$		-0.224	
		(0.158)	
$cmwl_{i,t-1}$			0.935***
			(0.070)
$cmwl_{i,t-2}$			-0.143**
			(0.061)
$loan_{i,t}$	-0.298***	-0.161*	-0.010
	(0.086)	(0.086)	(0.027)
$cimp_{i,t}$	0.777***	0.444***	0.224***
	(0.129)	(0.124)	(0.034)
$cfdi_{i,t}$	1.003	-0.048	0.647**
	(0.723)	(0.471)	(0.290)
$isva_{i,t}$	0.015	0.009	0.001
	(0.011)	(0.006)	(0.003)
$cctr_{i,t}$	3.301**	1.289	0.469
	(1.503)	(0.960)	(0.412)
Constant	0.873	0.208	0.092
	(0.948)	(0.737)	(0.303)
Hansen's J test	2.022	3.496	1.198
AR (1) test	-3.769***	-2.790***	-1.531
AR (2) test	-0.154	-0.381	-0.952

Note 1: White-corrected robust standard error statistic in parenthesis (…). **Note 2**: ***, **, and * signifies p-values less than 0.01, 0.05, and 0.10 respectively.
Source: Authors' computation, 2025.

6. Discussion of findings

The findings of this study provide a nuanced empirical perspective on the drivers of Chinese transnational labour migration to Africa, revealing that the demand for Chinese migrant workers is significantly influenced by the structure of trade and finance. While traditional narratives often assume a uniform increase in Chinese labour accompanying all forms of engagement, these results indicate that Chinese loans, natural resource imports, and FDI exert distinct and sometimes counterintuitive pressures on the labour market. This section discusses these findings through the theoretical frameworks of Resource-for-Infrastructure (RFI) logic, tied aid conditionality, and neoclassical labour displacement theory, while engaging with contemporary empirical literature.

The most striking finding is the statistically significant negative effect of Chinese loans on the total number of Chinese migrant workers (–0.298, $p < 0.01$). This result appears to challenge the theory of "Conditionality with Chinese Characteristics," which posits that Chinese concessional finance is structurally "tied" to the procurement of Chinese contractors and a mandate for Chinese technical personnel (Wingo, 2018; Haroz, 2011). However, when viewed through the lens of project lifecycles and workforce localization theory, this negative correlation aligns with recent empirical trends. Development Reimagined (2020) and the China Africa Research Initiative (CARI, 2025) note that while Chinese worker numbers peaked in 2015 alongside record-high lending, they have since declined as firms have become more "settled" in the African market. Scholars such as Sautman and Hairong (2015) and Oya and Schaefer (2019) argue that as Chinese firms gain experience in host countries, they increasingly substitute expensive expatriate labour with local workers for unskilled and semi-skilled roles to minimize operating costs. The findings suggest that as the volume of loans matures, the initial structural requirement for large Chinese crews may be giving way to a more localized workforce, reflecting a shift from the "importation of labour" to the "management of local labour" (Tang, 2016; Kernen & Lam, 2014).

In contrast to loans, China's imports from Africa exert a significant positive influence on the demand for Chinese migrant workers across all models (Total: 0.777, $p < 0.01$; Contract: 0.444, $p < 0.01$). This finding strongly supports the Resource-for-Infrastructure (RFI) or "Angola Model" of engagement. Under this framework, infrastructure projects are often collateralized against future resource streams, such as oil in Angola or minerals in the DRC (Abubakar, 2025; Martuscelli, 2020). Theoretically, these RFI deals prioritize technical efficiency and speed to ensure that extraction can begin promptly to facilitate loan repayment (Abubakar, 2025; Jureńczyk, 2020). The positive correlation indicates that the strategic pursuit of resource security necessitates a sustained presence of Chinese technical experts who are familiar with the specialized extraction machinery and management protocols of Chinese state-owned enterprises (SOEs) (Mohseni-Cheraghlou & Aladekoba, 2023; Chiyemura, 2021). Empirically, this matches the data showing that resource-rich nations like Angola and the DRC remain the top destinations for Chinese contract workers, as the capital-intensive nature of mining and oil extraction creates an "enclave" labour demand for foreign specialists (Wegenast et al., 2019; Power, 2012).

The study finds that Chinese FDI has a generally insignificant effect on total migrant worker numbers, though it shows a nuanced positive association with workers engaged in labour services (0.647). This result partially diverges from the Flying Geese (FG) theory, which suggests that the relocation of labour-intensive manufacturing from China to Africa should create a massive demand for Chinese "technical human capital" to oversee factory setup and knowledge transfer (Ozawa, 2015; Lin & Wang, 2014). The lack of statistical significance in the total labour model may be explained by the high localization rates found in FDI-driven manufacturing sectors. Large-scale surveys by McKinsey (2017) and Oya and Schaefer (2019) find that local employees comprise

89% to 95% of the workforce in Chinese-invested manufacturing firms. While FDI brings a "package" of capital and management, the economic incentive to hire local workers—who are significantly less expensive than Chinese expatriates—appears to outweigh the structural drive to import labour in the manufacturing and service sectors (Oya & Schaefer, 2019; Sun, 2017).

Finally, the finding that control of corruption significantly increases the number of Chinese migrant workers highlights the role of institutional quality in shaping labour mobility. Better governance and regulatory environments reduce the "cost of being alien" and encourage Chinese firms to deploy larger contingents of their own staff for long-term projects (Ozawa, 2015; Sauvant & Chen, 2014). This underscores the importance of African agency; as host countries like Nigeria and Ethiopia implement stricter labour policies or localization mandates, they can influence the labour-to-finance ratio without necessarily deterring investment (Development Reimagined, 2020). Collectively, the findings suggest that while resource-linked trade remains a primary driver of Chinese labour demand, the maturation of financial flows and the strategic use of local policy can lead to more inclusive employment outcomes for the continent.

6. Conclusion and Recommendations

6.1 Conclusion

This study has provided a comprehensive empirical analysis of the multi-dimensional drivers of Chinese transnational labor migration to Africa, revealing that the demand for Chinese migrant workers is a structurally determined outcome of how development finance, trade, and investment are institutionalized. The findings suggest that the relationship between China and Africa is undergoing a critical transition, shifting from a period of mass labor importation toward a more nuanced model of workforce localization and technical specialization (Oya & Schaefer, 2019; Development Reimagined, 2020). A central finding of this research is the localization paradox associated with Chinese loans. While the theory of "Conditionality with Chinese Characteristics" (Wingo, 2018) suggests that tied finance should inherently increase foreign labor demand, the statistically significant negative effect observed in this study indicates that as loan volumes mature, Chinese firms are increasingly substituting expensive expatriate labor with local African workers for unskilled and semi-skilled roles (Sautman & Hairong, 2015; Oya & Schaefer, 2019). This reflects a maturation of Chinese enterprises on the continent, as firms gain the "ownership-specific advantages" necessary to manage local labor effectively while minimizing the "cost of being alien" (Sauvant & Chen, 2014; Ozawa, 2015).Conversely, the study identifies China's import of natural resources as the primary persistent driver of Chinese labor demand. This confirms the enduring relevance of the Resource-for-Infrastructure (RFI) or "Angola Model," where the technical complexity and urgent timelines of extraction-linked mega-projects—such as pipelines and deep-water ports—necessitate a sustained influx of Chinese technical experts (Abubakar, 2025; Martuscelli, 2020; Mohseni-Cheraghlou & Aladekoba, 2023). Regarding FDI, the results suggest that while total labor numbers remain relatively stable, there is a specific demand for Chinese "technical human capital" in senior management and specialized labor services to safeguard production protocols and facilitate technology transfer (McKinsey, 2017; Ozawa, 2015). Ultimately, the demand for Chinese workers is not a monolithic phenomenon but a variable determined by the technical requirements of trade and the agency of host-country institutions.

6.2 Recommendations

Based on the findings and the synthesized literature, the following policy recommendations are proposed for African governments and stakeholders:

1. **Strengthen Labor Quotas and Localization Mandates**: African states should move beyond "relaxed" labor policies and implement "targeted" or "strict" localization mandates that require Chinese firms to submit clear workforce transition plans (Development Reimagined, 2020). Policymakers must reserve semi-skilled and supervisory roles for local citizens to reduce the "leakage" of project benefits and ensure that the "Business of Diplomacy" translates into meaningful domestic employment (Ogroh, 2024; Kodzi, 2018).

2. **Negotiate Knowledge Transfer in RFI Deals**: To break the cycle of dependency in the resource sector, future infrastructure-for-resource swaps must include binding clauses for technical knowledge transfer. African governments should mandate that a percentage of Chinese technical roles be shadowed by local understudies, thereby bridging the "skills gap" that Chinese firms frequently cite as a justification for importing foreign labour (Chiyemura, 2021; Sun, 2017).

3. **Institutional Quality and Corruption Control**: Given that higher institutional quality is associated with larger contingents of Chinese workers, African states must leverage their regulatory agency to ensure that better governance lead to better labor protections for both local and migrant workers (Wingo, 2018; Ogroh, 2024). Reducing corruption in the issuance of work permits will ensure that labour flows are governed by genuine economic need rather than informal bypasses.

4. **Diversify Financial Engagements and Trade**: African leaders should strive for more symmetrical trade relations by reducing their reliance on raw material exports and resource-backed loans (SAIIA, 2021; Abubakar, 2025). By utilizing frameworks like the African Continental Free Trade Area (AfCFTA), nations can build local manufacturing capacity, thereby attracting Chinese FDI that prioritizes local labor integration over the "enclave" models characteristic of the extractive industries.

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