



MOBILIZATION OF PRIVATE FINANCING AND INDUSTRIALIZATION: EVIDENCE FROM 15 AFRICAN COUNTRIES

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ABSTRACT: *Purpose: This study investigates how private financing affects industrialization in Africa. It focuses on whether domestic savings and personal remittances strengthen or weaken manufacturing value added and the broader industrialization rate. Method: The paper analyzes a panel of 15 African countries from 2006 to 2020 using data from the World Bank's World Development Indicators (WDI) and Worldwide Governance Indicators (WGI). The empirical strategy combines preliminary ordinary least squares (OLS) fixed- and random-effects estimates with feasible generalized least squares (FGLS). A three-stage least squares (3SLS) specification is used as a robustness check. Results and findings: The results show that gross domestic savings are positively associated with both manufacturing value added and the industrialization rate. Personal remittances, by contrast, have a negative association with the two measures of industrialization in the sample. Urbanization, gross domestic product (GDP) per capita, and political stability also show important links with industrial outcomes, although the direction and strength of the control variables vary across specifications. Recommendation: African policymakers should deepen domestic savings, improve the formal financial system's ability to intermediate local capital, and design public-private partnership models that channel private finance toward productive infrastructure and manufacturing. Remittance policies should also move beyond transfer facilitation and encourage diaspora investment platforms that can support industrial ventures. Originality: The study contributes to the literature by examining two private-financing channels within a multi-country African panel and by comparing their effects across two related measures of industrialization. It also adds policy relevance by showing that not all forms of private finance automatically translate into industrial transformation.*

KEYWORDS: Private financing; industrialization; domestic savings; remittances; Africa; generalized least squares.



INTRODUCTION

Industrialization remains central to Africa's long-term development agenda. The African Union (AU), through Agenda 2063, places industrial development at the heart of structural transformation, regional value-chain development, and inclusive growth. This focus is closely aligned with Sustainable Development Goal (SDG) 9, which emphasizes industry, innovation, and infrastructure. For African countries, industrialization is not only about expanding factories. It is also about creating better jobs, increasing export capacity, improving productivity, and building the technological base needed for resilient growth.

The development argument is straightforward. When economies move from primary production into manufacturing and higher-productivity services, they can generate more stable revenues and more diversified employment. Industry also creates demand for skills, infrastructure, logistics, finance, and innovation. This explains why industrial expansion has historically supported the rapid transformation of many regions. In Africa, however, the promise of industrialization has remained only partly realized. The African Development Bank (AfDB) notes that industry generates about US\$700 of gross domestic product (GDP) per capita in Africa, compared with about US\$2,500 in Latin America and US\$3,400 in East Asia (African Development Bank, 2018). The gap is not merely a production gap; it is also a financing, capability, and policy coordination gap.

Africa has important structural advantages. These include a young population, fast urbanization, expanding domestic markets, a rising middle class, and growing digital capabilities. Yet these advantages require patient and productive financing. The Addis Ababa Action Agenda placed strong emphasis on mobilizing domestic and private resources for sustainable development (United Nations, 2015). This emphasis has become even more urgent as public budgets face debt pressures and external finance remains uneven. Multilateral Development Banks (MDBs) and Development Finance Institutions (DFIs) mobilized US\$64.1 billion in private finance for low- and middle-income countries in 2020 and US\$63.3 billion in 2021 (Multilateral Development Banks & Development Finance Institutions, 2023). While these figures are substantial, they also show that private finance is still not reaching low-income countries and productive infrastructure at the scale required.

The literature has already established several links between finance and development. Some studies examine financial sector development and economic growth (Eric & Zhongxiu, 2017; Guru & Yadav, 2019). Others investigate financial deepening and industrialization in specific country contexts, including Nigeria and Tanzania (Ewetan & Ike, 2014; Joseph, 2022; Ohiomu & Oligbi, 2020; Udejaja & Miyazako, 2021). A related strand examines foreign direct investment (FDI), financial liberalization, and the industrial effects of global capital flows (Alfaro, 2003; Levchenko et al., 2009; UNCTAD, 1999). Another strand focuses on remittances and their possible effects on entrepreneurship, household welfare, and industrial development (Efobia et al., 2019; Mabrouk & Mekni, 2018).

Even with this growing literature, three issues remain insufficiently explored. First, many studies treat finance as a broad financial-sector variable, rather than distinguishing between domestic savings and remittances as private-financing channels. Second, studies on Africa often focus on growth outcomes, while fewer studies directly examine industrialization through both manufacturing value added and the industrialization rate. Third, the evidence remains mixed on remittances. Some studies suggest that remittances can ease credit



constraints and support enterprise activity, but others show that remittances are often directed toward consumption, health, education, or small household enterprises rather than larger-scale industrial production.

This paper addresses these gaps by examining whether private financing contributes to industrialization in 15 African countries over the period 2006-2020. It makes three contributions. First, it separates private financing into gross domestic savings and personal remittances, allowing the study to compare two channels that may work differently. Second, it uses two measures of industrialization: manufacturing value added and the industrialization rate. Third, it applies FGLS and a 3SLS robustness check to improve the consistency of the empirical presentation and to address panel-level heterogeneity and error-correlation concerns. The rest of the paper is structured as follows. Section 2 reviews the relevant literature. Section 3 presents the data and methodology. Section 4 reports and discusses the empirical results. Section 5 presents the limitations and future research directions. Section 6 concludes and offers policy recommendations.

Private Financing and Industrialization: Review of Related Studies

The theoretical literature has long treated finance as an important driver of industrial transformation. Gerschenkron (1962, 1968, 1970) showed that late industrializers often relied on distinctive institutional arrangements to mobilize investment capital. In some contexts, private wealth accumulation and capital markets played a leading role. In others, banks and the state helped organize long-term industrial finance. This historical insight remains relevant for Africa, where industrial development often depends on the ability of financial institutions to transform savings into productive investment.

Chen and Shin (2011) highlight China's distinctive pattern of industrial financing, where self-mobilized funds and retained earnings supported fixed investment alongside bank credit. Lazonick and O'Sullivan (1997) show that industrial development in Japan and Germany relied heavily on bank-supported corporate capitalization. These studies suggest that the structure of finance matters. Industrialization is not helped only by the quantity of finance, but also by the direction, maturity, cost, and institutional channels through which finance reaches producers.

Empirical studies also link financial development to industrial output and growth. Ewetan and Ike (2014) find that financial sector development matters for industrialization in Nigeria, while Ohiomu and Oligbi (2020) report that financial deepening influences economic growth. Guru and Yadav (2019) show a positive finance-growth relationship in Brazil, Russia, India, China, and South Africa (BRICS). Shahbaz et al. (2018) further argue that institutions and government capacity shape the relationship between financial development and industrialization in India and China. In the African context, Ustarz and Fanta (2021) suggest that finance may need to reach a threshold before it becomes strongly growth-enhancing for the industrial sector.

Remittances occupy a more contested place in this debate. On the positive side, they can ease household liquidity constraints, support small businesses, and provide local entrepreneurs with start-up capital. Woodruff and Zenteno (2001), for example, show that remittances were an important source of capital for microenterprises in Mexico. Efobia et al. (2019) also find that remittances can stimulate industrialization in Africa through financial development under



certain initial conditions. On the other hand, remittances may not automatically support industrial production when they are mainly used for food security, health care, education, housing, or consumption smoothing (Mabrouk & Mekni, 2018). This distinction is crucial for interpreting their industrial effect.

The literature therefore points to an important policy question: which kinds of private finance are most likely to support industrialization in Africa? Domestic savings may strengthen local capital formation when they are mobilized by reliable banks, pension funds, insurance institutions, and capital markets. Remittances may also support development, but their industrial effect depends on whether they are channeled into productive investment rather than only household consumption. This paper builds on that debate by empirically comparing gross domestic savings and personal remittances across a panel of African countries.

DATA AND METHODOLOGY

Data, sample, and variables

The study investigates the effect of private financing on industrialization in 15 African countries from 2006 to 2020. The countries are Angola, Botswana, Burkina Faso, Cape Verde, Côte d'Ivoire, Egypt, Ethiopia, Ghana, Mauritius, Mozambique, Morocco, Namibia, South Africa, Togo, and Zambia. The sample is determined by the availability of consistent data over the study period. The main data sources are the World Bank's WDI and WGI databases (World Bank, 2025a, 2025b).

Two dependent variables are used to measure industrialization. The first is the industrialization rate, measured as the ratio of industrial value added to GDP. This captures the contribution of industry to the overall economy. The second is manufacturing value added as a share of GDP. Manufacturing value added is particularly useful because it reflects the capacity of an economy to transform materials and inputs into finished or semi-finished products (Avom et al., 2021; Dong et al., 2011; Effiom & Uche, 2022; World Bank, 2025a).

Private financing is captured through two variables. The first is gross domestic savings as a share of GDP. It represents the portion of national income not consumed and therefore potentially available for investment. The second is personal remittances received as a share of GDP. The WDI defines personal remittances as personal transfers and compensation of employees received from abroad (World Bank, 2025a). These variables are used because they represent two distinct channels through which private resources may enter the productive economy.

Several control variables are included to reduce omitted-variable bias. GDP per capita captures the level of economic development. Urbanization measures the share of the population living in urban areas and is included because urban concentration can increase demand, labor-market depth, and infrastructure use. Gross fixed capital formation captures investment intensity. Agricultural value added is included because agriculture can either support industry through linkages or compete with industry for labor and capital. Finally, control of corruption and political stability are included to capture institutional quality and policy risk.

**Table 1. Variables, measurement, and data sources**

Variable	Meaning in the model	Measurement	Source
lnvam	Natural log of manufacturing value added	Manufacturing value added (% of GDP)	WDI
lnind_rate	Natural log of industrialization rate	Industry value added (% of GDP)	WDI
savings	Gross domestic savings	Gross domestic savings (% of GDP)	WDI
lntrans_mi	Natural log of personal remittances received	Personal remittances received (% of GDP)	WDI
lnurba	Natural log of urbanization	Urban population indicator	WDI
lnfbcf	Natural log of gross fixed capital formation	Gross fixed capital formation (% of GDP)	WDI
lnpib	Natural log of GDP per capita; PIB is the French abbreviation for GDP	GDP per capita	WDI
lnvag	Natural log of agricultural value added	Agriculture, forestry, and fishing value added (% of GDP)	WDI
corrupt	Control of corruption	Worldwide Governance Indicator estimate	WGI
postab	Political stability and absence of violence/terrorism	Worldwide Governance Indicator estimate	WGI

Note. WDI = World Development Indicators; WGI = Worldwide Governance Indicators; GDP = gross domestic product. Natural logarithms are used to reduce skewness and improve comparability across countries.

Descriptive statistics and correlation analysis

Tables 2 and 3 present the descriptive statistics and correlation matrix for the study variables. The average manufacturing value added is 9.884% of GDP, while the average industrialization rate is 26.434% of GDP. Manufacturing value added is less dispersed than the industrialization rate, with standard deviations of 3.871 and 10.035, respectively. Domestic savings and personal remittances represent, on average, 18.342% and 2.737% of GDP. GDP per capita shows substantial variation across the sample, reflecting the heterogeneity of the selected countries.

**Table 2. Descriptive statistics of study variables**

Variable	Description	Obs.	Mean	Std. dev.	Min.	Max.
Ind_rate	Industrialization rate (% of GDP)	225	26.434	10.035	9.435	61.883
vam	Manufacturing value added (% of GDP)	225	9.884	3.871	3.399	16.841
savings	Gross domestic savings (% of GDP)	214	18.342	11.428	-4.599	55.611
Trans_fo	Personal remittances received (% of GDP)	225	2.737	3.209	0.000	12.466
urban	Urban population indicator	225	15.603	1.114	12.984	19.345
fbcf	Gross fixed capital formation (% of GDP)	200	22.902	6.715	10.523	42.792
GDP	GDP per capita	225	2,979.868	2,400.985	329.679	10,956.945
vag	Agricultural value added	225	14.112	10.783	1.739	45.883
corrupt	Control of corruption	225	-0.239	0.623	-1.468	1.023
postab	Political stability and absence of violence/terrorism	225	-0.151	0.834	-1.862	1.201

Source. Authors' calculations based on WDI and WGI data. Decimal points have been standardized for consistency.

The correlation matrix suggests that most pairwise correlations are moderate. One exception is the correlation between GDP per capita and agricultural value added, which is -0.838. This value is high enough to warrant caution in interpretation. However, it does not directly involve the two main private-financing variables, and the study therefore relies on alternative estimators and robustness checks to assess whether the main findings remain stable.

Table 3. Correlation matrix of study variables

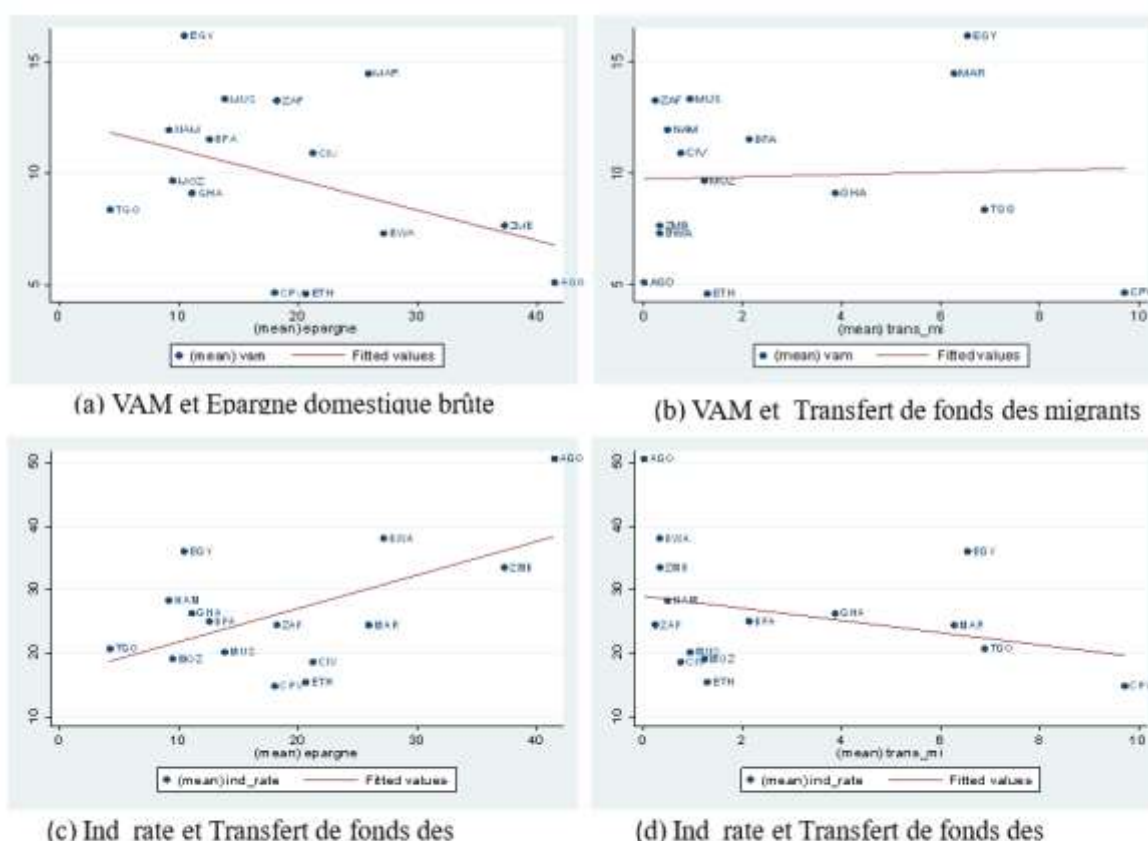
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) lnvam	1.000									
(2) lnind_rate	-0.227	1.000								
(3) savings	-0.044	0.338	1.000							
(4) lntrans_mi	0.295	-0.378	-0.307	1.000						
(5) lnurba	0.028	0.116	0.158	0.231	1.000					



Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(6) lnfbcf	-0.444	0.137	0.385	-0.200	-0.060	1.000				
(7) lnpiib	0.316	0.325	0.219	-0.339	-0.233	-0.093	1.000			
(8) lnvag	-0.124	-0.385	-0.295	0.449	0.283	-0.007	-0.838	1.000		
(9) corrupt	0.245	-0.043	0.042	-0.051	-0.561	0.028	0.543	-0.575	1.000	
(10) postab	0.041	0.163	-0.010	-0.338	-0.705	0.055	0.477	-0.596	0.706	1.000

Source. Authors' calculations based on WDI and WGI data. *lnpiib* refers to the natural log of GDP per capita; *PIB* is the French abbreviation for GDP.

Figure 1. Scatterplots between private-financing indicators and industrialization measures



Notes: VAM = manufacturing value added; Ind_rate = industrialization rate;

Epargne domestique brute = gross domestic savings; Transfert de fonds des migrants = personal remit

Source: Authors' calculations based on WDI and WGI data. The figure is retained from the original manuscript and captioned in English to define the French terms used in the plot panels.



Empirical strategy

Panel data are appropriate because they allow the study to observe both cross-country differences and changes over time. However, panel data may contain country-specific heterogeneity, heteroskedasticity, and correlation in the error structure. Relying only on pooled OLS can therefore produce inefficient or biased estimates when the assumptions of homoskedastic and independently distributed errors are violated (Greene, 2018; Wooldridge, 2010). For this reason, the study first reports fixed- and random-effects estimates and then uses FGLS as the main estimator.

The general model can be written as follows:

$$Y_{it} = \alpha + \beta PF_{it} + \gamma X_{it} + \mu_i + \varepsilon_{it} \quad (1)$$

where Y_{it} is the industrialization outcome for country i in year t ; PF_{it} represents the private-financing variable; X_{it} is the vector of control variables; μ_i captures unobserved country-specific effects; and ε_{it} is the idiosyncratic error term. The main estimating equations are:

$$\ln VAM_{it} = \alpha + \beta_1 Savings_{it} + \gamma X_{it} + \mu_i + \varepsilon_{it} \quad (2)$$

$$\ln VAM_{it} = \alpha + \beta_2 \ln Remittances_{it} + \gamma X_{it} + \mu_i + \varepsilon_{it} \quad (3)$$

$$\ln IND_{it} = \alpha + \beta_3 Savings_{it} + \gamma X_{it} + \mu_i + \varepsilon_{it} \quad (4)$$

$$\ln IND_{it} = \alpha + \beta_4 \ln Remittances_{it} + \gamma X_{it} + \mu_i + \varepsilon_{it} \quad (5)$$

The study uses separate specifications for savings and remittances to reduce collinearity between the two private-financing indicators and to make the economic interpretation clearer. The Hausman specification test is used to compare fixed and random effects in the preliminary panel estimates (Hausman, 1978). Random effects are considered appropriate where the unobserved country effect is not correlated with the explanatory variables. Where the Hausman result suggests caution, the paper relies more heavily on FGLS and robustness estimates rather than on the preliminary static panel result alone.

The hypotheses tested in the study are stated explicitly as follows. For domestic savings, the null hypothesis is $H_0: \beta_s = 0$, meaning that gross domestic savings have no significant effect on industrialization. The alternative hypothesis is $H_1: \beta_s > 0$, meaning that gross domestic savings improve industrialization. For personal remittances, the null hypothesis is $H_0: \beta_r = 0$, meaning that remittances have no significant effect on industrialization. The alternative hypothesis is $H_1: \beta_r \neq 0$, because the literature suggests that remittances may either support enterprise investment or be absorbed mainly by household consumption.

Model significance is assessed using the overall Fisher test in the OLS framework and the Wald chi-square statistic in the FGLS and 3SLS frameworks. In each case, the null hypothesis is that all slope coefficients are jointly equal to zero. A statistically significant p -value therefore indicates that the model has joint explanatory power (Greene, 2018; Gujarati & Porter, 2009). The 3SLS robustness check is included because it is useful where equations may be related through their error terms and where simultaneous relationships may exist among the outcomes (Zellner & Theil, 1962).



RESULTS AND DISCUSSION

Preliminary fixed- and random-effects estimates

Table 4 presents the preliminary OLS panel estimates using fixed and random effects. The table is treated as a diagnostic step rather than the main basis for inference. The Hausman test is used to compare fixed and random effects. Most specifications do not reject the random-effects assumption, although one industrialization-rate specification suggests that fixed effects may be preferable. This mixed evidence supports the decision to report FGLS as the main estimator and to conduct a robustness check.

Two broad patterns emerge from the preliminary estimates. First, gross domestic savings are positively associated with both manufacturing value added and the industrialization rate. Second, personal remittances are negatively associated with both outcomes. These signs are consistent with the later FGLS results, but the OLS estimates remain vulnerable to unobserved heterogeneity and error-correlation concerns. They should therefore be read as preliminary evidence.

Table 4. Preliminary fixed- and random-effects estimates

Variable	VAM FE (1)	VAM RE (2)	VAM FE (3)	VAM RE (4)	IR FE (5)	IR RE (6)	IR FE (7)	IR RE (8)
Savings	0.0766*** (0.0162)	0.0740*** (0.0163)			0.0268** (0.0122)	0.0298** (0.0123)		
Intrans_mi			- 0.0345** (0.0142)	-0.0226* (0.0126)			- 0.0352*** (0.0104)	- 0.0200** (0.00959)
lnurba	0.352*** (0.123)	0.139** (0.0656)	0.207 (0.134)	0.147** (0.0621)	-0.119 (0.0924)	0.0495 (0.0554)	-0.136 (0.0974)	0.0858 (0.0561)
lnfbcf	-0.112* (0.0664)	-0.154** (0.0655)	-0.0715 (0.0685)	-0.0788 (0.0653)	0.0250 (0.0500)	0.0484 (0.0496)	0.00678 (0.0500)	0.0655 (0.0488)
lnpib	-0.343** (0.168)	-0.0473 (0.104)	-0.0696 (0.185)	-0.0275 (0.103)	0.455*** (0.127)	0.190** (0.0852)	0.672*** (0.135)	0.268*** (0.0873)
lnvag	-0.0995 (0.0831)	-0.0274 (0.0771)	- 0.251*** (0.0876)	-0.129 (0.0792)	-0.106* (0.0626)	-0.111* (0.0596)	-0.138** (0.0639)	-0.115* (0.0614)
corrupt	0.373*** (0.0934)	0.370*** (0.0877)	0.437*** (0.0961)	0.413*** (0.0881)	0.159** (0.0704)	0.111* (0.0674)	0.0731 (0.0700)	0.0499 (0.0676)
postab	0.0914* (0.0510)	0.0539 (0.0477)	0.0432 (0.0526)	0.00924 (0.0487)	-0.0545 (0.0384)	-0.0330 (0.0365)	-0.0340 (0.0383)	-0.0137 (0.0368)
Constant	-0.135 (1.558)	0.897 (1.194)	0.489 (1.668)	0.810 (1.191)	1.777 (1.173)	1.082 (0.958)	0.550 (1.216)	-0.0755 (0.987)
Observations	192	192	198	198	192	192	198	198
Hausman statistic	1.89	1.89	3.51	3.51	11.79	11.79	23.00**	23.00**

Note. VAM = manufacturing value added; IR = industrialization rate; FE = fixed effects; RE = random effects. Robust standard errors are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$. A significant Hausman statistic indicates preference for fixed effects in that specification.



Feasible Generalized Least Squares Results

Table 5 presents the FGLS results. The Wald chi-square statistics are significant across all four specifications, with p-values of 0.0000. This indicates that the explanatory variables are jointly significant in each model. The results strengthen the pattern observed in the preliminary estimates.

Gross domestic savings have a positive relationship with the two measures of industrialization. In the manufacturing value-added specification, the coefficient is positive and reported as statistically significant. In the industrialization-rate specification, the coefficient is also positive and significant at the 1% level. This finding is consistent with the view that mobilizing domestic savings can increase the pool of investible resources available to banks, capital markets, and other financial institutions. When these resources are directed toward productive sectors, they can support investment in machinery, infrastructure, inventories, and industrial expansion (NEPAD & Economic Commission for Africa, 2014).

Personal remittances show a negative and significant relationship with both manufacturing value added and the industrialization rate. This result is not necessarily a rejection of the developmental value of remittances. Rather, it suggests that remittances may not automatically become industrial capital. In many African economies, remittances are first used to stabilize household consumption, food security, health care, education, and housing (Mabrouk & Mekni, 2018). Even when remittances support enterprise activity, they may be concentrated in micro and small firms rather than in capital-intensive manufacturing ventures (Gubert & Nordman, 2011).

The control variables also provide useful information. Urbanization is consistently positive and significant, suggesting that urban concentration may help industrial activity by expanding markets, labor supply, and infrastructure use. GDP per capita is positive and significant in the manufacturing specifications, while political stability is especially important in the industrialization-rate models. Agricultural value added and control of corruption show mixed signs across dependent variables. These mixed effects are plausible because agriculture can both supply inputs to industry and compete with industry for resources, while corruption measures may reflect broader institutional and structural differences across countries.

Table 5. Feasible generalized least squares estimates

Variable	lnvam (1)	lnvam (2)	lnind_rate (3)	lnind_rate (4)
Savings	0.00297** (0.0256)		0.0342*** (0.0117)	
Intrans_mi		-0.0604*** (0.0122)		-0.0235** (0.00967)
lnurba	0.0823*** (0.0161)	0.0623*** (0.0180)	0.0615*** (0.0177)	0.0647*** (0.0156)
lnfbcf	-0.382*** (0.0697)	-0.231*** (0.0610)	0.0804 (0.0637)	0.120** (0.0528)
lnpib	0.214*** (0.0358)	0.232*** (0.0345)	0.0153 (0.0300)	0.00342 (0.0301)
lnvag	0.238*** (0.0379)	0.134*** (0.0355)	-0.131*** (0.0285)	-0.126*** (0.0312)



Variable	lnvam (1)	lnvam (2)	lnind_rate (3)	lnind_rate (4)
corrupt	0.312*** (0.0604)	0.214*** (0.0614)	-0.173*** (0.0507)	-0.110** (0.0465)
postab	0.00610 (0.0395)	-0.0145 (0.0396)	0.200*** (0.0358)	0.157*** (0.0347)
Constant	0.167 (0.521)	0.0932 (0.531)	2.135*** (0.436)	2.131*** (0.375)
Observations	192	198	192	198
Wald chi-square	156.6	271.2	206.7	203.6
Prob. > chi-square	0.0000	0.0000	0.0000	0.0000

Note. Robust standard errors are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$. The Wald chi-square statistic tests the joint significance of the model.

Robustness analysis

Table 6 reports the robustness analysis using 3SLS. The signs of the two main variables remain consistent with the FGLS results. Gross domestic savings remain positive in both industrialization models, while personal remittances remain negative. The Wald chi-square statistics are significant across all four models, again with p-values of 0.0000. This supports the overall conclusion that the findings are not driven only by the choice of the FGLS estimator.

The robustness results are important because they help reconcile the empirical findings with the literature. The positive role of domestic savings is consistent with finance-led industrial development arguments. The negative remittance coefficient, however, suggests that the developmental effect of remittances depends strongly on their use. Remittances may reduce poverty and improve welfare while still having a limited or even negative association with measured industrialization if they are not transformed into productive, scalable investment.

Table 6. Three-stage least squares robustness estimates

Variable	lnvam (1)	lnvam (2)	lnind_rate (3)	lnind_rate (4)
Savings	0.0358* (0.0267)		0.0505** (0.0228)	
Intrans_mi		-0.0512*** (0.0133)		-0.0109* (0.0114)
lnurba	0.0449* (0.0258)	0.0302 (0.0243)	0.0688*** (0.0220)	0.0792*** (0.0207)
lnfbcf	-0.600*** (0.0915)	-0.373*** (0.0793)	0.0775 (0.0782)	0.138** (0.0678)
lnpib	0.216*** (0.0480)	0.232*** (0.0466)	0.0664 (0.0411)	0.0657* (0.0399)
lnvag	0.217*** (0.0534)	0.0924* (0.0515)	-0.0980** (0.0457)	-0.101** (0.0440)
corrupt	0.299*** (0.0604)	0.154** (0.0640)	-0.229*** (0.0516)	-0.182*** (0.0547)
postab	-0.0304	-0.0328	0.171***	0.151***



Variable	lnvam (1)	lnvam (2)	lnind_rate (3)	lnind_rate (4)
	(0.0529)	(0.0517)	(0.0452)	(0.0442)
Constant	1.271* (0.714)	1.023 (0.671)	1.483** (0.611)	1.277** (0.574)
Observations	192	198	192	198
Wald chi-square	121.2	122.0	100.2	95.84
Prob. > chi-square	0.0000	0.0000	0.0000	0.0000

Note. 3SLS = three-stage least squares. Robust standard errors are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$. The Wald chi-square statistic tests the joint significance of the model.

STUDY LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

The study has some limitations that should be acknowledged. First, the sample is limited to 15 African countries because of data availability. The findings therefore provide useful regional evidence but should not be interpreted as representing all African economies. Second, the study uses country-level aggregate data. Such data are valuable for macroeconomic analysis, but they cannot fully capture firm-level financing constraints, sector-level heterogeneity, or the differences between formal and informal enterprises.

Third, private financing is measured using gross domestic savings and personal remittances. These are important indicators, but they do not cover all private-financing channels. Future research could include domestic credit to the private sector, pension assets, insurance funds, venture capital, private equity, diaspora bonds, and capital-market indicators. Fourth, remittances are not disaggregated by use. Future studies would benefit from distinguishing between remittances used for consumption, housing, education, health, microenterprise activity, and industrial investment.

Finally, while FGLS and 3SLS improve the empirical presentation, they do not fully eliminate all possible endogeneity concerns. Future research could use instrumental-variable strategies, system generalized method of moments (system GMM), or natural-experiment designs where credible instruments or policy shocks are available. A sector-level or firm-level dataset would also help explain the channels through which private finance reaches, or fails to reach, manufacturing firms.

CONCLUSION AND POLICY RECOMMENDATIONS

This article examined the effects of private financing on industrialization in Africa. Using panel data for 15 African countries from 2006 to 2020, the study assessed the effects of gross domestic savings and personal remittances on manufacturing value added and the industrialization rate. The estimates from the FGLS model show that gross domestic savings contribute positively to industrialization, while personal remittances have a negative association with the two industrialization measures. Urbanization, GDP per capita, and political stability also matter, although some control variables show mixed effects across specifications.



The policy implication is not that remittances are undesirable. Remittances remain vital for household welfare, poverty reduction, health, education, and resilience. The key lesson is that remittances do not automatically become industrial capital. If African countries want remittances to support industrialization, they need stronger diaspora investment channels, credible project pipelines, lower transfer costs, matching grant schemes, and financial products that can move a portion of remittance flows into productive enterprises.

The first recommendation is to encourage domestic savings and deepen financial intermediation. African governments should integrate the informal sector into the formal financial system, strengthen trust in banks and capital markets, and promote savings products that are accessible to small businesses and households. The second recommendation is to improve the sub-regional development of financial markets. Fragmented national markets often limit the scale of long-term finance available for industrial projects. The third recommendation is to design public-private partnership models that direct private finance toward infrastructure, energy, logistics, industrial parks, and technology adoption.

Overall, the findings suggest that Africa's industrialization agenda requires more than a general call for private capital. It requires careful attention to the type of private finance, the institutions that intermediate it, and the sectors that ultimately receive it. Domestic savings appear to have a stronger industrial link in the sample, while remittances require better policy architecture if they are to support larger-scale industrial transformation.

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