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Assessing the Influence of Institutional Quality on Chinese OFDI Location Selection: An Analysis of African and Asian Countries

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Abstract

This study explores the role of institutional quality as an important factor in facilitating Chinese foreign direct investment (OFDI) into African and Asian countries. We analyze the different market- and resource-seeking incentives of Chinese firms and measure the impact of institutions on their investment decisions. Our data set covers 72 countries over eight years, which we analyze using the Generalized Method of Moments. Our results show that institutional quality, particularly in terms of government effectiveness, regulatory quality, and the rule of law, plays a significant role in both attracting and deterring market-seeking investments while having a less pronounced effect on resource-seeking investments. Our findings are important for understanding the dynamics of Chinese OFDI in Africa and Asia and its implications for long-term economic growth.

Keywords: Chinese OFDI, Africa-Asia, institutions, markets-seeking, resource-seeking

1. Introduction

Chinese outward foreign direct investment (OFDI) is becoming more important in global FDI, spurred by the "Going Out" plan put in place in 2000 to release its surplus capacity and increase international cooperation (Yu, Qian, & Liu 2019). There are two results from this: It created a policy direction, engaged investors about domestic imperatives, and encouraged local firms to expand internationally. Since then, Chinese OFDI has grown significantly, although Africa and Asia continue to account for most of its global dispersion. Chinese firms probably found it simpler to invest in Africa and Asia than to take on well-established enterprises in the industrialized world. Investing in Africa and Asia was also more in line with China's political goals and its growing need for raw resources simultaneously.

Encouraged by domestic policy and capital demand overseas, China has become the second-largest source of foreign investment in the world behind the United States, which received 136.9 billion USD in outbound foreign direct investment in 2019. This amount represents 10.4% of the global total. The same year, Chinese investment in Asia totaled 110.84 billion dollars, or 80.9 percent, with member countries of the Association of Southeast Asian Nations (ASEAN) receiving 13.02 billion, or 11.8 percent, of that total (MOFCOM, 2021).

The number of investments made by China in Africa between 2003 and 2019 increased dramatically, from $ 75 million in 2003 to over $ 2.7 billion in 2019, indicating a roughly 70% rise in the number of investments made in Africa (Chinese African Research Initiative, 2020). China announced $60 billion in investment collaboration with Africa in 2018 alone under the heading of financial assistance. This demonstrates a considerable improvement in collaboration (The memorandum of understanding between China and Africa). Previous empirical studies on the factors that influence Chinese OFDI generally have produced contrasting or even contradicting results. This is particularly true when it comes to factors that are unique to the host country, such as the wealth of its natural resources and the quality of its institutions. High-quality institutions are thought to help investors overcome their fears and increase their confidence in doing business, based on theoretical literature and empirical studies on OFDI location choice (Shah, Ahmad, & Ahmed, 2016). However, despite having inadequate institutional quality, studies reveal that China's investors are especially drawn to countries with a wealth of natural resources (Ramasamy, Yeung, & Laforet, 2012). These findings showed a significant relationship between Chinese OFDI and the natural resources available throughout countries with weak political institutions.

This article aims to investigate whether institutional quality, natural resources and market size in the host country

affect outward foreign direct investment and how this impact connects to the purpose of the investment. Market size will be included in our research; in addition to natural resources, it is another significant element for African and Asia countries to attract OFDI (Asiedu, E. 2006). Access to a large market (GDP) gives foreign investors a chance to take advantage of scale economies and the effective use of resources (Miniesy & Elish, 2017). Given this setting, we will investigate the factors influencing China's investment in Africa and Asia, particularly its choice of investment destinations.

Our contributions to the existing literature take various forms. We restrict our empirical analysis to emerging countries of Africa and Asia since these two areas get 66 percent of Chinese OFDI. African and Asian institutions are fragile and dependent on exports of natural resources, rendering them vulnerable to abuse. Therefore, it is critical to determine if Chinese OFDI invests purposely in countries that have weak institutions and vast resources. Few academics have explored the relationship between institutions' roles and the motive for investment.

In this article, we shall examine this in further depth. We are especially interested in whether these institutions' importance differs depending on the kind of foreign direct investment (market-seeking versus resource-seeking) and the type of country. China views Africa and Asia as meaningful in terms of expanding political support and contributing to their "Peaceful Economic Development" program. China paid particular attention to the two areas through its current Belt and Road Initiative. They are given a policy tool for the efficient use of Chinese OFDI by understanding the purpose and motivations of Chinese OFDI in Africa and Asia.

This research utilizes fresh data from 2010 to 2018 that doesn't have zero values, which earlier research didn't employ since most previous studies relied on outdated data that had several zero values, making the model less accurate.

This study is structured as follows. Section 2 presents a "Theoretical Background" that describes the theoretical and empirical literature, and Section 3 provides the following research hypotheses. Section 4 "Data and methods" presents the study's dataset and Econometric Methods. Section 5 "Results and Discussions" explains the results and discussions of the study. After that, the paper ends with a conclusion.

2. Theoretical and Hypotheses Development

We are especially interested in determining if institutions' role differs based on whether natural resources or markets attract outward foreign direct investment to Africa and Asia. We adopt an eclectic framework to provide the context for our inquiry. However, we will start by evaluating the empirical studies in this area. In addition, we will establish hypotheses to assess the influence of institutions on Chinese foreign direct investment flows into Africa and Asia.

2.1 Natural Resource-Seeking

Obtaining access to natural resources is a primary motivation for Chinese outward foreign direct investment. A rising economy like China must get basic resources or restricted inputs (Urdinez, Masiero, & Ogasavara, 2014). The Chinese government has undertaken large FDI investments in a variety of other countries in order to ensure these resources (Zhan, 1995). On the one hand, (Kamal et al., 2019) demonstrate that Chinese OFDI has long been seen as resource-seeking and even rent-seeking, and its location choices are significantly correlated with the natural resource endowments of the recipient country. In contrast, several studies have shown that Chinese FDI and resource availability are insignificant or even detrimental (Shan et al., 2018). Different definitions of resource intensity in research, such as resource production (Cheung et al., 2012), resource rent (Ross, 2015), and resource export (Cheung & Qian, 2009) are perhaps to be endogenous to OFDI in certain instances. We would anticipate the production measure would be endogenous to OFDI if the level of investment in certain resources directly affects the extraction of those resources. Numerous studies support the resource-seeking motivation for China's foreign direct investment, notably in the developing countries in Africa, the MENA, and Asia (Gold et al., 2020; Gold, 2022). This essay makes the following hypothesis in the context of China's aim to safeguard natural resources.

Hypothesis (1): Chinese OFDI is attracted to countries with large natural resource reserves.

2.2 Market-Seeking

Market-seeking is one of the key objectives of MNEs, and it is especially vulnerable to changes in the host country's investment environment (Chakrabarti, 2001). The empirical study (Shan et al., 2018; Gold et al., 2020) supports and illustrates the market-seeking reasoning for China's OFDI. A big market size (GDP) gives foreign investors prospects for effectively utilizing resources and accumulating economies of scale (Miniesy & Elish, 2017). The host country's market size impacts FDI location decisions, suggesting a positive connection with FDI

inflows. An offensive approach to market search OFDI targets new markets via horizontal growth as well as maintains a position in the market via economic interactions (Buckley et al., 2007). Alternatively, a foreign country may impose limitations such as taxes, import restrictions, superior service offerings, and uniqueness by putting a foreign entity near its local clients. Offensive reasons support China's OFDIs (Deng, 2004).

Consequently, growth in the host country's market size makes the country more attractive as a possible recipient of OFDI. The markets of Africa and Asia vary in size and sector, with Chinese investors primarily interested in the infrastructural sectors of these countries' economies. Over the last decades, China has gathered vast competence in domestic infrastructure construction. Infrastructure-related considerations are the topic of additional discussion. (Soremekun & Malgwi, 2012) found that the high penetration and use of mobile phones in the data set of developing countries can explain the positive and statistically significant relationship between infrastructure development (mobile users) and FDI flows.

Nonetheless, (Wadhwa & Sudhakara, 2011) used internet service as a proxy for infrastructure and found that foreign direct investment negatively correlated with infrastructure. Foreign direct investment (FDI) is more likely to be attracted to countries with big consumer markets when it is market-driven. In this context, market size is defined by the host country's GDP, and it is predicted that FDI inflows would positively correlate to market size.

To establish if the infrastructure sector has a sectoral influence, we need to determine whether it is considered a production input or a market. When a country with a poor infrastructure stock, we may expect it to draw more OFDI (so the variable has such a negative coefficient). Still, the second assumption predicts that a country with superior infrastructure will attract more OFDI (the variable will have a positive coefficient). The importance of market pursuit necessitates the following hypotheses:

Hypothesis (2A): The host country with a larger domestic market attracts foreign direct investment.

Hypothesis (2B): Chinese OFDI tends to be attracted to countries with infrastructure facilities in African and Asian countries

2.3 Institutional Quality

Both from a resource-seeking and a market-seeking approach, the institutions must play a crucial role in promoting FDI (Naud é & Krugell, 2007). According to the literature (Cuervo-Cazurra & Genc, 2008; Kamal et al., 2020), weak institutional frameworks may attract investment. At the same time, others have investigated the impact of risk and corruption in luring investment (Asiedu, 2002; Bouchoucha & Benammou, 2020) and looked at the relationship between institutional quality and FDI in African countries. They found a strong correlation between FDI attractiveness with voice and accountability, regulatory quality, government effectiveness, and control of corruption. However, fewer studies have examined if the impacts of these variables vary when FDI is motivated by resources (Kolstad & Wiig, 2011; Kolstad, 2012) instead of markets. Both (Buckley et al., 2007; Cuervo-Cazurra & Genc, 2008) use MNEs from developing countries to invest in other emerging economies. They exclude the impacts of the host country's institutional quality on the size of its market and the accessibility of its natural resources.

According to the Refs (Kolstad & Wiig, 2011; Kolstad, 2012), inadequate institutional frameworks in African economies with abundant natural resources attract Chinese FDI. However, they contend that weak institutional frameworks draw FDI from other nations as well; therefore, they do not only draw Chinese MNEs.

We are unable to remark on the influence of institutions on market-seeking FDI since recent work (Muhammad & Khan, 2022; Kamal et al., 2020) has not considered the host country's institutional background. However, we will propose hypotheses that may be evaluated using our data.

In addition, we assess whether institutional quality changes across countries with small and big markets and between resource-rich and resource-poor countries. Consequently, this part of institutional quality provides three sets of hypotheses:

Hypothesis (3A): Weak institutional factors attract Chinese OFDI.

Hypothesis (3B): Chinese OFDI is attracted to countries with larger domestic markets and weak institutional factors.

3. Data and Methods

3.1 Data and Variables Descriptions.

This study looks at how institutions in Africa and Asia may affect where Chinese OFDI chooses to invest. To

develop our model, we utilized data from the Ministry of Commerce's "Statistical Bulletin of China's Outward Foreign Direct Investment" (MOFCOM, 2021) (Appendix C). Our research includes 72 countries as hosts from 2010 to 2018. According to (Cai, 1999), China will see rapid economic growth in the coming years, leading to the establishment of enterprises that will need a lot of raw materials. Similar claims are made by (Buckley et al., 2008) and (Cai, 1999) that China's natural resource and energy availability is inadequate to meet domestic demands.

Chinese enterprises are employing OFDI to access natural resources such as energy, petroleum, and minerals to enable fast economic growth (Hobdari et al., 2010). Consequently, we employ natural resources such as fuel resources export (measured as a percentage of merchandise), Ore and metal resources export (calculated as a percentage of merchandise) of host countries in Africa and Asia to determine Chinese OFDI.

We also collected data on institutions using the Worldwide Governance Indicators (WGI, 2020). Six indicators include the rule of law, corruption control, voice and accountability, government effectiveness, political stability, and regulatory quality (Kaufmann, Kraay, & Mastruzzi, 2011). All such markers have two functions. Initially, our models use the INSI (Institutional composite index). Then, in our model, we included each indicator independently to examine whether their impacts on FDI differed. All six criteria range from -2.5 (week governance) to +2.5 (week governance) (strong governance).

Following the existing research (Shan et al., 2018), we use each host country's GDP to measure its market size for market-seeking FDI. The data is obtained from the (World Bank 2021)World Development Indicators. Along with the typical market-seeking variable, we use a sector-specific variable (Infrastructure) to proxy market-seeking in a specific industry. As a measure of infrastructure, we use the number of internet users per 100 people following (Wood & Harrison, 2015). Furthermore, there is a greater demand for products and services in a large market (Buckley et al., 2010). Bilateral trade can facilitate foreign investment, which is also a powerful determinant. We rely on bilateral trade as the control variable.

3.2 Estimation Method

This study used a panel data framework for its analysis since it has been highlighted that using panel data has various advantages over using time series or cross-section data (Hsiao, 2003). The fundamental panel model used in this study is displayed here:

$$lnOFDI_{it} = \alpha + \beta Y_{it-1} + \phi X_{it} + \delta Z_{it} + \varepsilon_{it}$$

Our dependent variable, $lnOFDI_{it}$ is the natural logarithm of China OFDI in host countries (i) located in Africa and Asia in a given year (t), Y_{it-1} is the one-year-lagged dependent variable, X_{it} is the vector of independent variables (Ln GDP, LnINFRA, LnFUE, LnOME, and LnINSI (see Appendix C). Z_{it} is the control variable, α, β, ϕ, and δ are parameters, and ε indicates the error term.

As an independent variable, we use the one-year lagged dependent variable (Mistura & Roulet, 2019) to account for the pathway dependence (Amighini, Mcmillan, & Sanfilippo, 2017) and the trend of FDI. Therefore, incorporating the lagged dependent variable into an ordinary least squares regression would provide selection bias results, including coefficients with erroneous signs (Driffield, Pereira, & Temouri, 2019). In order to correct for such bias, we predict our model using the system GMM estimator, which is appropriate for dynamic panel data with a small T and a big N (Roodman, 2009).

We may employ instruments from inside our model to adjust for any endogeneity, which is an advantage of the system GMM estimator (Roodman, 2009). In contrast, the traditional instrumental variable method requires the selection of appropriate external instruments (Amighini, Mcmillan, & Sanfilippo, 2017). The difference GMM and system GMM are the two titles under which the panel GMM is reported.

Our research chose the latter primarily because it has a few desirable qualities. The two-step system GMM exhibits fewer corrected standard errors than the two-step difference GMM, as emphasized by (Windmeijer, 2005), which increases the accuracy of its estimates. Due to more "informative" instruments, the downward bias is less likely to occur in the two-step system GMM compared to the two-step difference GMM. Consequently, the use of system GMM is contingent upon two scenarios: firstly, the reliability among these extra instruments, and second, the lack of second-order autocorrelation.

The Refs of (Arellano & Bond, 1991), and (Arellano & Bover, 1995) present the Sargan test of over-identification and the Arellano-Bond (AR2) autocorrelation to evaluate these two scenarios. Arellano-Bond (AR2) autocorrelation, which checks for the lack of second-order autocorrelation, and the Sargan test of over-identification, which evaluates the reliability of the instruments.

4. Modelling Results and Discussions

Our models are estimated utilizing the System GMM approach in the wake of the tests we performed previously. A summary of the findings is shown in Tables 2 and 3. We look at the regression from our baseline (Model I), which includes all variables except for the institutions in question. (Model II) consists of the institutional variable as an additional variable. There are various other iterations of this model, some of which include the interaction terms between institutions and infrastructure (Model III), GDP (Model IV), fuel resource (Model V), and ore and metal resources (Model VI) are included in the following columns of Table 1. More specifically, we split our sample into major and small markets [1], countries with abundant natural resources and countries with limited natural resources [2]. Due to this, we can investigate whether the effect of institutions varies among different samples. These findings are presented in Table 2. We shall explain our results in the following.

According to our findings, the coefficient of the fuel resources variable in Table 1 is significant, leading us to infer that fuel resources attract Chinese OFDI into Africa and Asia. We observe in Table 2 that the presence of fuel resource reserves leads to a significant rise in foreign direct investment in both Models IX and X, that is, in the resource-rich countries sub-sample as well as in the resource-poor countries sub-sample.

As a result, the level of fuel resources contributes to a rise in the amount of foreign direct investment. Therefore, based on our findings, we can infer that fuel resources are a big draw for Chinese enterprises expanding in Africa and Asia. Concerning the second natural resource variable (Ore and metal resources), we observe that African and Asia host countries do not draw Chinese outward foreign direct investment (Table 1).

Neither of the six models in Table 1's variable has any significance. Moreover, our sub-sample findings in Table 2 show that the coefficient of ore and metal resources is insignificant in four sub-samples, indicating no significant variability in the influence of these resources on OFDI across samples. Consequently, our findings for such variables may not completely enable us to accept or reject Hypothesis (1). The following factors influence whether resources in Africa and Asia attract or deter Chinese OFDI: fuel resources have an influence, although ore and metal resources may not be attractive. These results back with previous research on Chinese resource-seeking FDI (Cheung et al., 2012; Cheung & Qian, 2009).

Regarding hypothesis (2B), the result supports the market-seeking FDI hypothesis since the GDP coefficient is positive and statistically significant in four models (Table 1). This validates previous findings (Kolstad & Wiig, 2011; Shan et al., 2018). Turning to our analysis of the sub-samples in (Table 2), we find that the GDP coefficient is not significant in limited-resource countries (Model X, b = 0.032), but it is significant and negative in the low-income sub-sample (Model VIII, b= -0,248 p= 0.05).

Table 1. Results of system GMM, complete models

Variables	Model I	Model II	Model III	Model IV	Model V	Model VI
L.lnOFDI	0.833***	0.684***	0.664***	0.663***	0.705***	0.679***
	(0.143)	(0.171)	(0.169)	(0.156)	(0.254)	(0.158)
ln_GDP	0.116	0.204*	0.204**	0.219**	0.19	0.241**
	(0.103)	(0.104)	(0.097)	(0.092)	(0.161)	(0.090)
LnINFRA	-0.128*	-0.261***	-0.296***	-0.255***	-0.115	-0.251***
	(0.074)	(0.89)	(0.093)	(0.089)	(0.086)	(0.087)
Ln FUE	0.043*	0.031*	0.038	0.031*	-0.134**	0.031
	(0.021)	(0.017)	(0.018)	(0.018)	(0.057)	(0.019)
LnOME	-0.03	-0.117	-0.121	-0.115	-0.241	-0.093
	(0.114)	(0.078)	(0.074)	(0.79)	(0.155)	(0.092)
Ln TROP	0.056	0.059	0.055	0.062	0.110*	0.057
	(0.047)	(0.048)	(0.043)	(0.49)	(0.057)	(0.052)
INSI		0.226*	0.627*	-0.095	0.268*	0.23*
		(0.116)	(0.351)	(1.382)	(0.150)	(0.132)
INSI *INFRA			-0.11			
			(0.089)			
INSI* lnGDP				0.013		
				(0.055)		
INSI * Ln FUE					-0.092**	
					(0.039)	
INSI *LnOME						0.084
						(0.07)
Constant	-0.73	-0.853	-0.277	-0.86	-1.074	-1.806
	(1.08)	(1.155)	(1.077)	(1.043)	(1.805)	(1.202)

No. of Obs.	576	576	576	576	576	576
Time Dumies	yes	yes	yes	yes	yes	yes
Group count	72	72	72	72	72	72
Number of Instruments	25	28	30	30	26	30
AR(1)	0.015	0.013	0.009	0.007	0.037	0.006
AR(2)	0.227	0.322	0.323	0.319	0.348	0.656
Hansen test	0.139	0.159	0.186	0.176	0.101	0.165

Note. Robust options used; t-statistics in parentheses; *** p < 0.01, ** p < 0.05, * p < 0.1 indicate significance at 1%, 5%, and 10%, respectively. Estimations are done using the xtabond2 routine in Stata.

However, the GDP coefficient is positive and significant in high-income and Resource-abundant countries. This result supports the notion that market potential and FDI outflow are positively correlated (Chakrabarti & Scholnick, 2002), particularly as new emerging countries or transition economies in Africa and Asia continue to expand and provide additional prospects for profit generation. As an emerging hotspot, the Asian market will continue to be a destination for Chinese OFDI with significant growth. In the African continent, this may represent the fact that most Chinese firms investing in Africa are not just from the high-tech sector but also industries with a lower level of technical development (Bureau van Dijk, 2020; Eurostat, 2020).

Table 2. The results of the system GMM, along with the sub-models

Variables	**Model VII**	**Model VIII**	**Model IX**	**Model X**
	Higher-income	**Low-income**	**Resource-rich**	**Resource-poor**
L.lnOFDI	0.652***	0.511***	0.605***	0.839***
	(0.128)	(0.169)	(0.101)	(0.164)
ln_GDP	0.31**	-0.248***	0.23**	0.032
	(0.113)	(0.086)	(0.101)	(0.096)
LnINFRA	-0.493**	-0.129**	-0.401*	-0.199**
	(0.234)	(0.057)	(0.214)	(0.089)
Ln FUE	0.029	-0.018	0.125***	0.109***
	(0.027)	(0.025)	(0.026)	(0.032)
Ln OME	0.114	-0.061	0.042	-0.089
	(0.151)	(0.074)	(0.059)	(0.082)
Ln TROP	0.555*	-0.091*	-0.019	0.011
	(0.281)	(0.046)	(0.165)	(0.055)
INSI	0.301***	0.472**	0.181	0.279**
	(0.102)	(0.182)	(0.214)	0.134
Constant	-5.039	1.617	-0.208	1.856
	(2.053)	(1.094)	(-0.208)	(1.262)
No. of Obs.	208	368	168	408
Time Dummies	yes	yes	yes	yes
Group count	26	46	21	51
Number of Instruments	26	24	20	24
AR(1)	0.020	0.019	0.044	0.029
AR(2)	0.437	0.473	0.445	0.535
Hansen test	0.192	0.154	0.440	0.426

Note. *, **, *** mean significant at 10%, 5%, and 1%.

Our findings, therefore, support Hypothesis (2A), which holds that Chinese OFDI is motivated by market demands. However, our sub-sample analyses show that it attracts both higher-income and Resource-abundant. We present more thorough evidence on Chinese market-seeking FDI in Africa and Asia in our result than in other studies (e.g., Mourao, 2018; Kamal et al., 2020).

Table 3. Full models based on the system GMM results for institutional sub-indicators

Variables	VACC	POLS	GEFF	REQ	ROLAW	COCOR
L.lnOFDI	1.311***	0.864***	0.996***	1.088***	1.204***	1.038***
	(0.206)	(0.134)	(0.110)	(0.162)	(0.208)	(0.170)
ln_GDP	-0.221*	0.110	-0.037	-0.068	-0.151	-0.052
	(0.128)	(0.098)	(0.072)	(0.095)	(0.127)	(0.096)
LnINFRA	0.065	-0.129	-0.112*	-0.034*	-0.138	-0.071
	(0.109)	(0.081)	(0.059)	(0.072)	(0.073)	(0.071)
Ln FUE	-0.002	0.030**	0.031*	0.029**	0.012	0.025
	(0.019)	(0.013)	(0.016)	(0.14)	(0.023)	(0.018)
LnOME	-0.158	-0.002	-0.132	-0.140	-0.168	-0.132*
	(0.114)	(0.036)	(0.106)	(0.035)	(0.101)	(0.072)
Ln TROP	-0.041	-0.020	0.004	-0.016	-0.020	-0.007
	(0.057)	(0.028)	(0.021)	(0.037)	(0.038)	(0.031)
VACC	0.148*					
	(0.87)					
POLS		0.114				
		(0.082)				
GEFF			0.160***			
			(0.056)			
REQ				0.095**		
				(0.044)		
ROLAW					0.174**	
					(0.067)	
COCOR						0.131**
						(0.054)
Constant	-2.296**	-0.744	1.573*	1.014*	2.002*	1.374**
	(1.092)	(0.877)	(0.839)	(0.584)	(1.009)	(0. 645)
No. of Obs.	576	576	576	576	576	576
Time Dummies	yes	yes	yes	yes	yes	yes
Group count	72	72	72	72	72	72
Number of Instruments	27	30	26	30	24	29
AR(1)	0.013	0.008	0.011	0.012	0.008	0.012
AR(2)	0.266	0.214	0.267	0.199	0.876	0.265
Hansen test	0.319	0.103	0.234	0.205	0.214	0.195

Note. *, **, *** mean significant at, respectively, 10%, 5%, 1%.

Meanwhile, the quality of infrastructure analysis shows that Chinese OFDI tends to correlate negatively with the infrastructure development of African and Asian economies (Tables 2 and 3), indicating that Chinese OFDI prefers to invest in countries with fewer infrastructure facilities; thus, our hypothesis (2B) can be confirmed. This finding is not in accordance with previous results that suggest countries with superior infrastructure facilities attract more foreign investments, which has a positive effect on FDI inflow (Asiedu, 2002; Urata & Kawai, 2000). We argue that the majority of China's direct investments in Africa and Asia involve the development of huge infrastructure projects. Therefore, a lack of infrastructure facilities in the host country creates greater opportunities for Chinese enterprises, particularly those with limited technology and funding channels for massive infrastructure projects. Inadequate infrastructure facilities in Africa may also explain this conclusion, and Asia serves as an outlet for the Chinese construction industry's surplus output.

Although institutional hypothesis (3A), our empirical modeling demonstrates that local host country institutional quality features are more relevant than others in predicting Chinese investment in Africa and Asia. When analyzing the outcomes of our institution-related hypotheses, one must keep in mind that the Institutional composite index (INSI) ranges from -2.5 (weak institutions) to +2.5 (strong institutions). This institutional index's coefficient is consistently positive and statistically significant (Table 1). In Model II, when our Institutional composite index (INSI) is included in the basic regression, the coefficient is significant and positive (b= 0.226, p = 0.1). With our full-model findings shown in Table 1, we further validate the existing research claiming that the institutional risk of host countries has a significant positive influence on China's OFDI (Duanmu & Guney, 2009). Our findings on the deconstructed institutional measures reported in Table 3 revealed that the Chinese OFDI was attracted to the effects of a better rule of law, government accountability, regulatory

quality, and control of corruption. The industry diversity of FDI projects is one probable reason. Large-scale infrastructure developments (dams, trains, ports, bridges, highways, etc.) are related to these projects. By their very nature, these massive building projects are often politically sensitive and generally take a long time to complete before beginning. Since such projects generally evict locals and even whole towns, project preparation may require several consultation processes. Therefore, such projects often cannot be swiftly and readily implemented. This is likely to be especially true in countries with more robust political and legal systems with more stringent planning processes. Controlling the level of corruption in the host country was also an important institutional factor of OFDI. This aligns with previous research on FDI flows in Africa (Asiedu, 2006; Rodr ǵuez-Pose & Cols, 2017). While some have argued in the past that corruption does not deter Chinese investment (Shan et al., 2018), we oppose and find that corruption discourages more investment in the African and Asian countries where Chinese investment is most significant because it leads to inefficiencies, raises costs, and lowers profits.

Turning to explore the connection between institutional quality and the other factors that determine (FDI), we find in Table 1 that the interaction terms for GDP, infrastructure, and ore and metal resources are not significant. Only the (INSI) and fuel resources interaction coefficient is significant and negative (b = -0.092, p = 0.01). Our findings show that, although the interaction impact is negative, countries with higher fuel reserves and poor-quality institutions are more inclined to attract less OFDI into it, a small net positive effect of institutions can be seen due to the positive level effect of institutions: [-0.092*-0.389] 0.268= 0.009.3

Appendix (A) provides the findings for hypothesis (3B), including interactions between the six institutional measures and GDP. These findings validate the sign of the interaction between the Institutional composite index (INSI) and (GDP). Particularly positive significant are the interactions between GDP and Government Effectiveness (b = 0.067, p= 0.1), GDP and Regulatory Quality (b= 0.094, p = 0.1), and GDP and Rule of Law (b = 0.091, p= 0.05). Thus, in countries with a greater GDP and better-quality institutions in the forms of government efficiency, regulatory quality, and the rule of law, Chinese investors are more inclined to seek out markets in Africa and Asia that provide locational advantages. A larger GDP has a positive net impact for all three interaction factors. Therefore, hypothesis (3B) about these three institutional indicators is not supported. Our findings contribute to the literature by demonstrating that greater market sizes and better-quality institutions in host countries attract Chinese OFDI. Chinese OFDI in Africa and Asia emphasizes market size more than autonomous and well-established host country policies. This significance supports our contention that while analyzing the influence of institutions on foreign direct investment, one should consider the size of the host country's market. It also corroborates the contention of (He, Xie, & Zhu, 2015) that improved host country institutions attract FDI from emerging economies in the context of market-seeking.

Concentrating on countries with abundant resources, our findings in Table 2 demonstrate that institutions in resource-rich countries have no impact on Chinese OFDI. Our analysis indicates that weaker institutions are no longer attractive to Chinese OFDI; hence hypothesis (3C) is not supported. These findings are consistent with the theoretical concepts known as the Dutch disease and the resource curse. Countries with significant oil reserves, like those in the Middle East, are the least interested in attracting FDI for two reasons: first, they have enough money from oil sales revenue to fund domestic projects, like resource exploration and extraction. Second, because the majority of Middle Eastern countries are heavily dependent on oil exports, FDI is deterred by the complex ownership requirements stipulated by these countries. The six sub-indices of our Institutional composite index (INSI) in Appendix B show that no institutional sub-indicator is significant in the resource-rich sub-sample, particularly in the resource-seeking setting. Because of the resource curse and regional conflicts, institutions in resource-rich countries often deviate from the established course and serve the vested interests of individuals and tribes. Therefore, the resource-rich countries in Africa and Asia underwent a similar procedure. Our results, which show that diverse institutional quality measures don't seem to matter for Chinese OFDI seeking resources, and support (Ajide & Raheem, 2016), claim that this is the case.

5. Conclusion

The influx of Chinese investment into Africa and Asia has led to the development of a significant amount of literature. Although the study has been done on both the factors that drive this investment and the motivation behind the investment itself, relatively few scholars have addressed how the role of institutions interacts with the motivation behind the investment. In this paper's investigation, we sought to think about this topic in greater depth. We were particularly interested in determining if the function of these institutions differs depending on the kind of foreign direct investment (market-seeking versus resource-seeking) and the kind of nation under consideration (resource-rich and poor; higher- and low-income). Employing a System GMM covering the period of China's OFDI surge in Africa and Asia (2010-2018), our research shows that countries with higher incomes

and greater quantities of natural resources are more appealing destinations for Chinese foreign direct investment (OFDI). These countries also tend to have larger marketplaces and higher-quality institutions. Our research on institutions suggests that Chinese investors might be interested in helping host nations in Africa and Asia build more reliable institutions. This would be consistent with China's refraining from political meddling and benefitting the countries in question. In addition, companies facing increased levels of competition at home may go outside for new markets with institutional settings comparable to their own.

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Notes

Note 1. We separate our sample by market size using the (World Bank 2021) income categorization of countries. In model VII, we classify countries as having bigger markets if their GNI per capita was greater than the World Bank's low-income benchmark (US$ 1.035 in 2012). Small markets were defined as those in countries with GNI

below this criterion.

Note 2. We follow the IMF's approach and designate countries as resource-rich if their natural resource export share is at least 25%. (Model IX). Resource-poor countries had exports below this benchmark (Model X).

Note 3. Calculation of interaction net effects is based on (Tchamyou & Asongu, 2017). The mean of INSI is 0.389.

Appendix A. System GMM Results of Institutional Sub-indicators, GDP Interactions

Variables	VACC	POLS	GEFF	REQ	ROLAW	COCOR
L.lnOFDI	0.924***	0.587***	0.824***	0.779***	0.724**	0.781***
	(0.251)	(0.198)	(0.212)	(0.278)	(0.287)	(0.275)
ln_GDP	0.084	0.284*	0.001	0.053	0.081	0.054
	(0.14)	(0.159)	(0.123)	(0.164)	(0.168)	(0.16)
LnINFRA	0.068	-0.247**	-0.206**	-0.175*	-0.183*	-0.17*
	(0.114)	(0.112)	(0.103)	(0.099)	(0.097)	(0.098)
Ln FUE	-0.100*	0.008	0.088***	0.084***	0.081***	0.08***
	(0.06)	(0.057)	(0.027)	(0.027)	(0.029)	(0.028)
LnOME	-0.145	-0.035	-0.187*	-0.184	-0.208*	-0.195
	(0.112)	(0.114)	(0.107)	(0.118)	(0.118)	(0.124)
Ln TROP	0.031	-0.005	0.012	0.023	0.029	0.021
	(0.049)	(0.046)	(0.039)	(0.061)	(0.056)	(0.056)
VACC	-0.647					
	(1.40)					
POLS		1.304				
		(1.179)				
GEFF			-1.409			
			(0.961)			
REQ				-2.176*		
				(1.236)		
ROLAW					-2.113*	
					(1.087)	
COCOR						-1.641
						(1.109)
LnGDP*VACC	0.023					
	(0.055)					
LnGDP*POLS		-0.043				
		(0.046)				
LnGDP*GEFF			0.067*			
			(0.039)			
LnGDP*REQ				0.094*		
				(0.049)		
LnGDP*ROLAW					0.091**	
					(0.044)	
LnGDP*COCOR						0.073
						(0.045)
Constant	-1.308	-1.356	2.744 **	1.804	1.741	1.809*
	(1.181)	(1.765)	(1.142)	(1.147)	(1.138)	(1.056)
No. of Obs.	576	576	576	576	576	576
Time Dummies	yes	yes	yes	yes	yes	yes
Group count	72	72	72	72	72	72
Number of Instruments	24	25	28	28	26	26
AR(1)	0.027	0.025	0.012	0.051	0.058	0.042
AR(2)	0.410	0.344	0.371	0.417	0.459	0.408
Hansen test	0.326	0.361	0.311	0.454	0.335	0.286

Note. *, **, *** mean significance at, respectively, 10%, 5%, and 1%.

Appendix B. System GMM Results of Institutional Sub-indicators (Resource-rich countries)

Variables	VACC	POLS	GEFF	REQ	ROLAW	COCOR
L.lnOFDI	0.731***	0.740***	0.683***	0.772***	0.831***	0.858***
	(0.054)	(0.055)	(0.054)	(0.062)	(0.049)	(0.037)
ln_GDP	0.290**	0.260*	0.382***	0.197*	0.011	0.088*
	(0.132)	(0.130)	(0.114)	(0.103)	(0.074)	(0.044)
LnINFRA	-0.246***	-0.247***	-0.196	-0.182*	-0.149*	0.159***
	(0.074)	(0.067)	(0.130)	(0.098)	(0.085)	(0.038)
Ln FUE	0.074***	0.056**	0.063***	0.024	0.109*	0.026
	(0.023)	(0 023)	(0.015)	(0.017)	(0.062)	(0.028)
LnOME	-0.477***	-0.450***	0.599***	0.262**	-0.066	0.039
	(0.116)	(0.126)	(0.131)	(0.111)	(0.125)	(0.067)
Ln TROP	-0.039	-0.061	-0.140	0.024	-0.005	0.055
	(0.098)	(0.110)	(0.127)	(0.091)	(0.067)	(0.056)
VACC	0.130					
	(0.096)					
POLS		0.065				
		(0.095)				
GEFF			-0.044			
			(0.162)			
REQ				-0.063		
				(0.107)		
ROLAW					0.123	
					(0.138)	
COCOR						0.044
						(0.063)
Constant	-3.661	-2.801	-5.287 *	-1.953	2.641*	0.201
	(2.931)	(2.851)	(2.438)	(2.096)	(1.503)	(0.972)
No. of Obs.	168	168	168	168	168	168
Time Dummies	yes	yes	yes	yes	yes	yes
Group count	21	21	21	21	21	21
Number of Instruments	21	21	21	20	20	19
AR(1)	0.063	0.066	0.074	0.058	0.051	0.055
AR(2)	0.220	0.206	0.235	0.190	0.314	0.222
Hansen test	0.264	0.206	0.206	0.355	0.309	0.323

Note. *, **, *** mean significance at, respectively, 10%, 5%, and 1%.

Appendix C. Description of Variable

Variable		Variable name	Variable symbol	Measurement index	source
Dependent variable	China's outward direct investment scale in Africa and Asia		Ln OFDI	China's OFDI stock in Africa and Asia.	MOFCOM
Core independent variable (1)	Host country institutional quality	Institutional composite index	INSI	National governance index	WGI
	Market- seeking motivation	Market size of the host country	Ln GDP	Gross domestic product	World Bank, 2021
		Infrastructure	LN INFRA		
	Resource-seeking motivation	Fuel resources exports	FUE	Fuel resources exports (as a percentage of merchandise exports)	World Bank, 2021
		Ore and metal resources exports	OME	Ore and metal resources exports (as a percentage of merchandise exports)	World Bank, 2021
Core independent variable (2)	Host country-specific institutional quality in detail	Political stability and absence of violence/ terrorism	POLS	Measuring external and internal disputes, riots, lack of terrorism, etc., as well as peaceful administrative level changes;	WGI

		Regulatory quality	REQ	evaluates economic freedom and limited government intervention, as well as price regulation and general indices of trade and investment restrictions;	WGI
		Rule of law	ROLAW	Measures the factors of crime, like the inability of the government to enforce its legislation and the use of force against the population by the government.	WGI
		Voice and accountability	VACC	Impressions of the degree to which people may vote for their government and freedom of speech, organization, and media.	WGI
		Government effectiveness	GEFF	focuses on the quality of certain public goods, such as health care, education, infrastructure, and sanitation, as a metric for success;	WGI
		Control of corruption	COCOR	Describes the various types of corruption, ranging from administration to parliament;	WGI
Control variables	Strategic asset- seeking motivation	Trade openness in the host country	TROP	Sum of imports plus exports as a percentage of GDP	China Statistical Yearbooks, UNCTAD