

WORKING
PAPER

CHINA★AFRICA
RESEARCH INITIATIVE

NO. 29

JUL 2019

Comparing the Determinants of Western and Chinese Commercial Ties with Africa

David G. Landry



JOHNS HOPKINS
SCHOOL of ADVANCED
INTERNATIONAL STUDIES

sais-cari.org

NO. 29 | JULY 2019:

“Comparing the Determinants of Western and Chinese Commercial Ties with Africa”

by David G. Landry

TO CITE THIS PAPER:

Landry, David G. 2019. *Comparing the Determinants of Western and Chinese Commercial Ties with Africa*. Working Paper No. 2019/29. China-Africa Research Initiative, School of Advanced International Studies, Johns Hopkins University, Washington, DC. Retrieved from <http://www.sais-cari.org/publications>.

CORRESPONDING AUTHOR:

David G. Landry

Email: DavidGLandry@jhu.edu

NOTE:

The papers in this Working Paper series have undergone only limited review and may be updated, corrected or withdrawn. Please contact the corresponding author directly with comments or questions about this paper.

Editor: Daniela Solano-Ward

ABSTRACT

**SAIS-CARI WORKING PAPER
NO. 29 | JULY 2019:**

“Comparing the
Determinants of Western
and Chinese Commercial
Ties with Africa”

by David G. Landry

IN RECENT DECADES, CHINA HAS RISEN TO PROMINENCE in the global economy with breakneck speed. For example, its foreign direct investment outflows have increased more than 250-fold since 1990 and its bilateral trade volume increased by a factor of 24 between 1992 and 2015. Many have hypothesized that Chinese firms undermine the global drive to promote good governance in developing countries, and in Africa in particular, by targeting poorly governed countries for commercial ventures. This paper tests that hypothesis. It is the first to explicitly compare the determinants of Chinese and western commercial activities through quantitative modeling. It finds that governance quality among African countries plays a positive role in predicting their commercial activity, in terms of their foreign direct investment inflows, exports, and imports—with both western countries and China. It also finds that governance outcomes among African countries does not impact their commercial ties with China and the west differently. Out of the four governance indicators presented in the paper, only corruption controls systematically impact Chinese commercial activity differently than that of the west—western firms engage less than their Chinese counterparts with countries that suffer from higher corruption levels.

INTRODUCTION

THIS PAPER EXAMINES WHETHER CHINA'S COMMERCIAL activities in Africa differ from their western counterparts' in terms of how they are impacted by the governance outcomes of the countries where they take place. It also tests whether governance among African countries impact foreign direct investment (FDI) and trade (both imports and exports) differently. To do so, this paper employs a quantitative approach. The testing of the relationship between governance and commercial ties takes place through enhanced gravity models, controlling for economic, political, and geographic factors. The models use panel data of cross-country commercial ties as an outcome variable. They combine the commercial activities from China and the four western countries that have the largest trade volumes with, and investment flows in, Africa: France, Germany, the United Kingdom, and the United States.

In line with much of the literature investigating the impacts of governance on commercial activity, this paper demonstrates that African countries' governance quality plays a positive role in predicting their investment inflows and trade patterns. Additionally, it finds that the impact of governance on FDI is economically larger than on trade. It also finds that, as opposed to some of the widespread notions on the matter, overall governance quality does not impact western and Chinese commercial engagement in Africa differently. That said, this paper also demonstrates that Chinese firms are more likely than western firms to engage with African countries that suffer from high corruption levels. Finally, it finds that Chinese firms import more from resource-rich African countries than their western counterparts.

In recent decades, China has risen to prominence in the global economy with breakneck speed. For example, its FDI outflows have increased more than 250-fold since 1990 and its bilateral trade volume increased by a factor of 24 between 1992 and 2015. China's increasing clout in international affairs came as western actors began to pay increasing attention to the quality of governance in developing countries. Corruption controls, democratic development, and respect for human rights all made it to the forefront of the agenda articulated by the west in the decade following the end of the Cold War, as their foreign policy calculus changed fundamentally.

The good governance agenda has also made its way into the international business literature, as part of what Buckley et al. call the "institutions-based view of strategy".¹ One of the most consistent findings in that literature is that poor governance quality has a deeply negative impact on international commercial activity. On the one hand, the literature linking governance quality and foreign direct investment and, to a lesser extent trade, is remarkably consistent on the impact of governance. It shows that, all else equal, countries with worse governance outcomes are expected to receive less FDI, invest less, and trade less than their counterparts. Put simply, the causal mechanism raised to explain these findings is that commercial actors are deterred by poor governance and, as a result, take their business elsewhere.

On the other hand, according to much of the conventional thinking on the matter, China's engagement abroad not only disregards governance issues, but also undermines the west's efforts to tackle them. Another frequent critique against the Chinese, generally by western sources, is that China's economic engagement in Africa

is only forthcoming when the continent's abundant natural resources are at play. A slew of reporting purports to describe how Chinese actors operate. Headlines like “China in Africa: Investment or Exploitation” are commonplace in mainstream media outlets.² Other headlines, such as “Corruption Is China's Friend in Its Quest to Dominate Africa” explicitly draw a link between poor governance and Chinese engagement in Africa.³ This paper tests this narrative.

LITERATURE REVIEW

THE SCHOLARSHIP ON THE DETERMINANTS OF FDI unequivocally shows that better governance among host countries are associated with greater investment inflows. The findings are remarkably consistent over time. Wei demonstrates that corruption acts as a tax on FDI and affects it negatively.⁴ Chakrabarti shows that countries with higher levels of political risk (lower levels of political stability) generally receive less FDI.⁵ Other papers model the effects of a wider range of governance indicators on FDI flows. Alesina and Dollar, find that host countries' rule of law, enforceability of contracts, and economic freedom positively influence FDI.⁶ Similarly, Lambsdorff reveals that law and order (a strong court system and provisions for an orderly succession of power) represents an important predictor of countries' capital inflows.⁷ Addison and Heshmati find that democratization is positively linked with FDI inflows to developing countries.⁸ Daude and Stein find that government stability, the predictability of laws, regulations and policies, and the prominence of regulatory burden all play an important and positive role in predicting FDI flows.⁹

Recent papers—employing increasingly sophisticated methods—find similar results. Hakkala et al., using an instrumental variable approach, show that local corruption reduces the probability that a firm will invest in a country.¹⁰ Using a Bayesian approach, Blonigen and Piger show that governance (an aggregate of political stability, legal institutions, and corruption) has a positive impact on FDI inflows.¹¹

The existing research also shows that poor governance does not impact all investment equally—it stunts FDI disproportionately. Habib and Zurawicki show that corruption among host countries impacts FDI about twice as much as domestic investment.¹² In the same vein, Aizenman and Spiegel demonstrate that the ratio of foreign investment to domestic investment decreases as governance quality (enforcement of property rights) worsens.¹³ This raises the hypothesis that poor governance may affect domestic firms less because they can navigate better than their foreign counterparts, or because they are not impacted by the corruption control measures outlined above, such as the Foreign Corrupt Practices Act (FCPA). Finally, they may also simply lack the flexibility to take their money elsewhere.

The impact of governance on FDI is not limited to outward investment. Globerman and Shapiro show that poor governance infrastructure (political, institutional, and legal environments) negatively correlates with both FDI inflows and outflows.¹⁴ In other words, they show that better governance at home helps to attract FDI, but also fosters an environment conducive to domestic firms investing abroad.

This paper demonstrates that African countries' governance quality plays a positive role in predicting their investment inflows and trade patterns. Additionally, it finds that the impact of governance on FDI is economically larger than on trade. It also finds that, as opposed to some of the widespread notions on the matter, overall governance quality does not impact western and Chinese commercial engagement in Africa differently.

Similarly, Habib and Zurawicki show that the gap in perceived corruption levels between countries negatively impacts bilateral FDI flows.¹⁵

Many studies linking governance and FDI have overlooked the potential differences made by the countries from which FDI originates on where it flows. For example, is the FDI originating in France affected by different factors than that of the US? Some recent studies shed some light on that question and find that not all countries' firms respond the same way to governance outcomes. Winner and Egger find that corruption is a significant impediment to intra-OECD FDI, but not for extra-OECD FDI (which largely consists of FDI to host countries located in the developing world).¹⁶ Cuervo-Cazurra shows that corruption affects the sources of a country's FDI inflows.¹⁷ He demonstrates that higher corruption levels in host countries are associated with less FDI from countries that have signed the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, and with a higher share of FDI from countries also suffering from high levels of corruption.

The research linking governance and FDI in African host countries paints a similar picture. Morisset finds that the countries with the most attractive investment environments attract substantially larger FDI inflows.¹⁸ Similarly, Asiedu shows that an efficient legal system, and a good investment framework are positively associated with FDI.¹⁹ However, corruption and political instability negatively impact FDI inflows. Finally, Anyanwu finds that a stronger rule of law positively impacts FDI flows to African countries.²⁰

A relatively new body of scholarship attempts to find out whether China's FDI behaves the same way as that of other, mostly western, countries. However, a consensus has yet to emerge regarding the effects of host countries' governance outcomes on Chinese FDI. Buckley et al. find that Chinese FDI is disproportionately attracted to politically risky countries (as measured by the International Country Risk Guide, or ICRG), as well as resource rich countries.²¹ Similarly, Kolstad and Wiig show that Chinese FDI has a propensity to flow to poorly governed countries with abundant natural resources.²² Ramasamy et al. find that Chinese state-owned enterprises invest more in politically unstable countries, as well as in resource rich countries.²³ However, they find that neither factor affects the FDI patterns of private Chinese firms. On the other hand, Cheung and Qian, find that country risk (as measured by ICRG) does not play a significant role in predicting approved Chinese FDI outflows.²⁴ Similarly, using FDI data collected by reading news articles, Quer et al. find that political risk in host countries (also from ICRG) has no impact on Chinese FDI.²⁵ However, they find that natural resources wealth in host countries has a significant positive impact on their Chinese FDI inflows.

The research focusing on Chinese FDI in Africa paints a similarly abstract picture. It presents consistent results regarding the positive role of host countries' resource wealth in predicting FDI inflows originating in China. However, the scholarship uncovers strikingly different results when the role of host country governance is modeled. Kolstad and Wiig find that rule of law has a slightly negative value when used

There is little consensus in the literature researching the determinants of China's investment activities in Africa, beyond the fact that it appears to flow disproportionately to resource-rich countries. The role of governance - which this paper focuses on - is unclear.

to predict China's investment flows to 29 African countries.²⁶ However, when an interaction term capturing both natural resource wealth and rule of law is added to their models, rule of law (by itself) becomes positively associated with the total non-African FDI variable, and its negative association with Chinese FDI diminishes dramatically (or becomes slightly positive). Similarly, Cheung et al. find that high levels of corruption and low levels of law and order are associated with inflows of Chinese FDI in Africa, as is natural resource wealth.²⁷ Finally, Chen, Dollar, and Tang find that Chinese investment in Africa generally flows to politically stable countries regardless of their rule of law.²⁸ They contrast this result with African countries' aggregate FDI inflows, which tend to go to countries with a robust rule of law. However, Breivik finds no evidence that China's FDI is disproportionately attracted to countries with poor governance outcomes, although she finds that Chinese FDI in Africa is attracted to countries endowed with natural resources.²⁹ Similarly, Ross finds that Chinese investments in Africa are positively associated with both host countries' government governance outcomes and their level of natural resource wealth.³⁰ There is little consensus in the literature researching the determinants of China's investment activities in Africa, beyond the fact that it appears to flow disproportionately to resource-rich countries. The role of governance—which this paper focuses on—is unclear. Some of the papers find that African countries' governance levels simply has no impact on the investment they receive from China, while others find that China's investment flows disproportionately to countries with poor governance outcomes—and one finds the opposite.

The body of scholarship that explicitly links governance and trade patterns is smaller than that relating to FDI. In the words of Zurawicki: “It is rather amazing how little quantitative research has been devoted to the issue of corruption affecting exports.”³¹ That said, broadly speaking, the literature on the relationship between governance and trade broadly aligns with that linking governance and FDI. The bulk of it shows that countries with poor governance outcomes trade less. Again, however, the relationship of governance with trade remains unclear when it comes to Chinese commercial activity.

Lambsdorff examines the effects of corruption in importing countries on the exporting performance of their trading partners.³² He finds that firms from certain countries (Belgium, Luxembourg, France, Italy, and the Netherlands) perform better than their counterparts (the US, Australia, Austria, Sweden, and Malaysia) at securing a market for their goods in more corrupt countries. Anderson and Marcouiller show that countries with more transparent and impartial institutions have larger import volumes.³³ De Groot et al. provide further support for this hypothesis.³⁴ They show that governance, as captured by the six World Bank Worldwide Governance Indicators, have a “significant, positive and substantial” impact on trade.³⁵ They also show that this effect applies to the governance outcomes of exporting countries and importing countries alike—but more strongly to those of exporting countries. Linders et al. find that the difference between countries' respective levels of governance has a negative impact on bilateral trade, while cultural distance has the opposite effect.³⁶

The key hypothesis of this paper is that governance outcomes do play a positive role in predicting commercial activities, but under limited circumstances. African countries' governance quality is expected to have a greater impact on FDI than imports and exports, since the former generally necessitates substantial upfront cash outlays and has a long time-horizon.

The literature investigating the role of governance quality in predicting trade, and China's trade patterns in particular, is scant. In fact, only one paper explicitly explores how the effects of governance on trade play out with regards to China and Africa. De Grauwe et al. find the quality of African countries' governance levels plays a significant role in explaining their trade dynamics.³⁷ Their models demonstrate that African countries with better governance levels import more from China, France, Germany, the UK, and the US. However, China is the only country in the models that consistently imports more from African countries that suffer from poor governance outcomes. Additional research is needed to substantiate these findings, especially given that De Grauwe et al.'s models, as explained in the next section, do not explicitly test whether governance impacts China's trade patterns differently than those of western countries.

The literature on the determinants of commercial activities among western countries suggests that governance matters. In all the papers reviewed, governance is positively associated with investment, trade, or both. That said, only one paper explicitly compares how governance impact FDI and trade differently. Habib and Zurawicki contrast the impact of corruption on FDI with its effect on trade (for importing and exporting countries).³⁸ They find that corruption negatively impacts trade, and that it does so in relatively similar terms for both exporting and importing countries. In other words, they show that more corrupt countries import and export less. However, Habib and Zurawicki also show that the impact of corruption on trade is smaller than its effect on FDI.³⁹ They hypothesize that, in corrupt markets, trade is expected to be a "safer" option because, as a market entry mode, it requires a lesser level of upfront commitment than FDI.

The literature on the impacts of governance on commercial activity suffers from three shortcomings. First, the literature on the determinants of commercial ties almost exclusively explores the impact of corruption or political risk. Other governance indicators, such as democratic development and respect for human rights, might also affect these ties (especially if ethics play a role in explaining the causal link between corruption and commercial activity). Second, much of the literature on China's overseas engagement lacks a comparative outlook, and none of it explicitly tests whether governance and resource wealth impact commercial activity from China and western countries differently. Some papers, by Kolstad and Wiig, and Chen, Dollar, and Tang, contrast Chinese investments in Africa with African countries' aggregate investment inflows.⁴⁰ De Grauwe et al. also take a comparative approach to their models on China-Africa trade patterns.⁴¹ That said, none of these papers employ models that allow them to explicitly test whether China and the west differ in terms of how they invest, and whether governance and natural resources impact their commercial activities differently. These papers run separate models for China and western countries and compare the coefficients of governance and resources wealth across models. However, to effectively determine whether specific variables have a different impact on China's economic activity than on that of western countries, they need to be combined into a single model, and their difference tested. Finally, apart from Habib and Zurawicki, the literature linking governance and commercial activity

fails to investigate whether governance outcomes impact foreign direct investment and trade differently.⁴² As they note, governance is likely to have a stronger impact on FDI than on trade, due to the former's higher upfront costs and longer time-horizon.⁴³

RESEARCH QUESTIONS

THIS PAPER TESTS THE NARRATIVE THAT CHINESE FIRMS disproportionately engage with resource-rich countries that suffer from poor governance outcomes, compared to western countries. It seeks to answer the following questions:

1. Does a relationship exist between African countries' governance outcomes and their commercial ties?
2. Do differences in governance quality impact patterns of FDI and trade in the same way?
3. Does the quality of African countries' governance outcomes impact their commercial ties with China and western countries in a systematically different way?
4. Is China's commercial activity in Africa more "resource-seeking" than that of its western counterparts?
5. Does the quality of different governance indicators—corruption controls, political stability, democratic development, and respect for human rights—matter equally for commercial activity?

The key hypothesis of this paper is that governance outcomes do play a positive role in predicting commercial activities, but under limited circumstances. African countries' governance quality is expected to have a greater impact on FDI than imports and exports, since the former generally necessitates substantial upfront cash outlays and has a long time-horizon. Governance quality is also expected to play a greater role in predicting western commercial activity on the African continent than that of China. More specifically, Chinese commercial actors are expected to place less importance on corruption in African countries than their western counterparts, since the latter have legislation in place and, to a large extent, enforced that is aimed at curbing the potentially corrupt activities of their firms abroad. On the other hand, governance indicators for which no specific laws exist, such as democratic development, are expected to have a lesser impact on African countries' commercial activity than those for which no explicit rules or norms do exist. Additionally, governance indicators that can directly impact a firm's bottom line, like political stability, are expected to have a larger impact on commercial activity than the ones that might only impact profit through indirect channels, such as respect for human rights. Finally, China's commercial activity is expected to correlate more than that of its western counterparts to the size of African countries' natural resources base. This is expected, in part, because of the skewing effects of large—and relatively new—Chinese extractive projects.

METHODOLOGY AND DATA

THIS PAPER EMPLOYS A QUANTITATIVE APPROACH TO ADDRESS the questions posed above. The data used is presented in Table 1.

The testing of the relationship between governance, natural resources, receiving country market size, and political alignment on the one hand, and foreign direct investment flows and trade ties on the other, takes place through enhanced gravity models controlling for economic, political, and geographic factors. Some of the models presented in the paper encompass all 54 African countries, while others exclude South Africa.⁴⁴ All the models comprise China as well as four western countries—France, Germany, the United Kingdom, and the United States (See Figures 1 and 2).⁴⁵ Dummy variables reflect the non-African country for each indicator, and the

Table 1: Summary Statistics of the Data

VARIABLES	N	Mean	Std. Dev.	Min	Max	Source(s)
African Countries' FDI Inflows	1,691	1.18e + 08	5.63e + 08	0	1.30e + 10	OECD, CSY, and SB
African Countries' Imports	3,975	5.21e + 08	1.38e + 09	36,000	1.70e + 10	UN Comtrade
African Countries' Exports	3,975	9.93e + 08	2.73e + 09	0	4.80e + 07	UN Comtrade
Political Alignment	3,679	0	1	-2.424663	1.849638	Voeten
Common Language (Dummy)	4,050	.2703704	.4442099	0	1	CEPII
Colonial Ties (Dummy)	4,050	.1703704	.3760076	0	1	CEPII
Geographic Distance	4,050	7,597.213	2,967.858	1,340.39	14,928.20	CEPII
GDP (PPP)	4,050	2.90e + 10	6.69e + 10	0.00e + 00	5.68e + 11	WB
GDP per Capita (PPP)	4,005	5,031	6,685	400	48,711	WB
Resources (% of GDP)	3,530	15	16	0	81	WB
Corruption Controls (Index)	4,000	0	1	-2.717727	2.699944	WB
Political Stability (Index)	4,000	0	1	-2.162123	1.939304	WB
Democratic Development (Index)	4,000	0	1	-2.026096	1.950132	Polity 4, Freedom House
Respect for Human Rights (Index)	3,925	0	1	-2.094585	1.813391	Cingranelli & Richards
Governance (Index)	3,925	0	1	-2.043259	2.363925	PCA Index

China dummy is interacted with the variables of interest in order to test the hypothesis that the determinants of China's commercial engagement are different from those of the west. All the models are estimated using fixed effects reflecting the sending country, the receiving country, and the year captured by the data. The basic version of the models is outlined in Equation 1.

Two distinct models are used in the paper: the standard Ordinary Least Square (OLS) model and the preferred Poisson Pseudo-Maximum-Likelihood (PPML) estimation.⁴⁶ As part of the OLS models, the paper employs the log of the yearly value of FDI, imports, or exports (plus one) as the dependent variable.⁴⁷ Additionally, as part of the PPML models, the yearly value of FDI, imports, or exports is used as the dependent variable. The PPML model naturally deals with the multiple zeros in the dependent variable, essentially combining aspects of the extensive and intensive margin models in a single specification.⁴⁸ In other words, it captures whether commercial activity will take place between countries (the extensive margin) and their intensity (the intensive margin).⁴⁹ Another advantage of the PPML estimation is that, unlike OLS, it is consistent even in the presence of heteroskedasticity. The PPML models are hence preferred, and thus explored in the body of the paper.⁵⁰

This paper uses panel data from three key sources to compile the dependent variables of interest. It employs FDI flows data compiled by the OECD for the years 2003 to 2013 for the western countries sample. It uses Chinese FDI flow data compiled by the China Statistical Yearbook (CSY) and the Statistical Bulletin of China's Outward Foreign Direct Investment (SB) for 2003 to 2014.⁵¹ Finally, for all the countries sampled, the paper employs exports and imports data compiled by the UN Comtrade Database for 2001 to 2015.

The paper's independent variables come from various sources. The political alignment variable measures the voting alignment of country pairs at the United Nations in a given year and is compiled by Voeten. The dummy variables capturing country-pairs' colonial and linguistic ties, as well as the data reflecting the distance between country-pairs' respective capital cities, are compiled by CEPII. The variables reflecting the characteristics of the African countries sampled—their GDP, GDP per capita, and the importance of natural resource rents as a share of their economic output—are obtained from the World Bank. The data reflecting the governance outcomes of the African countries sampled comes from a variety of sources. The variables reflecting levels of corruption controls and political stability are generated using data produced by the World Bank.⁵² The variable reflecting levels of democratic development combines the yearly data produced by Freedom House and Polity IV. The variable reflecting respect for human rights is based on data compiled by Cingranelli and Richards. Finally, the variable that captures countries' aggregate governance levels is produced by combining the four individual governance measures through principal component analysis.⁵³

The testing of the relationship between governance, natural resources, receiving country market size, and political alignment on the one hand, and foreign direct investment flows and trade ties on the other, takes place through enhanced gravity models controlling for economic, political, and geographic factors.

Figure 1: Total FDI Flows to Africa, by Country (2003-2012)

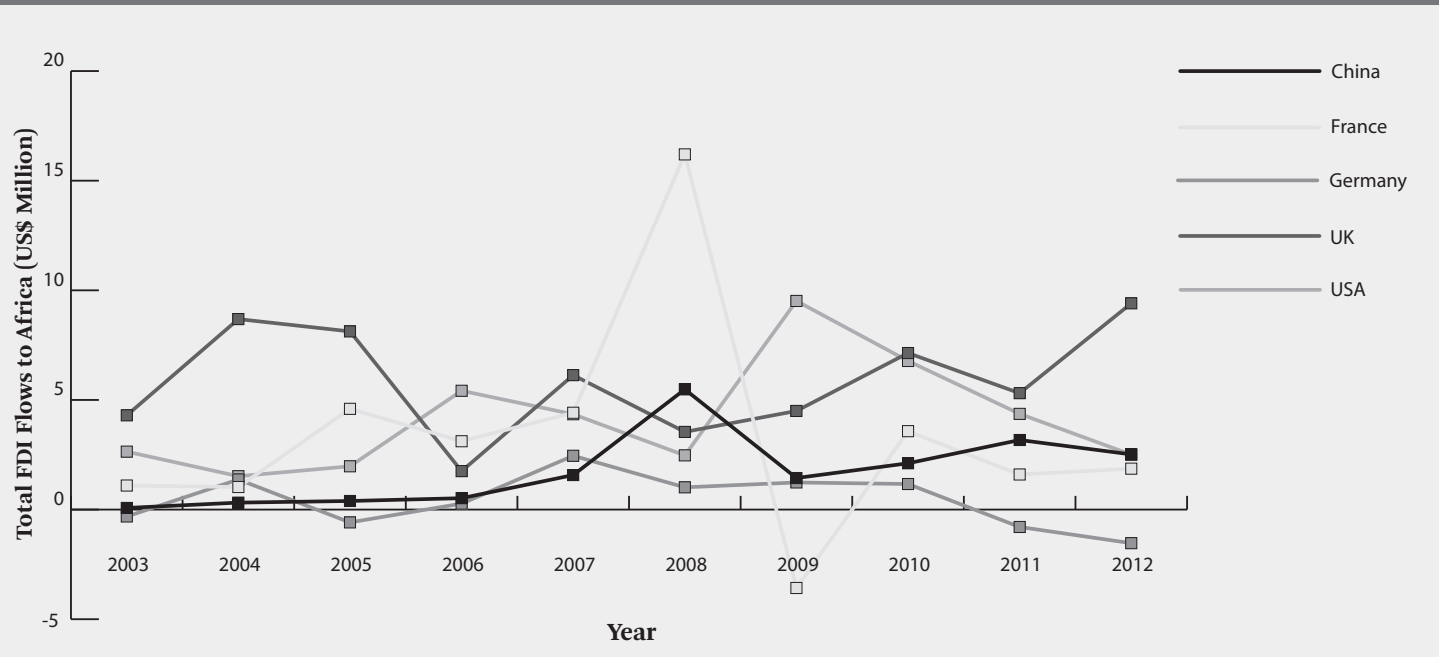
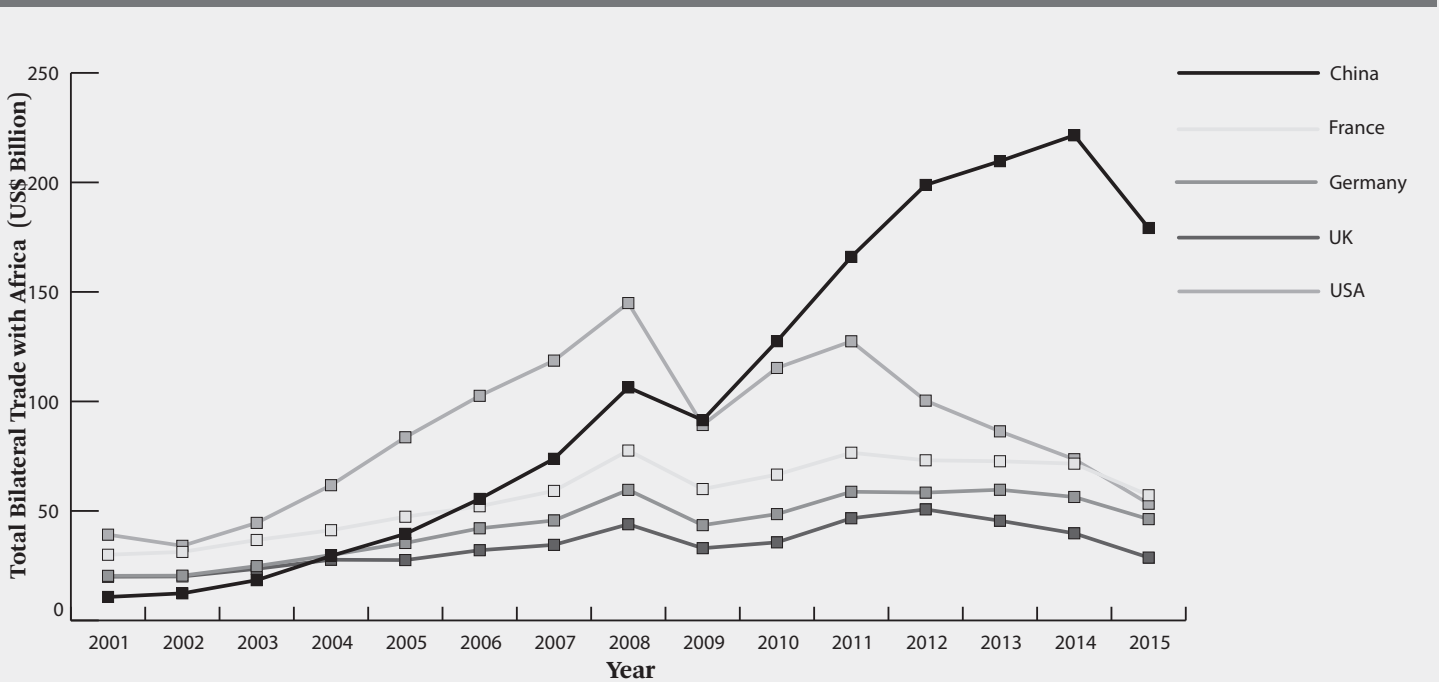


Figure 2: Total Bilateral Trade Flows with Africa, by Country (2001-2015)



Equation 1⁵⁴

$$y_{ijt} = \alpha x_{ijt-1} + \beta z_{jt-1} + \gamma n_{jt-1} + \delta c_{it-1} + \zeta c^* n_{ijt-1} + \varepsilon_{ij}$$

Where:

- y_{ijt} is the total FDI flows from country i to African host country j in year t , or the imports or exports between country i and African country j in year t .
- x_{ijt-1} is a vector of UN voting alignment and geographic distance (log) between countries i and j , as well as dummy variables reflecting their colonial and language ties, in year $t-1$.
- z_{jt-1} is a vector of variables reflecting African host countries' economic characteristics—GDP (log), GDP per capita (log), and natural resource rents as a percentage of GDP—in year $t-1$.
- n_{jt-1} is a vector of variables reflecting the governance quality of African host countries—political stability, corruption controls, democratic development, respect for human rights, and an aggregate indicator of governance quality generated through principal component analysis—in year $t-1$.
- c_{it} is a dummy variable that captures whether country i in year $t-1$ is China.
- $c^* n_{ijt}$ is a vector of interaction terms capturing whether country i is China and the variable of interest (the African country's governance quality, GDP, resource rents as a percentage of GDP, or its political alignment to the home country) in year $t-1$. In other words, the coefficient ζ captures whether the impact of the variable of interest in question on commercial activities changes when China is country i .
- ε_{ij} is the error term.

RESULTS - PPML

THE TABLES BELOW ANSWER MANY OF THE CENTRAL QUESTIONS of this paper. With regards to the paper's first question, they show that governance plays a statistically significant positive role in predicting African countries' commercial activities. Table 2's first model demonstrates that a standard deviation increase in governance quality (roughly the difference between Sierra Leone and Senegal in 2015) is associated with an increase in FDI inflows of 141 percent for the full sample comprising China and the west (statistically significant at the one percent level).⁵⁵ Tables 3 and 4's first models show that a standard deviation increase in governance quality among African countries is associated with an increase in exports of 21 percent and an increase in imports of 12 percent (statistically significant at the five and 10 percent level, respectively).

Comparing the coefficients highlighted above suggests that governance plays a more important role in predicting FDI than trade (both exports and imports), thus providing an affirmative answer to the paper's second question. This also lends some support to Habib and Zurawicki's hypothesis that investment is more sensitive to governance quality than trade, because it generally entails a longer time horizon and

often comprises larger upfront costs.⁵⁶ As mentioned above, these results reflect the whole sample comprising both China and western countries. Therefore, the impact of governance on China and the west's commercial ties—if they behave in opposite ways—might cancel out in the models. The following paragraphs explore whether this is the case by breaking down the models that explicitly compare China and the west.

With regards to the third question, the tables below show that the role of governance quality in predicting the commercial activities of Chinese and western

Table 2: Dependent Variable - African Countries' FDI Inflows (Excluding South Africa)

VARIABLES	(1)	(2)	(3)	(4)	(5)
Governance (Index)	0.878*** (0.212)	0.891*** (0.207)	0.887*** (0.226)	0.773*** (0.220)	0.816*** (0.228)
China * Governance (Index)	-	-0.0934 (0.113)	-	-	-
Resources (% of GDP)	0.0100 (0.0168)	0.0104 (0.0172)	0.0101 (0.0169)	0.00747 (0.0159)	0.0118 (0.0175)
China * Resources (% of GDP)	-	-	-0.00240 (0.00573)	-	-
GDP, PPP (Log)	0.551* (0.316)	0.528* (0.308)	0.550* (0.317)	0.716** (0.342)	0.605* (0.324)
China * GDP, PPP (Log)	-	-	-	-0.391*** (0.0422)	-
Political Alignment (Index)	-1.126* (0.627)	-1.142* (0.607)	-1.120* (0.636)	-0.945 (0.649)	-1.182* (0.692)
China * Political Alignment (Index)	-	-	-	-	1.443*** (0.158)
GDP per Capita, PPP (Log)	-0.642 (0.997)	-0.601 (0.969)	-0.642 (0.999)	-0.643 (0.973)	-0.827 (1.106)
Language	0.213 (0.299)	0.183 (0.345)	0.223 (0.306)	0.339 (0.254)	0.369* (0.200)
Colony	0.252 (0.233)	0.265 (0.245)	0.245 (0.245)	0.265 (0.247)	0.148 (0.216)
Distance (Log)	0.0146 (0.265)	-0.0296 (0.328)	0.0300 (0.266)	0.318 (0.242)	0.0863 (0.258)
Observations	1,385	1,386	1,386	1,386	1,386
R-squared	0.439	0.439	0.439	0.440	0.446

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

firms does not differ significantly (none of the China-specific coefficients highlighted below are different from their western counterparts to a statistically significant degree). In fact, while African countries' governance quality consistently plays a statistically significant positive role in predicting western FDI, imports, and exports, the same applies for China's FDI and exports. Table 2's second model shows that a standard deviation increase in governance quality is associated with a 144 percent increase in western FDI (statistically significant at the one percent level). Tables 3 and

Table 3: Dependent Variable - African Countries' Exports (Excluding South Africa)

VARIABLES	(1)	(2)	(3)	(4)	(5)
Governance (Index)	0.189** (0.0857)	0.264** (0.111)	0.202** (0.0877)	0.193** (0.0890)	0.176** (0.0750)
China * Governance (Index)	-	-0.285 (0.220)	-	-	-
Resources (% of GDP)	0.0240*** (0.00765)	0.0241*** (0.00774)	0.0189* (0.0100)	0.0242*** (0.00787)	0.0240*** (0.00738)
China * Resources (% of GDP)	-	-	0.0206*** (0.00768)	-	-
GDP, PPP (Log)	0.590 (0.378)	0.592 (0.380)	0.558 (0.353)	0.628 (0.397)	0.572 (0.355)
China * GDP, PPP (Log)	-	-	-	-0.124** (0.0555)	-
Political Alignment (Index)	-0.618** (0.295)	-0.611** (0.297)	-0.704** (0.287)	-0.588** (0.286)	-0.776** (0.307)
China * Political Alignment (Index)	-	-	-	-	1.494*** (0.197)
GDP per Capita, PPP (Log)	-0.849** (0.376)	-0.845** (0.374)	-0.833** (0.345)	-0.841** (0.380)	-0.950** (0.397)
Language	0.676* (0.368)	0.621* (0.361)	0.513* (0.290)	0.676* (0.353)	0.784* (0.426)
Colony	0.212 (0.333)	0.229 (0.361)	0.271 (0.310)	0.224 (0.290)	0.157 (0.329)
Distance (Log)	-1.236*** (0.438)	-1.298*** (0.459)	-1.317*** (0.451)	-1.168*** (0.429)	-1.106*** (0.346)
Observations	3,389	3,389	3,389	3,389	3,389
R-squared	0.704	0.703	0.704	0.700	0.736

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 4: Dependent Variable - African Countries' Imports (Excluding South Africa)

VARIABLES	(1)	(2)	(3)	(4)	(5)
Governance (Index)	0.115* (0.0623)	0.0867** (0.0394)	0.116* (0.0619)	0.113* (0.0607)	0.119** (0.0599)
China * Governance (Index)	-	0.0710 (0.0860)	-	-	-
Resources (% of GDP)	0.00913*** (0.00312)	0.00912*** (0.00312)	0.0101*** (0.00342)	0.00915*** (0.00314)	0.00958*** (0.00341)
China * Resources (% of GDP)	-	-	-0.00292 (0.00197)	-	-
GDP, PPP (Log)	0.511*** (0.179)	0.511*** (0.179)	0.509*** (0.178)	0.536*** (0.182)	0.515*** (0.177)
China * GDP, PPP (Log)	-	-	-	-0.0510 (0.0670)	-
Political Alignment (Index)	-0.481*** (0.163)	-0.477*** (0.157)	-0.477*** (0.165)	-0.451*** (0.164)	-0.595** (0.253)
China * Political Alignment (Index)	-	-	-	-	0.647*** (0.141)
GDP per Capita, PPP (Log)	-0.283 (0.229)	-0.285 (0.228)	-0.284 (0.229)	-0.276 (0.234)	-0.342 (0.255)
Language	0.351 (0.227)	0.358 (0.224)	0.356 (0.228)	0.357 (0.232)	0.457** (0.191)
Colony	0.802*** (0.253)	0.805*** (0.261)	0.807*** (0.252)	0.812*** (0.284)	0.744*** (0.251)
Distance (Log)	-0.726*** (0.170)	-0.718*** (0.175)	-0.713*** (0.174)	-0.693*** (0.195)	-0.686*** (0.138)
Observations	3,389	3,389	3,389	3,389	3,389
R-squared	0.865	0.863	0.864	0.861	0.879

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

4's fourth models show that a standard deviation increase in governance quality is associated with a 30 percent increase in exports and a nine percent rise in imports (both statistically significant at the five percent level) for the western countries sample. Table 2's second model shows that a standard deviation increase in governance quality is associated with a 122 percent increase in Chinese FDI.⁵⁷ Table 3's second model demonstrates that a standard deviation reduction in governance quality is associated with a two percent increase in exports to China. Finally, Table 4's second model shows that a standard deviation increase in governance quality is associated with a 17 percent rise in imports from China. These coefficients show that western firms engage more with African countries that have better governance outcomes. They also demonstrate that Chinese firms invest more in, and export more to, African countries with better governance outcomes (and that governance outcomes have virtually no impact on Chinese imports).

The tables above paint a mixed picture as to whether China's commercial activity is more resource-seeking than that of the west. Table 2's third model shows that the impact of resource wealth on western FDI is not statistically significant and that China's coefficient does not differ from the west's to a statistically significant degree. Table 3's third model shows that a one percent increase in resource wealth as a share of GDP is associated with a two percent increase in exports to the west (statistically significant at the 10 percent level) and a four percent increase in exports to China (which is different from the west's coefficient at the one percent level, suggesting that Chinese firms import more than their western counterparts from resource-rich African countries). Finally, Table 4's third model shows that a one percent increase in resource wealth is associated with a one percent increase in western imports (for which the coefficient is significant at the one percent level) and Chinese imports (the difference between the two coefficients lacking statistical significance).

Now, the tables below explore the role of specific governance indicators in predicting Chinese and western commercial activity in Africa. They show that countries with low corruption levels consistently attract significantly more western commercial activity and that Chinese firms engage more than their western counterparts with countries that suffer from higher corruption levels. Table 5's first model shows that corruption controls have a positive impact on FDI for the western sample. More specifically, a standard deviation increase in the quality of corruption controls among African countries is associated with a 112 percent increase in western investment (though it lacks statistical significance). The same model also shows that a standard deviation increase in the quality of African countries' corruption controls is associated with a 55 percent increase in Chinese FDI (the difference between the west and China's respective coefficients being statistically significant at the one percent level). Table 6's first model shows that a standard deviation increase in corruption controls is associated with a 46 percent increase in African countries' exports to western countries (statistically significant at the five percent level) and a 40 percent decrease in their exports to China (the difference between the two coefficients being statistically significant at the one percent level). Finally, Table 7's first model shows

With regards to the role of specific governance indicators in predicting commercial activity, this paper shows that corruption controls represent by far the strongest determinant of western countries' commercial activity in Africa.

Table 5: Dependent Variable - African Countries' FDI Inflows (Excluding South Africa)

VARIABLES	(1)	(2)	(3)	(4)
Corruption (Index)	0.753 (0.520)	-	-	-
China * Corruption (Index)	-0.314*** (0.0699)	-	-	-
Stability (Index)	-	0.657*** (0.231)	-	-
China * Stability (Index)	-	-0.115 (0.0990)	-	-
Democracy (Index)	-	-	-0.225 (0.483)	-
China * Democracy (Index)	-	-	0.253* (0.146)	-
Human Rights (Index)	-	-	-	0.287 (0.234)
China * Human Rights (Index)	-	-	-	-0.0270 (0.108)
Political Alignment (Index)	-1.242** (0.570)	-0.964* (0.547)	-1.190* (0.610)	-1.254** (0.579)
Log (GDP, PPP)	0.461 (0.333)	0.489 (0.340)	0.626* (0.361)	0.633* (0.343)
Log (GDP per capita, PPP)	-0.638 (0.884)	-1.076 (1.187)	-0.712 (1.126)	-0.461 (1.007)
Resources (% of GDP)	0.0204 (0.0151)	0.0120 (0.0156)	0.0194 (0.0169)	0.0139 (0.0183)
Language	0.162 (0.329)	0.206 (0.301)	0.351 (0.304)	0.209 (0.355)
Colony	0.248 (0.228)	0.245 (0.219)	0.140 (0.265)	0.249 (0.257)
Distance (Log)	-0.0662 (0.332)	-0.0342 (0.289)	0.127 (0.296)	0.00328 (0.324)
Observations	1,386	1,386	1,386	1,386
R-squared	0.431	0.445	0.433	0.431

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 6: Dependent Variable - African Countries' Exports (Excluding South Africa)

VARIABLES	(1)	(2)	(3)	(4)
Corruption (Index)	0.379** (0.154)	-	-	-
China * Corruption (Index)	-0.712*** (0.166)	-	-	-
Stability (Index)	-	-0.0907 (0.0903)	-	-
China * Stability (Index)	-	0.291 (0.198)	-	-
Democracy (Index)	-	-	0.260** (0.116)	-
China * Democracy (Index)	-	-	-0.546*** (0.0711)	-
Human Rights (Index)	-	-	-	0.0685* (0.0400)
China * Human Rights (Index)	-	-	-	-0.0134 (0.108)
Political Alignment (Index)	-0.503 (0.314)	-0.638** (0.300)	-0.662** (0.282)	-0.627** (0.292)
Log (GDP, PPP)	0.558 (0.357)	0.587* (0.354)	0.624 (0.403)	0.609* (0.362)
Log (GDP per capita, PPP)	-0.809*** (0.312)	-0.772* (0.437)	-0.736 (0.476)	-0.806** (0.357)
Resources (% of GDP)	0.0264*** (0.00939)	0.0258*** (0.00808)	0.0249*** (0.00797)	0.0249*** (0.00791)
Language	0.608** (0.306)	0.632** (0.314)	0.395* (0.209)	0.675* (0.374)
Colony	0.202 (0.356)	0.231 (0.268)	0.359 (0.277)	0.212 (0.337)
Distance (Log)	-1.176*** (0.361)	-1.192** (0.469)	-1.401*** (0.499)	-1.240*** (0.444)
Observations	3,399	3,399	3,399	3,389
R-squared	0.728	0.728	0.720	0.703

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 7: Dependent Variable - African Countries' Imports (Excluding South Africa)

VARIABLES	(1)	(2)	(3)	(4)
Corruption (Index)	0.307** (0.149)	-	-	-
China * Corruption (Index)	-0.228*** (0.0406)	-	-	-
Stability (Index)	-	0.157** (0.0642)	-	-
China * Stability (Index)	-	-0.0961 (0.0611)	-	-
Democracy (Index)	-	-	-0.208 (0.129)	-
China * Democracy (Index)	-	-	0.376*** (0.0585)	-
Human Rights (Index)	-	-	-	-0.0435 (0.0519)
China * Human Rights (Index)	-	-	-	0.147 (0.0968)
Political Alignment (Index)	-0.429*** (0.165)	-0.473*** (0.168)	-0.394*** (0.140)	-0.449*** (0.152)
Log (GDP, PPP)	0.480*** (0.179)	0.483*** (0.180)	0.474*** (0.172)	0.508*** (0.180)
Log (GDP per capita, PPP)	-0.357 (0.260)	-0.360 (0.249)	-0.292 (0.239)	-0.245 (0.228)
Resources (% of GDP)	0.0101*** (0.00351)	0.00904*** (0.00317)	0.0101*** (0.00340)	0.00982*** (0.00348)
Language	0.375* (0.214)	0.362* (0.219)	0.512*** (0.164)	0.375* (0.219)
Colony	0.767*** (0.242)	0.786*** (0.244)	0.720*** (0.209)	0.803*** (0.265)
Distance (Log)	-0.687*** (0.146)	-0.733*** (0.172)	-0.620*** (0.141)	-0.689*** (0.172)
Observations	3,399	3,399	3,399	3,389
R-squared	0.878	0.870	0.888	0.864

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

that a standard deviation increase in corruption controls is associated with a 36 percent increase in African imports from the west (statistically significant at the five percent level) and an 8 percent increase in their imports from China (the difference between the two being statistically significant at the one percent level). These results also demonstrate that, compared to their western counterparts, Chinese firms consistently engage more commercially with African countries that have higher levels of corruption. That said, the only commercial activity presented above for which Chinese firms engage more with African countries that suffer from higher corruption levels, in absolute terms, are imports.

Consistent with Chen, Dollar, and Tang's findings, the models presented above show that political stability plays a positive role in predicting Chinese investment in Africa—as is the case for the western sample.⁵⁸ Table 5's second model shows that a standard deviation increase in political stability is associated with a 93 percent increase in western FDI (which is statistically significant at the one percent level) and a 72 percent increase in Chinese FDI (with a coefficient that does not differ significantly from that of the west). Political stability's predictive power is not consistent across the commercial activities contained in this paper. For instance, while western firms export more to African countries that are more stable, the opposite is true with regards to their imports.

Democratic development and respect for human rights do not play a consistent role in predicting commercial activity. While western firms invest less in and export less to, but import more from, African countries with higher levels of democratic development the exact opposite is true with regards to Chinese firms (see Tables 5, 6, and 7). Similarly, both western and Chinese firms invest more in African countries with greater respect for human rights, but the impact of human rights on their imports and exports is minimal in economic terms.

CONCLUSION

THIS PAPER IS THE FIRST TO COMPARE THE DETERMINANTS of Chinese and western commercial engagement using quantitative models conducive to doing so. It tests the relationship between African countries' governance quality and their commercial ties with China and the west through enhanced gravity models, controlling for economic, political, and geographic factors, with the explicit goal of uncovering whether governance impacts Chinese firms' engagement differently than that of its western counterparts. This paper is also the first to investigate the impacts of governance on commercial ties with such levels of granularity for both sets of variables.

The findings presented in the previous section provide clear answers to the paper's questions and substantiate some of its key hypotheses—though they fail to support others. The paper finds that, for the full sample comprising China, France, Germany, the UK, and the US, African countries' governance outcomes play a positive and statistically significant role in predicting commercial activity. This is hardly surprising and is consistent with the rich literature on the subject. It also

demonstrates that governance quality's economic impact on FDI is stronger than that on trade. In other words, commercial actors appear more willing to import from, and export to, African countries that have poor governance outcomes than to invest in them. This is consistent with Habib and Zurawicki and is likely due to the fact that investment generally necessitates substantial upfront costs and features a longer time horizon than trade activities.⁵⁹

With regards to the paper's core question, the tables above indicate that governance quality's impacts on western and Chinese firms' commercial engagement in Africa do not differ significantly. This is quite surprising and contradicts many of the papers presented in the literature review. This may be due to the way in which governance quality is measured in this paper (through principal component analysis using four distinct governance indicators) or because of the construction of the models (using various fixed effects). It may also be due to the fact that this paper employs data spanning a much longer time period than the ones reviewed above, which would suggest that Chinese firms are becoming more averse to countries with poor governance outcomes over time. This would not be surprising—Chinese firms have historically had much less exposure to foreign jurisdictions than their western counterparts and may have taken time to develop a similar aversion to governance risks as they have. The tables presented above also show that the role of natural resource wealth in predicting commercial activity does not differ significantly between western firms and their Chinese counterparts—with the exception of Chinese imports, which are significantly more resource-driven than those of the west.

With regards to the role of specific governance indicators in predicting commercial activity, this paper shows that corruption controls represent by far the strongest determinant of western countries' commercial activity in Africa. This suggests that laws like the FCPA, which the western countries sampled in this paper implement and enforce, are working. This finding is also likely driven by the fact that corruption controls, unlike democratic development and respect for human rights, have a direct impact on firms' bottom line. Simply put, bribes are expensive, and it makes sense for firms to try to avoid them. Compared to their western counterparts, Chinese firms consistently engage more commercially with more corrupt African countries. That said, imports are the only Chinese commercial activity where corruption controls have a negative net coefficient. This is likely linked to the fact that African countries' resources wealth plays an important role in predicting their exports to China—the paradox of plenty tells us that natural resource rents often go hand in hand with high corruption levels.

According to much of the conventional thinking on the matter, China's commercial engagement abroad not only disregards governance issues, but also undermines the west's efforts to tackle them, by disproportionately targeting countries with higher corruption levels and worse human rights track records. Another frequent claim regarding China is that its economic engagement in Africa is only forthcoming when the continent's abundant natural resources are at play. The findings presented in this paper reveal the need for actors in academia, the media, the private sector, and

government, to re-evaluate their notions regarding the forces that drive commercial engagement in Africa—and that of China in particular. ★

APPENDIX A: DATA CONSTRUCTION AND DEFINITIONS

THIS RESEARCH PERTAINS TO HOW GOVERNANCE RELATES to cross-country economic activities—FDI and trade—with the aim of differentiating how China and western countries engage economically with Africa. The terms used are defined and operationalized as follows:

COMMERCIAL ACTIVITY

- **Foreign Direct Investment** – In line with the Balance of Payments Manual – Fifth Edition, FDI is defined as “investment made to acquire lasting interest in enterprises operating outside of the economy of the investor”.⁵⁹ The paper uses the OECD’s data on FDI flows and FDI stocks for the years 2003 to 2012 for France, Germany, the UK, and the US. It uses the Chinese Overseas Direct Investment data published in the China Statistical Yearbook and the Statistical Bulletin of China’s Outward Foreign Direct Investment.
- **Trade** – Trade is defined, as part of this research, as the total imports and exports in both merchandise and services that takes place between a pair of countries. The paper uses UN Comtrade yearly data on imports and exports—which covers the trade relationships with all 54 African countries and China, France, Germany, the UK, and the US—for the years 2001 to 2015.

GOVERNANCE INDICATORS

As part of this work, governance is operationalized through four sets of variables: corruption controls and the rule of law, political stability and the absence of violence, democratic development, and respect of human rights. Finally, an aggregate governance indicator is generated using a principal component analysis of these same four governance indicators. In order to facilitate the interpretation of the results, each of the variables outlined below, as well as the aggregate governance indicator, are standardized as follows:

$$(\text{Score}_{it} - \text{Score}_{\mu}) / \text{Score}_{\sigma}$$

- **Corruption Controls and Rule of Law** – This variable indexes two distinct World Bank Worldwide Governance Indicators reflecting (1) “perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence” and (2) “perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as “capture” of the state by elites and private interests”.⁶¹ The resulting variable is converted to a value between 0 and 5, as follows:

$$[(\text{Rule of Law} + \text{Control of Corruption})/2] + 2.5$$

- **Political Stability and Absence of Violence** – This indicator captures the World Bank Worldwide Governance Indicator reflecting “perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism.”⁶² It is then indexed and converted to a scale of 0 to 5, as follows:

$$\text{Political Stability and Absence of Violence} + 2.5$$

- Democratic Development** – This indicator indexes two widely employed indicators of democratic progress. It reflects (1) the Polity Project data, which is based on electoral openness and competitiveness, political participation, and checks and balances to constrain individuals in power. The resulting score is on a scale of -10 to +10, where autocracies score between -10 and -6, and democracies between 6 and 10. “Anocracies”, regimes that fall somewhere between democracy and autocracy, score between -5 and 5.⁶³ It also reflects (2) the Freedom House data, which evaluates political rights, based on indicators covering the electoral process, political participation, and the functioning of government, as well as civil liberties, based on indicators of freedom of expression, rights to association, rule of law, and individual rights. In Freedom House’s methodology, states are given an overall score between 1.0 and 7.0, where those considered free can score between 1.0 and 2.5, those partly free between 3.0 and 5.0, and those not free between 5.5 and 7.0.⁶⁴ Each dataset is indexed and converted to a scale ranging between 0 and 5. This is done using the following formula:

$$[(\text{Polity} + 10)/4 + (7 - \text{Freedom House}) * 0.83]/2$$

- Respect for Human Rights** – This indicator reflects the data on human rights collected by David L. Cingranelli, David L. Richards, and K. Chad Klay from the University of Birmingham, the University of Connecticut, and the University of Georgia, respectively.⁶⁵ Their dataset—CIRI for short—contains quantitative indicators on respect for a set of 15 human rights in 202 countries. It captures the years 1981 to 2011. The indicators are indexed and converted to a scale of 0 to 5, as follows:

$$[\text{Human Rights}/14] * 5$$

APPENDIX B: DATA LIMITATIONS

THE VARIABLES REFLECTING GOVERNANCE QUALITY—rule of law and corruption controls, political stability and absence of violence, democratic development, and respect of human rights—do not exhaustively capture the depth of governance quality in specific countries. However, they offer enough breadth to capture the variance in governance outcomes in different settings, which is what this work aims to do. Finally, most of these variables are perception based—they are generated from the informed opinions of experts. However, no better governance indicators exist for the purpose of this research. Furthermore, the very mechanisms through which governance is expected to affect economic activities as part of this work are perception-driven.

The variable reflecting UN voting alignment estimates the difference between two countries' voting patterns at the UN general assembly during a given year, in terms of their respective ideal point estimates. The variable reduces a highly complex phenomenon that takes place over the span of a year into a single digit indicator and should thus be interpreted with caution. This limitation is particularly relevant when analyzing short time-periods, though this is not the case in this paper.

The data capturing annual flows of Chinese FDI is drawn from official Chinese reports. The reports on Chinese Overseas Direct Investment (ODI) date from 2003 and extend to 2014. Before 2007, the figures reported captured “China Approved Overseas Investment” and did so for the years 1998 to 2005. As the definition appears to have changed, the two datasets are not consistent.⁶⁶ While many reports on Chinese FDI likely overestimate it by conflating press announcements and actual investments, the current official figures likely represent underestimates. The data produced by the Chinese government likely underestimates the total overseas investment of Chinese firms because it does not include funds that flow through offshore financial centers like Hong Kong—which accounted for 60 percent of outward FDI from the mainland in 2015—or that of smaller investors from China itself.⁶⁷ Furthermore, it does not record acquisitions that comprise important foreign assets, but that took place in third-party countries.⁶⁸ These shortcomings also apply to western FDI data. That said, a large proportion of Chinese funds actually comes from offshore centers, which likely makes this problem worse with regards to the data on Chinese FDI.

The key challenge posed by trade data is that it captures exports from a country to another, regardless of the identity of the exporting and importing entities. For example, if a Chinese textile firm operating in Madagascar knits and ships one million dollars' worth of shirts to South Africa, it is considered a Malagasy export and a South African import.

APPENDIX C:

PAPER RESULTS (PPML - INCLUDING SOUTH AFRICA)

Table 2: Dependent Variable - African Countries' FDI Inflows

VARIABLES	(1)	(2)	(3)	(4)	(5)
Governance (Index)	1.038*** (0.251)	0.991*** (0.258)	1.102*** (0.256)	0.958*** (0.237)	0.967*** (0.267)
China * Governance (Index)	-	0.324 (0.250)	-	-	-
Resources (% of GDP)	0.0102 (0.0145)	0.0104 (0.0150)	0.0114 (0.0152)	0.00948 (0.0147)	0.0117 (0.0142)
China * Resources (% of GDP)	-	-	-0.0186* (0.00999)	-	-
GDP, PPP (Log)	1.048 (0.704)	1.117 (0.695)	1.044 (0.716)	1.128 (0.718)	1.199* (0.724)
China * GDP, PPP (Log)	-	-	-	-0.235** (0.101)	-
Political Alignment (Index)	-1.032* (0.621)	-0.954 (0.641)	-0.997 (0.663)	-0.969 (0.602)	-1.188** (0.599)
China * Political Alignment (Index)	-	-	-	-	2.412*** (0.482)
GDP per Capita, PPP (Log)	-1.234 (1.593)	-1.347 (1.597)	-1.239 (1.607)	-1.241 (1.554)	-1.623 (1.727)
Language	0.492 (0.811)	0.633 (0.815)	0.571 (0.749)	0.527 (0.826)	0.762 (0.725)
Colony	0.663 (0.562)	0.587 (0.571)	0.618 (0.506)	0.693 (0.581)	0.469 (0.439)
Distance (Log)	0.703 (0.860)	0.915 (0.873)	0.827 (0.826)	0.794 (0.812)	0.910 (0.771)
Observations	1,427	1,427	1,427	1,427	1,427
R-squared	0.416	0.427	0.421	0.417	0.439

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 3: Dependent Variable - African Countries' Exports

VARIABLES	(1)	(2)	(3)	(4)	(5)
Governance (Index)	0.146 (0.112)	0.118 (0.101)	0.154 (0.106)	0.148 (0.113)	0.184* (0.0981)
China * Governance (Index)	-	0.0943 (0.271)	-	-	-
Resources (% of GDP)	0.0267** (0.0135)	0.0268** (0.0136)	0.0236* (0.0139)	0.0267** (0.0135)	0.0257* (0.0132)
China * Resources (% of GDP)	-	-	0.0111 (0.00947)	-	-
GDP, PPP (Log)	0.387 (0.334)	0.387 (0.333)	0.377 (0.318)	0.367 (0.327)	0.404 (0.328)
China * GDP, PPP (Log)	-	-	-	0.0622 (0.0479)	-
Political Alignment (Index)	-0.546 (0.390)	-0.532 (0.349)	-0.609* (0.357)	-0.554 (0.390)	-0.780* (0.413)
China * Political Alignment (Index)	-	-	-	-	1.684*** (0.148)
GDP per Capita, PPP (Log)	-0.629* (0.329)	-0.627* (0.332)	-0.622** (0.312)	-0.633* (0.327)	-0.793** (0.399)
Language	0.145 (0.163)	0.216 (0.249)	-3.93e -05 (0.132)	0.181 (0.192)	0.288 (0.221)
Colony	0.938*** (0.203)	0.898*** (0.284)	1.010*** (0.212)	0.912*** (0.227)	0.846*** (0.195)
Distance (Log)	-1.092** (0.479)	-1.013* (0.572)	-1.216** (0.560)	-1.082** (0.476)	-0.907** (0.377)
Observations	3,459	3,459	3,459	3,459	3,459
R-squared	0.620	0.633	0.607	0.629	0.650

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 4: Dependent Variable - African Countries' Imports

VARIABLES	(1)	(2)	(3)	(4)	(5)
Governance (Index)	0.139* (0.0764)	0.208* (0.120)	0.139* (0.0766)	0.138* (0.0799)	0.154** (0.0763)
China * Governance (Index)	-	-0.186 (0.155)	-	-	-
Resources (% of GDP)	0.00665* (0.00368)	0.00663* (0.00369)	0.00615* (0.00356)	0.00691* (0.00366)	0.00635* (0.00361)
China * Resources (% of GDP)	-	-	0.00143 (0.00377)	-	-
GDP, PPP (Log)	0.540*** (0.169)	0.533*** (0.166)	0.539*** (0.169)	0.600*** (0.207)	0.544*** (0.171)
China * GDP, PPP (Log)	-	-	-	-0.135** (0.0667)	-
Political Alignment (Index)	-0.286* (0.174)	-0.321* (0.171)	-0.290* (0.174)	-0.233 (0.155)	-0.370 (0.250)
China * Political Alignment (Index)	-	-	-	-	0.451*** (0.134)
GDP per Capita, PPP (Log)	-0.230 (0.222)	-0.220 (0.212)	-0.229 (0.220)	-0.222 (0.222)	-0.267 (0.243)
Language	0.316 (0.219)	0.229 (0.239)	0.311 (0.223)	0.269 (0.263)	0.387* (0.222)
Colony	0.986*** (0.320)	1.031*** (0.326)	0.987*** (0.322)	1.064** (0.421)	0.944*** (0.326)
Distance (Log)	-0.329* (0.177)	-0.458** (0.198)	-0.339** (0.167)	-0.343** (0.145)	-0.276* (0.166)
Observations	3,459	3,459	3,459	3,459	3,459
R-squared	0.840	0.856	0.840	0.843	0.841

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 5: Dependent Variable - African Countries' FDI Inflows

VARIABLES	(1)	(2)	(3)	(4)
Corruption (Index)	0.511 (0.460)	-	-	-
China * Corruption (Index)	0.0363 (0.167)	-	-	-
Stability (Index)	-	0.185 (0.390)	-	-
China * Stability (Index)	-	0.211 (0.160)	-	-
Democracy (Index)	-	-	0.378 (0.557)	-
China * Democracy (Index)	-	-	0.606*** (0.230)	-
Human Rights (Index)	-	-	-	0.469 (0.345)
China * Human Rights (Index)	-	-	-	0.282 (0.261)
Political Alignment (Index)	-1.152* (0.607)	-1.019 (0.632)	-0.921 (0.662)	-1.039* (0.600)
Log (GDP, PPP)	1.171 (0.804)	1.295 (0.834)	1.276* (0.767)	1.234* (0.706)
Log (GDP per capita, PPP)	-1.446 (1.581)	-1.578 (1.544)	-1.128 (1.529)	-0.976 (1.433)
Resources (% of GDP)	0.0226 (0.0162)	0.0172 (0.0187)	0.0219 (0.0175)	0.00799 (0.0139)
Language	0.506 (0.804)	0.520 (0.791)	0.857 (0.728)	0.611 (0.830)
Colony	0.631 (0.551)	0.631 (0.554)	0.382 (0.509)	0.607 (0.574)
Distance (Log)	0.714 (0.876)	0.761 (0.840)	1.078 (0.785)	0.889 (0.911)
Observations	1,427	1,427	1,427	1,427
R-squared	0.408	0.407	0.435	0.430

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 6: Dependent Variable - African Countries' Exports

VARIABLES	(1)	(2)	(3)	(4)
Corruption (Index)	0.189* (0.114)	-	-	-
China * Corruption (Index)	-0.165 (0.234)	-	-	-
Stability (Index)	-	-0.0782 (0.121)	-	-
China * Stability (Index)	-	0.396 (0.270)	-	-
Democracy (Index)	-	-	0.0748 (0.184)	-
China * Democracy (Index)	-	-	-0.0562 (0.182)	-
Human Rights (Index)	-	-	-	-0.00153 (0.0834)
China * Human Rights (Index)	-	-	-	0.220 (0.192)
Political Alignment (Index)	-0.552 (0.393)	-0.540 (0.371)	-0.562 (0.366)	-0.488 (0.342)
Log (GDP, PPP)	0.375 (0.339)	0.386 (0.303)	0.399 (0.339)	0.403 (0.320)
Log (GDP per capita, PPP)	-0.631** (0.278)	-0.620 (0.472)	-0.553 (0.449)	-0.575* (0.334)
Resources (% of GDP)	0.0286** (0.0132)	0.0273** (0.0124)	0.0277** (0.0134)	0.0270** (0.0134)
Language	0.0383 (0.159)	0.199 (0.172)	0.0903 (0.201)	0.298 (0.232)
Colony	0.993*** (0.248)	0.893*** (0.184)	0.971*** (0.270)	0.855*** (0.249)
Distance (Log)	-1.183** (0.551)	-0.937* (0.500)	-1.142* (0.594)	-0.893* (0.501)
Observations	3,469	3,469	3,469	3,459
R-squared	0.603	0.674	0.615	0.644

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 7: Dependent Variable - African Countries' Imports

VARIABLES	(1)	(2)	(3)	(4)
Corruption (Index)	0.369* (0.207)	-	-	-
China * Corruption (Index)	-0.373** (0.150)	-	-	-
Stability (Index)	-	0.155* (0.0810)	-	-
China * Stability (Index)	-	-0.187* (0.104)	-	-
Democracy (Index)	-	-	-0.0389 (0.0586)	-
China * Democracy (Index)	-	-	0.0365 (0.131)	-
Human Rights (Index)	-	-	-	0.0646 (0.0574)
China * Human Rights (Index)	-	-	-	-0.116 (0.141)
Political Alignment (Index)	-0.256* (0.148)	-0.287 (0.185)	-0.271 (0.174)	-0.325* (0.180)
Log (GDP, PPP)	0.499*** (0.165)	0.520*** (0.164)	0.535*** (0.162)	0.536*** (0.162)
Log (GDP per capita, PPP)	-0.301 (0.230)	-0.254 (0.232)	-0.208 (0.232)	-0.191 (0.222)
Resources (% of GDP)	0.00827** (0.00356)	0.00668* (0.00364)	0.00761** (0.00362)	0.00723* (0.00386)
Language	0.236 (0.245)	0.292 (0.213)	0.340 (0.238)	0.257 (0.230)
Colony	1.017*** (0.348)	0.986*** (0.308)	0.970*** (0.316)	1.016*** (0.318)
Distance (Log)	-0.441*** (0.157)	-0.398** (0.184)	-0.301* (0.156)	-0.423** (0.204)
Observations	3,469	3,469	3,469	3,459
R-squared	0.871	0.855	0.838	0.849

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

APPENDIX D: PAPER RESULTS (OLS - EXCLUDING SOUTH AFRICA)

Table 2: Dependent Variable - African Countries' FDI Inflows

VARIABLES	(1)	(2)	(3)	(4)	(5)
Governance (Index)	-0.918* (0.337)	-0.899 (0.440)	-0.920* (0.334)	-0.918** (0.326)	-0.864* (0.351)
China * Governance (Index)	-	-0.0519 (0.379)	-	-	-
Resources (% of GDP)	0.0371 (0.0188)	0.0372 (0.0186)	0.0341 (0.0229)	0.0358 (0.0188)	0.0390 (0.0199)
China * Resources (% of GDP)	-	-	0.0116 (0.0363)	-	-
GDP, PPP (Log)	1.144 (0.543)	1.137* (0.520)	1.114* (0.502)	1.422** (0.493)	1.006 (0.598)
China * GDP, PPP (Log)	-	-	-	-0.453 (0.273)	-
Political Alignment (Index)	-0.896 (0.747)	-0.895 (0.751)	-0.907 (0.735)	-0.915 (0.758)	-2.697** (0.822)
China * Political Alignment (Index)	-	-	-	-	6.549** (1.464)
GDP per Capita, PPP (Log)	-2.900 (1.471)	-2.875* (1.311)	-2.882 (1.405)	-2.845 (1.446)	-3.502* (1.481)
Language	1.269 (1.034)	1.265 (1.018)	1.243 (1.006)	1.201 (1.057)	1.426 (0.989)
Colony	4.536*** (0.618)	4.536*** (0.622)	4.556*** (0.573)	4.469*** (0.593)	4.427*** (0.657)
Distance (Log)	-0.154 (1.763)	-0.168 (1.841)	-0.239 (1.984)	0.189 (1.728)	0.291 (1.528)
Observations	1,386	1,386	1,386	1,386	1,386
R-squared	0.629	0.630	0.630	0.631	0.636

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 3: Dependent Variable - African Countries' Exports

VARIABLES	(1)	(2)	(3)	(4)	(5)
Governance (Index)	0.0965 (0.0911)	0.332 (0.170)	0.0977 (0.0917)	0.0949 (0.0913)	0.100 (0.0847)
China * Governance (Index)	-	-1.173*** (0.110)	-	-	-
Resources (% of GDP)	0.0205 (0.0146)	0.0206 (0.0146)	0.00659 (0.0188)	0.0204 (0.0146)	0.0206 (0.0145)
China * Resources (% of GDP)	-	-	0.0700*** (0.00745)	-	-
GDP, PPP (Log)	0.456* (0.210)	0.455* (0.210)	0.457* (0.210)	0.321 (0.327)	0.453 (0.214)
China * GDP, PPP (Log)	-	-	-	0.670*** (0.0633)	-
Political Alignment (Index)	-0.226 (0.274)	-0.271 (0.287)	-0.244 (0.266)	-0.163 (0.228)	-0.268 (0.364)
China * Political Alignment (Index)	-	-	-	-	0.267 (0.557)
GDP per Capita, PPP (Log)	0.377 (0.229)	0.369 (0.229)	0.375 (0.224)	0.387 (0.227)	0.366 (0.256)
Language	0.467 (0.219)	0.419 (0.245)	0.358 (0.253)	0.466 (0.228)	0.469 (0.224)
Colony	1.205** (0.265)	1.217** (0.277)	1.224** (0.274)	1.200** (0.322)	1.204** (0.264)
Distance (Log)	-0.0358 (0.490)	-0.326 (0.380)	-0.544 (0.327)	-0.484 (0.349)	-0.0240 (0.520)
Observations	3,389	3,389	3,389	3,389	3,389
R-squared	0.663	0.680	0.680	0.678	0.663

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 4: Dependent Variable - African Countries' Imports

VARIABLES	(1)	(2)	(3)	(4)	(5)
Governance (Index)	0.0906 (0.0643)	0.0824 (0.0543)	0.0905 (0.0643)	0.0904 (0.0644)	0.0938 (0.0673)
China * Governance (Index)	-	0.0410 (0.0483)	-	-	-
Resources (% of GDP)	0.00675* (0.00262)	0.00675* (0.00262)	0.00739* (0.00299)	0.00674* (0.00262)	0.00685* (0.00273)
China * Resources (% of GDP)	-	-	-0.00320 (0.00310)	-	-
GDP, PPP (Log)	0.430*** (0.0929)	0.430*** (0.0930)	0.430*** (0.0930)	0.417*** (0.0885)	0.427*** (0.0901)
China * GDP, PPP (Log)	-	-	-	0.0653** (0.0216)	-
Political Alignment (Index)	-0.193 (0.191)	-0.191 (0.190)	-0.192 (0.191)	-0.187 (0.186)	-0.230 (0.251)
China * Political Alignment (Index)	-	-	-	-	0.238 (0.235)
GDP per Capita, PPP (Log)	-0.205 (0.190)	-0.205 (0.190)	-0.205 (0.190)	-0.204 (0.190)	-0.215 (0.191)
Language	0.577 (0.303)	0.578 (0.301)	0.582 (0.302)	0.577 (0.303)	0.579 (0.302)
Colony	0.816*** (0.149)	0.816*** (0.148)	0.815*** (0.148)	0.816*** (0.147)	0.815*** (0.149)
Distance (Log)	-0.619*** (0.0976)	-0.609*** (0.105)	-0.596*** (0.109)	-0.663*** (0.130)	-0.609*** (0.0907)
Observations	3,389	3,389	3,389	3,389	3,389
R-squared	0.867	0.868	0.868	0.868	0.868

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 5: Dependent Variable - African Countries' FDI Inflows

VARIABLES	(1)	(2)	(3)	(4)
Corruption (Index)	-1.864 (1.049)	-	-	-
China * Corruption (Index)	-0.531 (0.458)	-	-	-
Stability (Index)	-	0.561 (0.486)	-	-
China * Stability (Index)	-	-0.280 (0.470)	-	-
Democracy (Index)	-	-	-1.799* (0.693)	-
China * Democracy (Index)	-	-	0.534* (0.234)	-
Human Rights (Index)	-	-	-	-0.287 (0.200)
China * Human Rights (Index)	-	-	-	0.0923 (0.318)
Political Alignment (Index)	-0.798 (0.739)	-0.805 (0.773)	-0.798 (0.692)	-0.877 (0.741)
Log (GDP, PPP)	0.828 (0.432)	0.989* (0.462)	1.114 (0.584)	1.140 (0.549)
Log (GDP per capita, PPP)	-0.914 (1.773)	-3.465** (1.141)	-3.818** (1.253)	-3.345* (1.285)
Resources (% of GDP)	0.0208 (0.0245)	0.0433* (0.0201)	0.0401 (0.0191)	0.0413 (0.0199)
Language	1.145 (1.054)	1.311 (1.065)	1.298 (1.035)	1.295 (1.040)
Colony	4.602*** (0.677)	4.465*** (0.650)	4.520*** (0.611)	4.500*** (0.609)
Distance (Log)	-0.295 (1.845)	-0.169 (1.863)	0.0304 (1.671)	-0.117 (1.767)
Observations	1,386	1,386	1,386	1,386
R-squared	0.632	0.629	0.632	0.629

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 6: Dependent Variable - African Countries' Exports

VARIABLES	(1)	(2)	(3)	(4)
Corruption (Index)	0.318 (0.266)	-	-	-
China * Corruption (Index)	-1.219*** (0.182)	-	-	-
Stability (Index)	-	0.247 (0.126)	-	-
China * Stability (Index)	-	-0.756*** (0.148)	-	-
Democracy (Index)	-	-	0.434 (0.234)	-
China * Democracy (Index)	-	-	-1.064*** (0.0501)	-
Human Rights (Index)	-	-	-	0.0702 (0.114)
China * Human Rights (Index)	-	-	-	-0.900*** (0.0798)
Political Alignment (Index)	-0.192 (0.246)	-0.183 (0.254)	-0.345 (0.325)	-0.291 (0.321)
Log (GDP, PPP)	0.465* (0.216)	0.440 (0.208)	0.469* (0.215)	0.471* (0.212)
Log (GDP per capita, PPP)	0.353 (0.229)	0.346 (0.206)	0.448 (0.234)	0.393 (0.259)
Resources (% of GDP)	0.0206 (0.0150)	0.0207 (0.0149)	0.0202 (0.0146)	0.0200 (0.0146)
Language	0.362 (0.256)	0.425 (0.231)	0.422 (0.241)	0.474 (0.225)
Colony	1.216** (0.271)	1.207** (0.270)	1.212*** (0.262)	1.198** (0.282)
Distance (Log)	-0.295 (0.410)	-0.227 (0.413)	-0.350 (0.378)	-0.127 (0.440)
Observations	3,399	3,399	3,399	3,389
R-squared	0.680	0.670	0.677	0.674

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 7: Dependent Variable - African Countries' Imports

VARIABLES	(1)	(2)	(3)	(4)
Corruption (Index)	0.121 (0.0686)	-	-	-
China * Corruption (Index)	-0.0679 (0.0628)	-	-	-
Stability (Index)	-	0.0507* (0.0198)	-	-
China * Stability (Index)	-	-0.0111 (0.0472)	-	-
Democracy (Index)	-	-	0.0171 (0.0587)	-
China * Democracy (Index)	-	-	0.136** (0.0382)	-
Human Rights (Index)	-	-	-	0.00256 (0.0236)
China * Human Rights (Index)	-	-	-	0.0502 (0.0410)
Political Alignment (Index)	-0.188 (0.187)	-0.179 (0.189)	-0.167 (0.184)	-0.185 (0.191)
Log (GDP, PPP)	0.441*** (0.0922)	0.425** (0.0947)	0.437*** (0.0926)	0.435*** (0.0917)
Log (GDP per capita, PPP)	-0.269 (0.177)	-0.203 (0.181)	-0.152 (0.194)	-0.161 (0.193)
Resources (% of GDP)	0.00733* (0.00274)	0.00661** (0.00236)	0.00615* (0.00234)	0.00617* (0.00234)
Language	0.572 (0.307)	0.576 (0.303)	0.580 (0.299)	0.576 (0.303)
Colony	0.814*** (0.151)	0.814*** (0.149)	0.812*** (0.147)	0.817*** (0.149)
Distance (Log)	-0.642*** (0.110)	-0.633*** (0.109)	-0.594*** (0.0909)	-0.615*** (0.0943)
Observations	3,399	3,399	3,399	3,389
R-squared	0.867	0.867	0.868	0.867

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

APPENDIX E: REDUCED FORM PAPER RESULTS (PPML - EXCLUDING SOUTH AFRICA)

Table 2: Dependent Variable - African Countries' FDI Inflows

VARIABLES	(1)	(2)	(3)	(4)
Governance (Index)	1.083*** (0.195)	-	-	-
China * Governance (Index)	-0.158*** (0.0441)	-	-	-
Resources (% of GDP)	-	0.0157 (0.0168)	-	-
China * Resources (% of GDP)	-	-0.00552 (0.00411)	-	-
GDP, PPP (Log)	-	-	0.516* (0.282)	-
China * GDP, PPP (Log)	-	-	-0.374*** (0.0249)	-
Political Alignment (Index)	-	-	-	-1.055* (0.561)
China * Political Alignment (Index)	-	-	-	0.926*** (0.123)
Observations	1,433	1,391	1,429	1,430
R-squared	0.439	0.423	0.426	0.444

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 3: Dependent Variable - African Countries' Exports

VARIABLES	(1)	(2)	(3)	(4)
Governance (Index)	0.481** (0.189)	-	-	-
China * Governance (Index)	-0.528*** (0.172)	-	-	-
Resources (% of GDP)	-	0.0116 (0.0144)	-	-
China * Resources (% of GDP)	-	0.0222*** (0.00713)	-	-
GDP, PPP (Log)	-	-	0.221 (0.309)	-
China * GDP, PPP (Log)	-	-	-0.234*** (0.0302)	-
Political Alignment (Index)	-	-	-	-0.696*** (0.167)
China * Political Alignment (Index)	-	-	-	0.746** (0.317)
Observations	3,570	3,460	3,550	3,589
R-squared	0.562	0.591	0.572	0.583

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 4: Dependent Variable - African Countries' Imports

VARIABLES	(1)	(2)	(3)	(4)
Governance (Index)	0.139** (0.0582)	-	-	-
China * Governance (Index)	-0.0133 (0.0828)	-	-	-
Resources (% of GDP)	-	0.00248 (0.00369)	-	-
China * Resources (% of GDP)	-	-0.00296** (0.00117)	-	-
GDP, PPP (Log)	-	-	0.377*** (0.131)	-
China * GDP, PPP (Log)	-	-	-0.0883** (0.0403)	-
Political Alignment (Index)	-	-	-	-0.602** (0.260)
China * Political Alignment (Index)	-	-	-	0.380** (0.177)
Observations	3,570	3,460	3,550	3,589
R-squared	0.723	0.724	0.722	0.740

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 5: Dependent Variable - African Countries' FDI Inflows

VARIABLES	(1)	(2)	(3)	(4)
Corruption (Index)	0.777 (0.565)	-	-	-
China * Corruption (Index)	-0.389*** (0.0584)	-	-	-
Stability (Index)	-	0.799*** (0.255)	-	-
China * Stability (Index)	-	-0.236*** (0.0748)	-	-
Democracy (Index)	-	-	-0.331 (0.440)	-
China * Democracy (Index)	-	-	0.180 (0.140)	-
Human Rights (Index)	-	-	-	0.283* (0.146)
China * Human Rights (Index)	-	-	-	0.0202 (0.0508)
Observations	1,433	1,433	1,433	1,433
R-squared	0.423	0.451	0.423	0.425

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 6: Dependent Variable - African Countries' Exports

VARIABLES	(1)	(2)	(3)	(4)
Corruption (Index)	0.529 (0.408)	-	-	-
China * Corruption (Index)	-1.077*** (0.225)	-	-	-
Stability (Index)	-	0.0786 (0.0746)	-	-
China * Stability (Index)	-	0.244 (0.187)	-	-
Democracy (Index)	-	-	0.201 (0.192)	-
China * Democracy (Index)	-	-	-0.705*** (0.186)	-
Human Rights (Index)	-	-	-	0.0847 (0.0914)
China * Human Rights (Index)	-	-	-	0.00201 (0.101)
Observations	3,640	3,640	3,640	3,570
R-squared	0.610	0.601	0.623	0.561

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parantheses

Table 7: Dependent Variable - African Countries' Imports

VARIABLES	(1)	(2)	(3)	(4)
Corruption (Index)	0.427** (0.174)	-	-	-
China * Corruption (Index)	-0.410*** (0.129)	-	-	-
Stability (Index)	-	0.219*** (0.0629)	-	-
China * Stability (Index)	-	-0.143* (0.0824)	-	-
Democracy (Index)	-	-	-0.275** (0.117)	-
China * Democracy (Index)	-	-	0.345*** (0.0671)	-
Human Rights (Index)	-	-	-	-0.0728 (0.0467)
China * Human Rights (Index)	-	-	-	0.147** (0.0633)
Observations	3,640	3,640	3,640	3,570
R-squared	0.764	0.738	0.748	0.723

Notes:

*** p<0.01, ** p<0.05, * p<0.1

Models include home country, host country, and year fixed effects

Robust standard errors clustered by home country in parentheses

ENDNOTES

1. Peter J. Buckley, L. Jeremy Clegg, Adam R. Cross, Hinrich Voss, and Ping Zheng, "The determinants of Chinese outward Foreign Direct Investment," *Journal of International Business Studies* 38, (2007): 499-518.
2. "China in Africa: Investment or Exploitation," *al Jazeera*, May 4, 2014, <https://www.aljazeera.com/programmes/insidestory/2014/05/china-africa-investment-exploitation-201454154158396626.html>
3. Wes Martin, "Corruption Is China's Friend in Its Quest to Dominate Africa," *The National Interest*, Sept. 13, 2018, <https://nationalinterest.org/feature/corruption-chinas-friend-its-quest-dominate-africa-31242>
4. Shang-Jin Wei, "How Taxing is Corruption on International Business?" *Review of Economics and Statistics* 82, no. 1 (2000): 1-11.
5. Avik Chakrabarti, "The Determinants of Foreign Direct Investment: Sensitivity Analyses of Cross-Country Regressions," *Kyklos* 54, no. 1 (2001): 89-114.
6. Alberto Alesina and David Dollar, "Who Gives Foreign Aid to Whom and Why?" *Journal of Economic Growth* 5, no. 1 (2000): 33-63.
7. Johann Lambsdorff, "How Corruption Affects Persistent Capital Flows," *Economics of Governance* 4, no. 3 (2003): 229-244.
8. Tony Addison and Almas Heshmati, "The New Global Determinants of FDI Flows to Developing Countries: The Importance of ICT and Democratization," World Institute for Development Economics Research Discussion Paper, no. 45 (2003).
9. Christian Daude and Ernesto Stein, "Institutions, Integration and the Location of Foreign Direct Investment," in *New Horizons of Foreign Direct Investment in the 21st Century*, OECD, (2001).
10. Katariina Hakkala, Pehr-Johan Norbäck, and Helena Svaleryd, "Asymmetric Effects of Corruption on FDI: Evidence from Swedish Multinational Firms," *The Review of Economics and Statistics* 90, no. 4 (2008): 627-642.
11. Bruce A. Blonigen and Jeremy Piger, "Determinants of Foreign Direct Investment," National Bureau of Economic Research Working Paper no. 16704 (2011).
12. Mohsin Habib and Leon Zurawicki, "Country-Level Investments and the Effect of Corruption: Some Empirical Evidence," *International Business Review* 10, no. 6 (2001): 687-700.
13. Joshua Aizenman and Mark M. Spiegel, "Institutional Efficiency, Monitoring Costs and the Investment Share of FDI," *Review of International Economics* 14, no. 4 (2006): 683-697.
14. Steven Globerman and Daniel Shapiro, "Global Foreign Direct Investment Flows: The Role of Governance Infrastructure," *World Development* 30, no. 11 (2002): 1899-1919.
15. Mohsin Habib and Leon Zurawicki, "Corruption and Foreign Direct Investment," *Journal of International Business Studies* 33, no. 2 (2002): 291-307.
16. Hannes Winner and Peter Egger, "How Corruption Influences Foreign Direct Investment: A Panel Data Study," *Economic Development and Cultural Change* 54, no. 2 (2006): 459-486.
17. Alvaro Cuervo-Cazurra, "Who Cares About Corruption?" *Journal of International Business Studies* 37, no. 6 (2006): 807-822.
18. Jacques Morisset, "Foreign Direct Investment in Africa- Policies also Matter," *Transnational Corporation* 9, no. 2 (2000): 107-125.
19. Elizabeth Asiedu, "Foreign Direct Investment in Africa: The Role of Natural Resources, Market Size, Government Policy, Institutions and Political Instability," *World Economy* 29, no. 1 (2006): 63-77.
20. John C. Anyanwu, "Why Does Foreign Direct Investment Go Where It Goes? New Evidence From African Countries," *Annals of Economics and Finance* 13, no. 2 (2012): 425-462.
21. Buckley, "The determinants of Chinese outward Foreign Direct Investment."
22. Ivar Kolstad and Arne Wiig, "What Determines Chinese Outward FDI?" CHR Michelsen Institute Working Paper no. 3 (2009).

23. Bala Ramasamy, Matthew Yeung, and Sylvie Laforet, "China's Outward Foreign Direct Investment: Location Choice and Firm Ownership," *Journal of World Business* 47, no.1 (2012): 17-25.
24. Yin-Wong Cheung and Xingwang Qian, "Empirics of China's Outward Investments," *Pacific Economic Review* 14, no. 3 (2009): 312-341.
25. Diego Quer, Enrique Claver, and Laura Rienda, "Political Risk, Cultural Distance, and Outward Foreign Direct Investment: Empirical Evidence from Large Chinese Firms," *Asia Pacific Journal of Management* 29, no. 4 (2011): 1089-1104.
26. Ivar Kolstad and Arne Wiig, "Better the Devil you Know? Chinese Foreign Direct Investment in Africa," *Journal of African Business* 12, no. 1 (2011): 31-50.
27. Yin-Wong Cheung, Jakob de Haan, Xingwang Qian, and Shu Yu, "China's Outward Direct Investment in Africa," Hong Kong Institute for Monetary Research Working Paper no. 13 (2011).
28. Wenjie Chen, David Dollar, and Heiwai Tang, "Why is China investing in Africa? Evidence from the Firm Level," Brookings Institution Working Paper (2015).
29. Anne-Lise Breivik, "Determinants of Chinese FDI in Africa: An Econometric Analysis," University of Bergen Master's Thesis (2014), <http://bora.uib.no/handle/1956/8000>.
30. Andrew G. Ross, "An Empirical Analysis of Chinese Outward Foreign Direct Investment in Africa," *Journal of Chinese Economic and Foreign Trade Studies* 8, no. 1 (2015): 4-19.
31. Leon Zurawicki and Mohsin Habib, "Corruption and Foreign Direct Investment: What Have We Learned?" *International Business & Economics Research Journal* 9, no. 7 (2010): 1-10.
32. Johann Lambsdorff, "An Empirical Investigation of Bribery in International Trade," *European Journal of Development Research* 11, no. 1 (1998): 40-59.
33. James E. Anderson and Douglas Marcouiller, "Insecurity and the Pattern of Trade: An Empirical Investigation," *Review of Economics and Statistics* 84, no. 2 (2002): 342-352.
34. Henri L.F. de Groot, Gert-Jan Linders, Piet Rietveld, and Uma Subramanian, "The Institutional Determinants of Bilateral Trade Patterns," Tinbergen Institute Discussion Paper no. 044/3 (2003).
35. *Ibid.*
36. Gert-Jan Linders, Arjen Slangen, Henri L.F. de Groot, and Sjoerd Beugelsdijk, "Cultural and Institutional Determinants of Bilateral Trade Flows," Tinbergen Institute Discussion Paper no. 074/3 (2005).
37. Paul De Grauwe, Romain Houssa, and Giulia Piccillo, "African Trade Dynamics: Is China a Different Trading Partner?" *Journal of Chinese Economic and Business Studies* 10, no. 1 (2012): 15-45.
38. Mohsin Habib and Leon Zurawicki, "Corruption and Its Effect on Trade and FDI," Transparency International Global Corruption Report 2005 (2005): 305-307.
39. *Ibid.*
40. Kolstad and Wiig, "Better the Devil you Know?"; Chen, Dollar, and Tang, "Why is China investing in Africa?"
41. De Grauwe et al., "African Trade Dynamics."
42. Habib and Zurawicki, "Corruption and Its Effect on Trade and FDI."
43. *Ibid.*
44. South Africa is excluded from the models presented in the main text—in line with some of Kolstad and Wiig's (2011) models—because it accounts for a huge share of Africa's commercial activity and has vastly better governance levels than the average African country. More specifically, it receives more than 29 percent of Africa's FDI inflows and accounts for more than 21 percent of its total trade volume. Furthermore, South Africa's aggregate governance score is almost 1.5 standard deviations higher than the African average. As such, the inclusion of South Africa in the models could skew the paper's results. See Appendix C for the PPML model results that include South Africa.

45. France, Germany, the UK, and the US are used to reflect western countries because they are the west's largest economies and account for most of the west's economic engagement with Africa. Including more western countries in the models would have resulted in a dramatic increase in the number of zeros in the data, which may have reduced the efficiency of the OLS models. Using aggregate OECD figures in the models could have been a valid alternative but was decided against because many OECD are not in the west.
46. Joao Santos Silva and Silvana Tenreyro, "The Log of Gravity," *Review of Economics and Statistics* 88, (2006): 641–58.
47. As the logarithm of zero is undefined, adding one to the values of trade and FDI in the OLS models allows the dataset to retain the zero values. Therefore, by adding one to the yearly values of trade and FDI, the OLS models can still account for the country-years that have a value of zero. That said, doing so can reduce the models' efficiency, and can lead to biased estimates due to the omission of data or mistaken reporting of data as zeros; Estrella Gomez-Herrera, "Comparing Alternative Methods to Estimate Gravity Models of Bilateral Trade," *Empirical Economics* 44, no. 2 (2013): 1087–1111.
48. Sergey Mityakov, Heiwai Tang, and Kevin K. Tsui, "International Politics and Import Diversification," *Journal of Law and Economics* 56, no. 4 (2013): 1091–1121.
49. *Ibid.*
50. The OLS models are presented in Appendix D.
51. See Appendix B for a discussion of the limitations of this data; China Africa Research Initiative. (2019). Data: Chinese Investment in Africa. Retrieved from: <http://www.sais-cari.org/chinese-investment-in-africa>; United Nations Conference on Trade and Development, "World Investment Report 2014: Annex Tables," (2016) Retrieved from: [http://unctad.org/en/pages/DIAE/World Investment Report/ Annex-Tables.aspx](http://unctad.org/en/pages/DIAE/World%20Investment%20Report/Annex-Tables.aspx).
52. Daniel Kaufmann, Aart Kraay, and Pablo Zoido-Lobaton, "Governance Matters II: Updated Indicators for 2000–01," World Bank Working Paper no. 2772 (2002).
53. See Appendix A for a discussion of the governance indicators used and Appendix E for reduced form models.
54. Wooldridge's (2002) serial autocorrelation test for panel data models was run for each model. The null hypothesis of no serial autocorrelation was rejected in many of the models. Therefore, the dependent variable was lagged in all the models of the paper; A Variance Inflation Factor (VIF) test was run for this specification of the model (in OLS) and the highest factor among the predictor variables was 2.29 (for language). Therefore, multicollinearity was not deemed to be an issue. Reduced form equation results are presented in Appendix E.
55. The implied response to changes in governance quality is computed as $e(\beta) - 1$
56. Habib and Zurawicki, "Corruption and Its Effect on Trade and FDI."
57. The implied Chinese response to changes in governance quality is computed as: $e(\beta_{\text{Governance}} - \beta_{\text{Governance}} * \text{China}) - 1$
58. Chen, Dollar, and Tang, "Why is China investing in Africa?"
59. Habib and Zurawicki, "Corruption and Its Effect on Trade and FDI."
60. "Balance of Payments Manual: Fifth Edition," (1993) International Monetary Fund.
61. "Worldwide Governance Indicators," World Bank (2016), Retrieved from: <http://info.worldbank.org/governance/wgi/index.aspx>.
62. World Bank (2016). *World Integrated Trade Solutions*. Retrieved from: <http://wits.worldbank.org/CountryProfile/en/Country/CHN/Year/LTST/Summary>
63. Center for Systemic Peace, "Polity IV Project," (2016) Retrieved from <http://www.systemicpeace.org/polity/polity4.htm>
64. Freedom House, "Freedom in the World Reports," (2016), Retrieved from https://freedomhouse.org/sites/default/files/FH_FITW_Report_2016.pdf
65. David L. Cingranelli, David L. Richards, and K. Chad Klay, "CIRI Human Rights Data Project," (2016), Retrieved from <http://www.humanrightsdata.com>. David L. Cingranelli, David L. Richards, and K. Chad Klay from the University of Birmingham, the University of Connecticut, and the University of Georgia, respectively. Their dataset—CIRI for short.

66. China Africa Research Initiative. (2019). *Data: Chinese Investment in Africa*. Retrieved from: <http://www.sais-cari.org/chinese-investment-in-africa>
67. Hong Kong Trade Development Council, "China Takes Global Number Two Outward FDI Slot: Hong Kong Remains the Preferred Service Platform," (2016) Retrieved from <http://hkmb.hktdc.com/en/1XoA8o4W/hktdc-research/China-Takes-Global-Number-Two-Outward-FDI-Slot-Hong-Kong-Remains-the-Preferred-Service-Platform>.
68. *Ibid.*

AUTHOR BIOS

DAVID G. LANDRY:

Is a researcher and consultant working on issues of economic development and good governance. He received his PhD in international development from the Johns Hopkins University School of Advanced International Studies. He also holds an MSc in global governance and diplomacy from the University of Oxford and a BA in international development from McGill University. David has been published in the Financial Times, the Washington Post, the Globe and Mail, Foreign Affairs, and the Diplomat. He has also published multiple papers on Chinese economic engagement in Africa, including for the China-Africa Research Initiative.

ALSO FROM SAIS-CARI

POLICY BRIEFS:

Disasters While Digging: Rates of Violence Against Mine Workers in Democratic Republic of Congo, South Africa, and Zambia

Policy Brief 37/2019, Christian Freymeyer

Do China-Financed Dams in Sub-Saharan Africa Improve the Region's Social Welfare? A Case Study of the Impacts of Ghana's Bui Dam

Policy Brief 33/2019, Keyi Tang and Yingjiao Shen

Chinese Manufacturing Investments and Knowledge Transfer: A Report from Ethiopia

Policy Brief 32/2019, Tang Xiaoyang

WORKING PAPERS:

The Blind Spot: International Mining in Angoche and Larde, Mozambique

Working Paper 28/2019, Sergio Chichava, Shubo Li, and Michael G. Sambo

Wealth from Waste? Chinese Investments and Technology Transfer in the Tanzanian Plastic Recycling Industry

Working Paper 27/2019, Ying Xia

Lessons from East Asia: Comparing Ethiopia and Vietnam's Early-Stage Special Economic Zone Development

Working Paper 26/2019, Keyi Tang

View the complete list of SAIS-CARI publications: www.sais-cari.org/publications



ABOUT THE SAIS CHINA-AFRICA RESEARCH INITIATIVE

Launched in 2014, the SAIS China-Africa Research Initiative (SAIS-CARI) is based at the Johns Hopkins University School of Advanced International Studies in Washington D.C. SAIS-CARI was set up to promote evidence-based understanding of the relations between China and African countries through high quality data collection, field research, conferences, and collaboration. Our mission is to promote research, conduct evidence-based analysis, foster collaboration, and train future leaders to better understand the economic and political dimensions of China- Africa relations and their implications for human security and global development. Please visit the [SAIS-CARI website](http://www.sais-cari.org) for more information on our work.

SAIS China-Africa Research Initiative
1717 Massachusetts Avenue NW, Suite 733
Washington, DC 20036
www.sais-cari.org
Email: sais-cari@jhu.edu



Support for this working paper series was provided by a grant from Carnegie Corporation of New York. Carnegie Corporation of New York is a philanthropic foundation created by Andrew Carnegie in 1911 to do “real and permanent good in this world.”

