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The Impact of China's Financial Aid on the Development of Fintech in African Countries

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Abstract

The international community has extensively debated the effects of aid especially foreign financial aid and its influence on the growth of fintech in recipient nations. Conversely, the motivations behind financial aid and its repercussions have elicited significant apprehension globally. China has vigorously upheld its international duties, serving as the cornerstone of the Belt and Road Initiative. In the past period (2013-2022), China extended financial aid to African nations exceeded 180 billion yuan. This practice is frequently characterized by certain international perspectives as a mechanism of the "going out strategy". This paper offers novel research views and empirical support for related domains as it employs the fixed-effect panel regression model to analyze data from the African Development Bank's financial database and the Aid-Data database, aiming to investigate the impact of China's aid on the development of fintech in Africa and to examine the potential mediating role of political risk in this relationship. This work employs multiple research methods, including endogeneity tests, heterogeneity tests, and robustness tests, to assure the trustworthiness of the research findings. The research findings indicate that China's aid to Africa does not rely on the effect from political risk and demonstrates a clear direct positive impact on the development of fintech in recipient nations. In contrast, US aid exerts an indirect impact, primarily via political risk. This report also concludes that China's aid to Africa has a more pronounced positive effect in oil-rich nations and sub-Saharan African countries. This study presents the following recommendations to enhance China-Africa cooperation, derived from the research findings: enhancing China's foreign aid mechanism, augmenting its power within the international aid framework, and proactively assisting Chinese firms in penetrating the global market to help the underdeveloped nations.

Keywords

China's Financial Aid, Political Risk, Fintech in Africa, Belt and Road Initiative

1. Research Introduction and Literature

1.1. Introduction

In recent years, financial aid has increasingly become a focal point in disciplines such as politics, finance, and development studies. This surge of interest aims to assess the effectiveness of financial aid in resource allocation and its role in global governance. Financial aid not only serves as a strategic tool for governments to achieve economic and geopolitical interests but also fosters international cooperation and ensures economic stability for recipient countries (Faustin, 2023; Moyo, 2019; Radelet, 2018). One of the most significant contributors to international financial aid in recent decades has been China, a rising non-traditional donor. China's financial aid approach has sparked global discussions, particularly regarding its expansion to over 160 countries in the world, with a substantial portion directed to Africa. Hasheela et al. highlight that between 2000 and 2021, Chinese financial aid to Africa accounted for 65% of global official development assistance (ODA), signaling the importance of China's involvement in African development (Hasheela et al., 2023; Callahan, 2021; Zheng & Xu, 2022).

At the heart of China's development agenda for Africa lies the promotion of financial technology (fintech). Over the years, China has fostered dialogue with African leaders to align development goals, emphasizing the importance of fintech development in building a shared future for both regions. China's growing influence in Africa, especially through its Belt and Road Initiative (BRI), has been seen to offer significant financial support for fintech development, including loans, direct investments, and infrastructure projects (Kuo, 2020; Wu, 2021; Li & Wang, 2022). However, this support has raised concerns, with critics arguing that Chinese aid might contribute to Africa's debt burdens, foster corruption, and undermine institutional development (Chikalipah, 2020; Museba, 2021; Ndikumana, 2020). Despite the growing scale of Chinese financial aid, its specific impact on Africa's fintech development, including its mechanisms and potential risks, remains underexplored (Chao & Tull, 2020; Ming & Shao, 2022; Ng & Li, 2021).

This research aims to bridge this gap by critically examining the impact of China's financial aid on the development of fintech in Africa, offering both theoretical insights and practical guidance for future China-Africa research and collaborations. To explore the impact of China's financial aid on the development of fintech in Africa, this study seeks to answer the following key questions:

1) Does China's aid have an impact on the development of fintech in Africa?

2) Does political risk have an effect on the relationship between financial aid and the development of the fintech sector in Africa?

Based on the research background and questions, this study posits the following hypothesis:

H1: China's financial aid significantly contributes to the development of fintech in Africa by enhancing infrastructure, fostering financial innovation, and promoting financial inclusion.

H2: The development of fintech in Africa is significantly influenced by China's financial aid, with political risk serving as a key mediating factor.

1.2. Literature Review

The field of foreign aid, particularly focusing on the effectiveness and motivations behind it, has witnessed significant expansion since the conclusion of the Cold War and the execution of large-scale aid programs such as the Marshall Plan. As global attention has shifted towards the Millennium Development Goals (MDGs), research on international development financing has flourished. By 2000, the number of articles published on financial aid grew exponentially, signifying its increasing importance in global discussions (Burnside & Dollar, 2000; World Bank, 2020). Despite this growing interest, limited attention has been paid to how foreign aid, particularly financial aid, impacts specific sectors like fintech development in recipient countries.

The Current State of Financial Aid Research

1) Motivations for International Aid

The motivations for financial aid are a critical component in assessing it. Traditional aid-giving nations such as the United States, European countries, and Japan have been primarily driven by economic interests, national security, and geopolitical concerns (Dreher et al., 2008; Fuchs & Dunning, 2018). After 9/11, the U.S. significantly expanded its aid for counterterrorism, showing a shift towards security-driven motives (Kuziemko & Werker, 2006). On the other hand, China's approach to aid, especially to Africa, has been largely resource-driven, with an emphasis on securing strategic access to raw materials (Fuchs et al., 2014; Lee, 2019). While many scholars focus on the political and economic dimensions of aid allocation, the humanitarian aspect and the evolving role of emerging donors like China require further scrutiny (Berthelemy, 2006; Bjørnskov & Schroder, 2010). These studies have concentrated on general motivations but did not specifically address the role of financial aid in fostering development like fintech in Africa. This research will fill that gap by exploring the specific motivations of China's financial aid to Africa in the context of fintech development.

2) Advances in Studies on Aid Effectiveness

Research on the effectiveness of foreign aid has evolved into distinct areas, including its impact on political stability, economic growth, and institutional development. Financial aid has been shown to contribute positively to political stability, particularly by reducing the likelihood of internal conflicts and promoting governance reforms (Smith & Brown, 2023; Ahmed & Lee, 2024). In terms of economic growth, studies have provided mixed results: while some argue that foreign aid stimulates growth through infrastructure investment (Davis & Green, 2023). Others suggest that it can create dependency and hinder local investment (Wilson & Clark, 2023). Additionally, foreign aid's role in fostering technological development, particularly in the context of digital infrastructure and financial inclusion, has gained prominence in recent studies. Aid programs have significantly contrib-

uted to the adoption of mobile payments and block chain technologies in developing nations (Chowdhury & Patel, 2024; Kim & Park, 2023). These researches have primarily focused on the broader effects of financial aid, with limited focus on the specific sectoral impacts such as the fintech field.

3) Aid and Institutional Building

Foreign financial aid plays a pivotal role in strengthening institutions in recipient countries by enhancing governance structures, improving judicial efficiency, and supporting anti-corruption measures. However, the export of governance models from donor countries has been criticized for causing cultural friction and limiting the effectiveness of aid programs. In the case of Africa, while aid has helped improve institutional quality in some nations, it has also faced criticism for reinforcing authoritarian governance in some regions (Ma & Huang, 2021; Zhang, 2022). Although institutional strengthening is often linked to aid effectiveness, the direct influence of aid on fintech development and the related institutional capacity in Africa has not been fully explored.

4) Chinese Aid to Africa

China's aid system, although a late entrant compared to Western donors, has grown rapidly since its formal establishment of the China International Development Cooperation Agency (Liu & Zhang, 2020). Researchers argue that China's aid to Africa has largely been driven by strategic and economic motives, focusing on resource extraction, infrastructure development, and enhancing bilateral economic relations (Fuchs et al., 2014). Despite the positive outcomes in infrastructure and poverty alleviation, concerns have been raised about the potential for fostering corruption and reinforcing authoritarian regimes (Morris, Parks, & Gardner, 2021; Brautigam, 2009). China's aid model has disrupted traditional aid paradigms, particularly by offering an alternative to conditional Western aid, which often comes with stringent political and economic reforms (Zhou, 2022).

Fintech development in Africa has significantly expanded financial inclusion, with innovations like mobile money platforms transforming access to financial services (Demirguc-Kunt et al., 2018). However, critical debates highlight that while technology can drive progress, it may also reinforce existing inequalities if digital access remains uneven (World Bank, 2020). Challenges such as regulatory gaps, the digital divide, and reliance on foreign technologies raise concerns about long-term sustainability and equitable growth (Ozili, 2018).

5) Fintech Development in Africa

China has played a notable role in supporting Africa's fintech growth through strategic investments and partnerships across various countries. In Nigeria, for example, OPay, a leading fintech company, has benefited from substantial Chinese investment, allowing it to expand its services and enhance financial accessibility (Adeniran, 2022). Similarly, in Kenya, Chinese investors have shown interest in the fintech sector, recognizing the country's rapidly growing digital economy and the potential for scalable financial solutions (Mwega, 2020). These investments have facilitated the development of digital payment platforms and mo-

bile banking services, contributing to increased financial accessibility for underserved populations (Zhang, 2021). In Ethiopia, the launch of Telebirr, a mobile money service by Ethio Telecom, has been supported by Chinese technology and expertise, aiming to enhance financial inclusion (Gebre, 2022). PalmPay, co-owned by Chinese firms, launched in Nigeria with significant investment, providing a further example of China's involvement in Africa's fintech sector (Oluwaseun, 2023). Scientific research underscores the significant influence of Chinese investments in driving Africa's digital transformation. Studies highlight that Chinese Outward Foreign Direct Investment (OFDI) has contributed to economic growth across 41 African countries between 2005 and 2020 (Chen & Nord, 2022). However, research also highlights environmental concerns linked to such investments, particularly regarding the need to align fintech expansion with sustainable practices to support financial and long term goals. (SDGs) (Mbaye & Zeleza, 2023). Furthermore, China's infrastructure financing has been shown to reduce trade costs, enhancing African countries' participation in global value chains and contributing to export growth and increased productivity (Chen, 2022). Nonetheless, critical perspectives caution that such involvement may also lead to economic dependencies, raising concerns about digital sovereignty and long-term autonomy (Venske, 2023). Engaging with these scientific arguments enriches the understanding of fintech's role in Africa's development landscape, highlighting both the opportunities and complexities introduced by foreign aid for fintech, particularly from China.

6) China's Financial Aid and Fintech Development

The emergence of fintech as a driving force for economic development in Africa has gained attention from international organizations and scholars alike. Financial aid has been crucial in enabling the growth of digital financial infrastructure, especially in regions with limited access to traditional banking services (Gathaiga & Nasir, 2021; Rostow & Templeman, 2023). Though the literature on China's aid effectiveness in Africa is vast, there is limited research on how China's financial aid specifically impacts the growth of fintech in Africa. (Li, 2019; Wei & Gu, 2022). While there is growing recognition of China's role in fintech development, the existing literature has not sufficiently explored the nuanced relationship between China's financial aid and the specific mechanisms driving fintech development in Africa. This research will provide empirical analysis to fill this gap, examining the impact of China's financial aid on fintech in Africa. This research highlights the critical role of financial aid in driving development, particularly in areas like fintech, but also reveals significant gaps in the current literature. Existing studies predominantly focus on the general effectiveness of aid or its political and economic impacts, leaving a gap in understanding how China's financial aid specifically impacts areas such as fintech development in Africa. By examining China's unique approach to aid and its focus on technology-driven growth, this study will offer novel insights into how financial aid can be leveraged to foster fintech development and economic development in Africa.

2. Conceptual Definitions and Theoretical Framework

2.1. Definitions of Fundamental Concepts

This part delineates the fundamental principles of financial aid, fintech, and political risk, establishing the theoretical framework for the ensuing research.

2.1.1. The Notion of Foreign Financial Aid

Financial aid encompasses diverse forms, including international economic assistance and development support, which involve grants, concessional financing, and material contributions. China's foreign aid predominantly comprises official development assistance (ODA) and other official funds (OOF), emphasizing monetizable resources (OECD, 2020; Neumayer, 2003). Aid classification can be based on origin, type, aim, etc., including bilateral or multilateral aid. The efficacy of assistance is assessed based on the attainment of established objectives (Sachs, 2005).

2.1.2. The Concept and Attributes of Fintech

Financial technology enhances financial services by technological innovation, increasing efficiency, inclusivity, and fostering economic development. Originating in the 1990s, it initially denoted the utilization of technology by financial organizations to minimize expenses, subsequently broadening to encompass AI, big data, and block chain in enhancing financial sector capabilities (Arner et al., 2017). Financial technology is characterized by technology-driven progress, inclusion, and global collaboration, while also encountering issues related to regulation and social equity (Zohar, 2019).

2.1.3. Political Risk

Political risk is categorized into narrow and broad meanings. The restricted definition emphasizes the influence of political occurrences or policy modifications on corporate interests within the host nation. The expansive term includes dangers such as warfare, labor strikes, or coups that could adversely impact a nation's economy (Henisz, 2000). This research largely examines macro-level political hazards and their impact on financial technology development.

2.2. Theoretical Framework

The concept of foreign financial aid emerged from development economics, focusing on the economic roles of help. The efficacy of aid is assessed by its success in fulfilling the objectives of both donor and recipient nations, and can be examined from multiple viewpoints: donor, recipient, or shared interests (Riddell, 2007).

2.2.1. The Theory of Recipient Country Interest

The inclusive finance theory, endorsed by the UN and international experts, advocates for the provision of comprehensive financial services to alleviate poverty and foster economic progress (United Nations, 2015). China's financial assistance, including support for digital payment systems and mobile banking, has improved financial accessibility in Africa, fostering regional economic development (Gao,

2019). The human capital theory, introduced by economist Theodore Schultz, asserts that technical advancement and economic progress are propelled by the enhancement of human capital (Schultz, 1961). China's assistance includes financial support, technology transfer, and talent development, thereby significantly bolstering Africa's financial technology advancement (Li & Liu, 2020).

2.2.2. The Donor Countries Interest Theory

The financial technology development idea, grounded in Joseph Schumpeter's innovation theory, asserts that technological advancement is the primary catalyst for growth in the financial sector (Schumpeter, 1942). China has enhanced its worldwide competitiveness through financial technology aid initiatives in Africa, simultaneously assisting recipient nations in modernizing their financial systems (Chen et al., 2018). The mercantilism theory, formulated by John A. Hobson, suggested that aid can facilitate the internationalization of the donor nation's industries (Hobson, 1902). By promoting financial technology in Africa, Chinese firms such as Alipay and Tencent have enhanced their market presence and cultivated trade and investment relationships with the continent, yielding reciprocal economic advantages (Bai & Zhang, 2020).

2.2.3. Theoretical Synopsis

The theory of inclusive finance and the notion of interdependence highlight the reciprocal dynamics of aid relationships. China's financial technology assistance to Africa not only bolsters the advancement of African financial systems but also amplifies China's economic and political might (Chin, 2007). China's financial assistance to Africa's financial technology advancement exemplifies a seamless integration of theory and practice, establishing a multi-tiered cooperation model advantageous to both entities.

3. Development Overview and Mechanism of Aid to Africa

China's international aid began in 1950, when the starting point of assistance was to help other countries achieve national independence. Since the Bandung Conference in 1955, the starting point of China's foreign aid has changed. In 1956, China provided free aid to the Egyptian government to support its national liberation movement. This marks an important milestone in China-Africa relations. One of the representative projects assisted by China in Africa is the Tazara Railway, which was launched in 1970. Although China's aid to Africa has a history of nearly 70 years, it started later than traditional donors such as France and the United States. From 1950 to 2023, China's aid system to Africa has experienced 73 years of development, and gradually expanded from small to large, forming a complete aid mechanism. According to the government report, the history of aid to Central Africa can be divided into five phases, each with its own characteristics.

Aid to Africa can be categorized into two primary types: development aid and humanitarian aid. The former is also known by several terms; international collaboration and abroad help fall under the umbrella of development assistance,

with the primary objective of facilitating sustainable development in recipient nations or regions. Development assistance frequently entails the transfer of public monies between nations. The aid monies may be transmitted not just between the two countries but also via indirect routes, including non-governmental organizations or international multilateral institutions, to execute foreign aid initiatives. Foreign aid encompasses unconditional foreign aid, conditional foreign aid, and various other forms of assistance, whereas humanitarian aid is primarily employed to address emergencies and crises, including natural disasters and refugee situations in recipient nations. The objective of such aid is to alleviate the suffering of affected populations, as observed during the COVID-19 pandemic. The provision of vaccines to Africa exemplifies a standard form of humanitarian aid.

Table 1. Data on aid to Africa reported by the Chinese government.

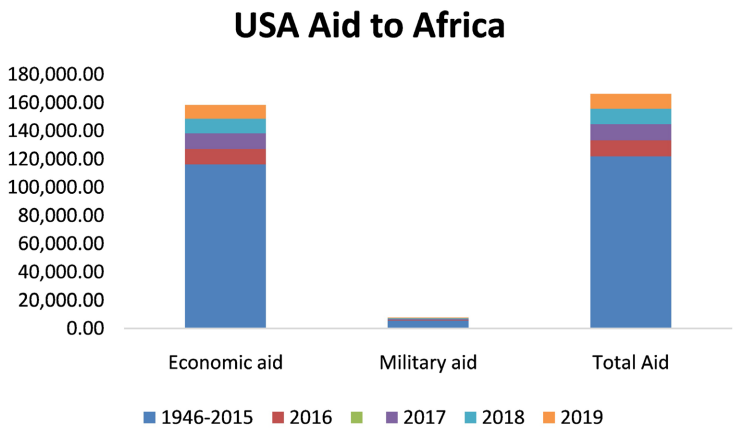
Phase	Period	Main Feature	Major Event
Phase 1	1950-1971	From 1950 to 1971, China played an active and supportive role in the national liberation movements and independence struggles of African countries. After the founding of the People's Republic of China in 1949, China adopted a foreign policy focused on solidarity with colonized nations, especially those in Africa, advocating for their independence from colonial rule	a) 1964: Zhou Enlai put forward the "Eight Principles" with equality, mutual benefit and no conditions attached as the core. b) 1963-1971: The Organization of African Unity (OAU) is formed. And about 90 per cent of African countries had independence
Phase 2	1971-1991	Support African countries in their transition from independence to democracy and help stabilize the political situation.	a) 1971: China resumed its lawful seat in the United Nations. b) 1972: Nixon's visit to China
Phase 3	1991-2001	After the Cold War, it adapted to the new international pattern and continued to adhere to the aid policy of non-interference in Africa's internal affairs	a) 1991: The Cold War ended with the collapse of the Soviet Union. b) Western countries carry out aid policies based on democracy and human rights.
Phase 4	2001-2013	In line with the world economy, the Forum on China-Africa Cooperation (FOCAC) has been launched, and the forms and scale of assistance have been significantly increased and diversified	a) 2001: China joined the WTO. b) Starting to provide assistance through PPP, BOT and other modes.
Phase 5	2013 onwards	Highlights the importance of China as a non-traditional donor and promotes innovation and reform of the international aid system.	a) 2013: The Belt and Road Initiative was proposed. b) Traditional donors (such as the United States, France, and the United Kingdom) explore innovative ways of aid.

Africa's international help can be categorized into two types: multilateral aid and bilateral aid. Multilateral help can be categorized based on the international organizations that deliver it, including the United Nations system, the World Bank, and the International Monetary Fund. Bilateral aid is primarily categorized into classic bilateral donors and non-traditional bilateral donors. The United Kingdom, the United States, and Europe are classified as traditional contributors,

whilst China, India, Brazil, and South Africa are categorized as non-traditional donors. These nations and organizations offer assistance to Africa through diverse cooperative efforts to enhance its growth and stability. The conventional international multilateral assistance framework has been predominantly influenced by developed nations, particularly the OECD members of the Development Assistance Committee (DAC). These nations constitute 90% of the global amount of Official Development Assistance (ODA) (Lawson, 2013). The primary instruments in the conventional multilateral assistance framework comprise the United Nations system, the World Bank Group, the International Monetary Fund (IMF), and regional multilateral development banks, including the Asian Development Bank and the African Development Bank. These institutions are pivotal in international development assistance, fostering economic growth and social advancement in poor nations through cooperative methods and cash allocation. This is summarized in Table 1.

3.1. Principal Bilateral Donor Nations

In recent years, Africa, recognized for its significant developmental potential, has garnered considerable attention from prominent bilateral aid nations, like the United States and the European Union. Although both organizations dedicated to fostering Africa's development, they exhibit considerable disparities in approach, emphasis, and historical trajectories. U.S. aid concentrates on health, education, food security, and humanitarian assistance. The most emblematic initiative is the President's Emergency Plan for Assistance (PEPFAR), which has significantly enhanced the response to AIDS in Africa. The United States has enacted the African Growth and Opportunity Act (AGOA) to enhance African nations' access to the U.S. market and fortify economic collaboration. U.S. aid frequently includes stipulations, such as mandating recipient nations to implement democratic changes, anti-corruption initiatives, and enhancements in governance. These criteria, although fostering responsibility, may also restrict African nations' flexibility in utilizing aid resources (Figure 1).



Note: Data is from U.S. Overseas Loans and Grants: in US millions.

Figure 1. United States aid to sub-Saharan Africa.

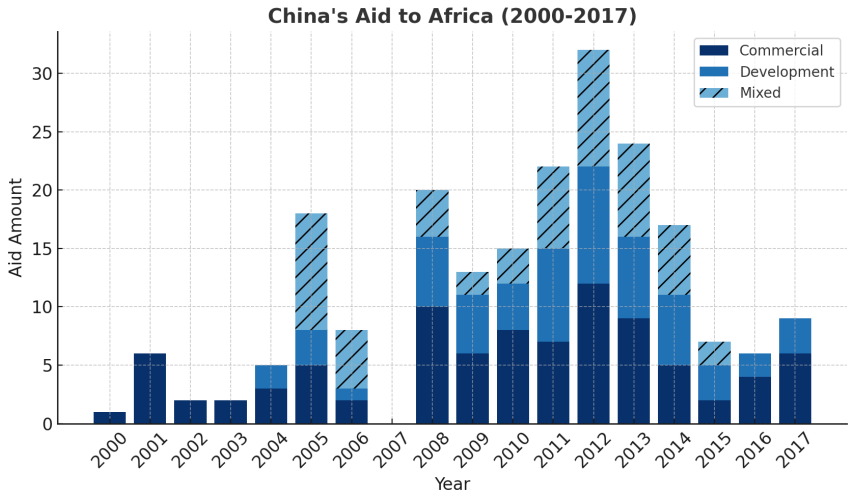
In contrast, the EU's aid approach focuses on multilateral collaboration. The EU has formed ties with African, Caribbean, and Pacific countries (ACP countries) through frameworks like the Cotonou Agreement, emphasizing environmental preservation, renewable energy, education, and equitable social development. The EU prioritizes the fight against climate change, the advancement of green energy initiatives, and the promotion of gender equality. Its support seeks to tackle structural issues and foster enduring resilience and self-sufficiency in African nations. The progression of EU aid to Africa distinctly illustrates its transformation. During the mid-20th century, EU assistance was predominantly shaped by post-colonial relations and aimed at preserving economic connections with former colonies. By the conclusion of the 20th century, the EU prioritized democracy, human rights, and governance in its aid program. In the 21st century, as issues like globalization and climate change escalate, the EU has redirected its emphasis towards economic development, renewable energy, and digital transformation.

Notwithstanding their disparities, both the United States and the European Union have significantly contributed to Africa's growth, with the distinct merits of their separate aid programs providing varied methodologies for advancement in African nations. The United States prioritizes immediate outcomes via strategies like healthcare and market access, but the European Union focuses on long-term fintech development aimed at systemic enhancement and social inclusion. This multifaceted aid strategy provides African nations with various avenues for collaboration with international partners to facilitate economic development and social advancement.

3.2. Disparities in Aid between China and United States

China and the United States differ in their foreign financial aid features and policy formulation tendencies. The following manifestations are present: Initially, there exist varying inclinations in the selection of beneficiaries and aid initiatives. In contrast, the United States has selected a wider array of honorees. The United States posits that open and democratic social governance is crucial for economic development, which relies on the collaborative involvement and concerted efforts of several stakeholders. Consequently, the aid recipients designated by the United States encompass the government, private institutions, corporations, and philanthropic organizations. Statistics from the Brookings Institution indicate that in 2018, 34% of U.S. development assistance was allocated to multilateral institutions, representing the largest share, followed by other sectors at 25%, national governments at 21%, and non-governmental organizations at the lowest proportion. Conversely, China mostly directs its assistance towards foreign governments and multilateral organizations, seldom selecting private institutions and firms as recipients of aid. The United States aims to propagate its principles through aid initiatives, frequently selecting humanitarian and public health projects. China is more predisposed to select initiatives that enhance the welfare of the populace and foster economic advancement in recipient countries, particularly infrastructure projects. From 2000 to 2017, the aid funds provided by China to Africa can be

broadly divided into three categories according to their purposes: commercial, development and mixed purposes. Specifically, commercial aid accounted for 13% of the total aid funds, occupied purposes accounted for 36.7%, and the remaining 50.2% was used for mixed purposes (Figure 2).

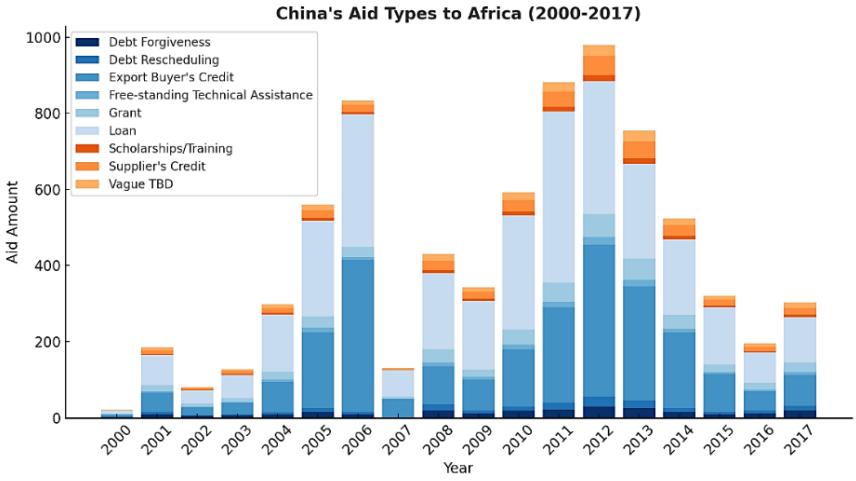


Note: Ordinate unit: $100 million, 2017 constant price. Data source: AidData.

Figure 2. Purpose of China's aid to Africa.

3.3. Categories of Chinese Aid to Africa

China has extended help to Africa through debt restructuring, debt forgiveness, technical support, and loan provisions. Between 2000 and 2017, loans were the predominant part at 51.4 percent, succeeded by export buyer's credit at 31.4 percent. The proportion of loans reached its zenith in 2011 at 98 percent. This clearly illustrates the versatility and adaptability of China's support to Africa in both its modalities and substance, while also highlighting the deep-rooted collaboration between China and African nations (Figure 3).

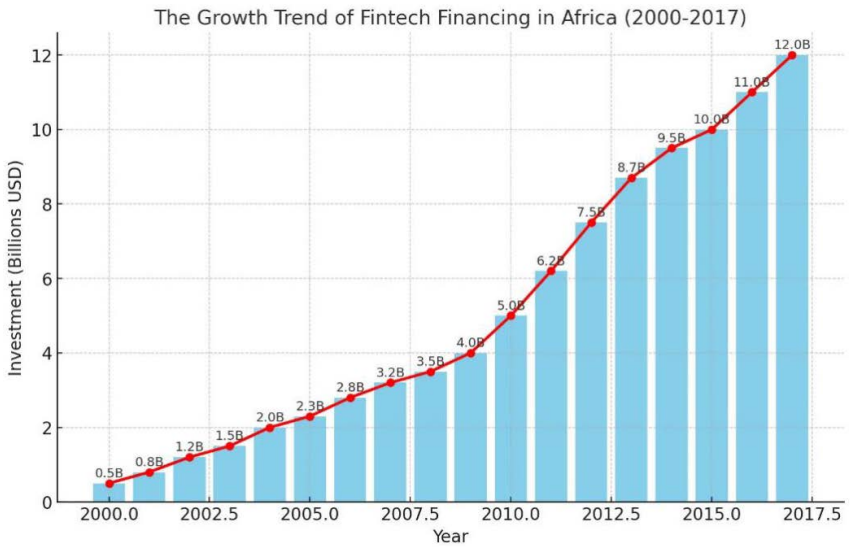


Note: Ordinate unit: $100 million, 2017 constant price. Data source: AidData.

Figure 3. Types of China's aid to Africa.

3.4. Development and Shortcomings in Fintech

In recent years, fintech has emerged as a significant inventive force in the financial sector, seeing rapid global development, particularly in emerging nations. It is essential for fostering financial inclusion, enhancing capital allocation efficiency, and stimulating economic growth (Barberis & Buckley, 2016). The advancement of fintech in Africa is primarily propelled by several factors, including the prevalence of mobile payments, the rise in Internet access, and supportive government policies (Gomber et al., 2017). Kenya's M-Pesa, a successful mobile payment system, has emerged as a significant topic in fintech research and has garnered extensive discussion (Jack & Suri, 2011). Simultaneously, several African nations are progressively enhancing their legislative frameworks to foster a market climate favorable to digital financial innovation (Zetzsche et al., 2017; Evans & Pirchio, 2015). In recent years, Africa has seen mobile phone subscribers surpass 495 million, with connected SIM cards totaling 930 million, expanding at an average annual rate of 4.8%. In Africa, mobile technology has emerged as the most efficient instrument for fintech companies to engage users. In 2007, the African mobile payment sector was catalyzed by the introduction of M-Pesa, an electronic wallet in Kenya that facilitates money transfers and payments via text messages, without the necessity of Internet access. M-Pesa garnered 1 million customers in its initial nine months of existence, then increasing to 4 million within 18 months. In that year, mobile phone transactions in Kenya amounted to $50 billion. Kenyans conduct an average of $140 million in daily mobile phone transactions, with mobile payments constituting 87 percent of the nation's yearly gross domestic product (GDP). North African nations possess 66.59 million mobile payment accounts and 74.1 million mobile payment agents, respectively (Boston Consulting Group, 2018). M-Pesa has undeniably initiated a new era by providing affordable and effective banking services to rural Kenya (**Figure 4**).



Source: Findex data Africa Fintech Innovation.

Figure 4. Africa fintech growth trend.

3.5. Financial Aid and Fintech Indirect Mechanism

In prior research, academics frequently considered political risk, institutional quality, and infrastructure as mediating variables in examining the influence of aid on economic growth (Chen & Li, 2021; Garcia et al., 2023). Some Western media characterize China's foreign aid to African nations as "strategic expansion", as previously mentioned. Consequently, political risk will serve as an intermediary variable in this study to examine the influence of China's foreign aid on the advancement of the fintech sector, while scholars juxtapose it with the United States' aid model, which is contingent upon political conditions. This section will present three distinct perspectives to examine the aforementioned challenges. This research will examine the indirect mechanism of American foreign aid and assess its impact on the advancement of African fintech development, considering the mediation of political risk (Figure 5).

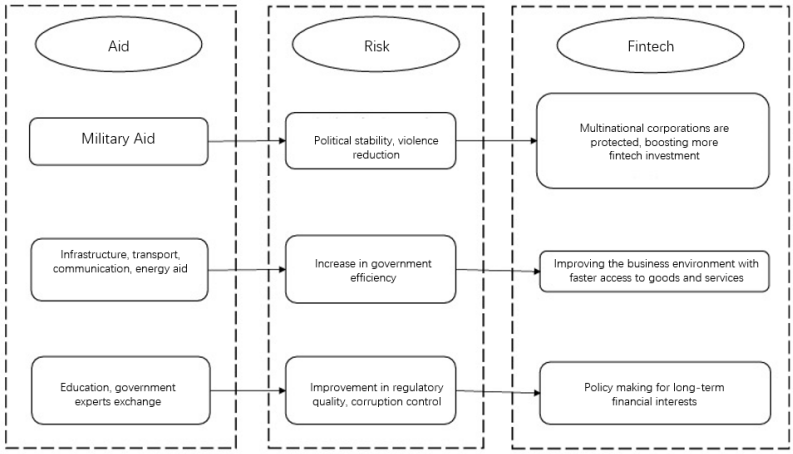


Figure 5. Indirect mechanisms for the impact of aid on fintech.

4. Empirical Analysis of Chinese Financial Aid on Fintech in Africa

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4.1. Model Development, Variable Specification and Data Origin

This study formulates the primary regression equations to analyze China's impact in the growth of fintech in Africa.

$$\text{Fintech}_{it} = \alpha\text{Aid} + \beta c_{it} + \varphi_i + \mu_{it} \quad (1)$$

In this research, we employ various analytical techniques, including stepwise detection regression parameter method, parameter product test method, and parameter difference test method, to thoroughly investigate whether political risk,

as an intermediary variable, influences the relationship between aid and fintech development. This study discusses the gradual detection regression parameter method employed by certain researchers in intermediary system detection to formulate two operational equations:

$$\text{Risk}_{it} = \gamma \text{Aid}_{it} + \beta_1 C_{it} + \varphi_{i1} + \mu_{it1} \quad (2)$$

$$\text{Fintech}_{it} = \alpha_1 \text{Aid}_{it} + \omega Risk_{it} + \beta_2 Cit + \varphi_{i2} + \mu_{it2} \quad (3)$$

The equations of the aforementioned operation i represent several African countries, whereas t denotes different years. The financial technology development indicators (Fintech), market trade openness (FDI), Africa's market trade dependence on China (GDP), socio-economic development (GDP), and investment (GDP) will influence the economic development level of African countries over a span of years. This influence encompasses capital intensity, trade openness, foreign aid, import and export dynamics, and investment, particularly regarding foreign direct investment from China, the significance of trade liberalization, the interdependence of Africa and China in market trade, the impact of socio-economic development, reliance on grants, and the role of natural resources.

This project aims to utilize control panel data from 45 African nations receiving foreign aid between 2000 and 2017, employing least squares, fixed effects, and other methodologies, with China's total foreign investment in Africa as the independent variable and the level of fintech development in recipient countries as the dependent variable. Utilizing metrics such as foreign direct investment (FDI), trade openness, Africa's trade reliance on China, economic development (GDP), financial input, and natural resource input, among others. Establishing the correlation between African economic growth and foreign direct investment (FDI) in Africa.

4.1.1. Independent Variable

China's financial aid to Africa, this research conducts a thorough comparison analysis using two metrics: Aid Data and CARI (China-Africa Research Initiative). This study utilized the total aid amount from the Aid Data 2.0 database as the primary dependent variable, adjusting the relevant data to the 2017 fixed dollar exchange rate to mitigate the effects of inflation, and employed paired numbers to ensure comparability with other variables. Firstly, Aid Data database inaccurately categorizes foreign investments by private enterprises, such as Huawei, as official bailouts, and loans from Chinese-African joint ventures as loans from the host nation's government, hence inflating the estimation of China's concealed debt to African nations. Moreover, several scholars have focused their research on the foreign help provided by NGOs. Consequently, we utilized data from the Johns Hopkins China-Africa Research Initiative to assess its stability. This study gathers data on nations, sectors, and financial service entities related to China's foreign direct investment, financial aid assistance, and credit; nonetheless, the overall scope of total money and investment projects in Africa is much inferior than that of Aid Data.

Secondly, considering the diversification of China's non-aid models and the ex-

isting literature on the funding methods of the Official Development Assistance "ODA", along with the characteristics of funding scales across various countries, this analysis will delve into the action mechanism of the "poverty alleviation" policy on China's development and investigate the role of this policy in advancing economic development. Consequently, the volume of American aid to Africa is incorporated into the fundamental regression analysis, and its impact is examined.

4.1.2. Dependent Variable

The **Financial Technology Development Index (Fintech)** examines the extent of financial technology advancement in African nations. The analysis encompassed of data from 2000 to 2017. Findexable releases a globally comparable Fintech development metric, which is assessed annually within the same nation. The findexable neural network offers a scientific analytical approach to establish a comprehensive indexing system for the advancement of financial technology. Initially, to mitigate the impact of anomalous data, we exclude the lowest 2.5% of observational data. Secondly, the scores for each indicator are derived separately based on distinct data types. In the absence of an absolute ideal value, the weighted average score is utilized. The score of each indicator is normalized to a range of [0, 100], and subsequently, the arithmetic mean is employed to get the overall score of the countries, resulting in their ranking. This, in conjunction with the World Bank's Global Financial Inclusion Database, which offers comprehensive data on financial inclusion, digital payments, and mobile banking, robustly supports the analysis of fintech trends and their impacts across various nations.

4.1.3. Intermediary Variable

Political Risk, by evaluating various alternative factors, the "arithmetic average" of the four indicators of "Control of Violence" and "Social Stability"—namely "Government Effectiveness," "Regulatory Quality," and "Anti-Corruption"—in the African Governance Index, is utilized to assess the political risks encountered by African nations. The evaluation outcomes were graded from -2.5 (bad) to 2.5 (poor), with lower scores signifying more political peril. In the regression model, we standardized the political risk index, indicating that a greater value corresponds to an increased level of political risk.

Nonetheless, due to the challenges in quantifying political risk, researchers from various nations select disparate alternative indicators. Prior research has utilized the Global Governance Index (WGI), the Index of Economic Freedom, and the International Country Risk Guide (ICRG). In 2018, Jing Zhou and Jing Hong conducted a quantitative evaluation of the political risk in African nations by utilizing the average coefficients of the four World Governance Indicators. In 2017, Chen Si and Ma Yeqing, followed by Zhu Jiaqi in 2021, utilized the national regulatory economic risk level from the International Country Risk Guide to assess the political risk of different nations. In 2014, utilizing ICRG statistical data, Tan Yingying and Fang Zhaoyun (2019) categorized intergovernmental political risk into two tiers: unilateral and bilateral, and established distinct scoring standards for each category.

4.1.4. Control Variable

The control variable for market openness to trade is determined by the proportion of total imports and exports relative to GDP, as sourced from the World Bank WDI database. In African nations, the openness of market commerce significantly influences the quality of international trade. This study established this indicator as a control variable, based on the research conclusions of Moustier and Teboul in 2001. Outward direct investment is quantified as the ratio of a nation's foreign direct investment inflows to its GDP for the current year, and this metric is transformed into logarithmic form for analytical purposes. The sample data for this indicator was sourced from the United Nations database, using selection criteria derived on the study findings of Yan Bing, Xie Xindi, and other experts in 2021. Grant reliance serves as a proxy variable for the volume of grants within government revenue, encompassing payments from foreign government departments and international organizations. This study based its variable selection on the research conducted by Yan Hongrong and Zhang Xiaolu et al. in 2020. The degree of socio-economic development is assessed using real GDP per capita, estimated at constant 2017 US dollar prices. The index data was sourced from the United Nations database, and the selection referenced the research findings of Yan Bing and Xie Xindi from 2021, as well as those of Zhou Jing and Hong Jing from 2018. Total natural resources serve as a proxy variable. Data sourced from the World Bank Database. This work adopts a novel perspective based on the research of Chen Weibing and Wu Jin. The exchange rate denotes the annual average rate of China's currency relative to that of the recipient country. Information from the United Nations Conference on Trade and Development (UNCTAD). Consult the decisions made by Renwick et al. (2018). The debt ratio is the total debt repaid throughout the year expressed as a percentage of Gross National Income (GNI). Data was acquired from the United Nations information database (Table 2).

Table 2. Descriptive statistics.

Variable	Description	Maximum	Minimum	Average	SD	Sample Size
Fintech	Financial Technology	63.38	34.61	46.69	5.99	751.50
Aid	Aid to Africa	21.98	6.98	16.51	2.65	581.40
CLA aid	CLA Aid	8.86	0.00	3.80	1.78	325.80
Risk	Political Risk	0.86	−2.29	−0.56	0.55	751.50
GDPper	Per Capita GDP	9,759.60	99.45	1,511.10	1,750.50	737.10
Exchange rate	Exchange Rate	1.65	0.00	0.11	0.23	751.50
Grants	Grant Ratio	110.97	0.00	2.57	5.35	704.70
Debt	Debt Ratio	53.70	0.00	2.76	4.30	716.40
Resource Intensity	Resource Intensity	52.82	0.00	10.26	9.56	737.10
Open Trade	Trade Openness	313.20	0.02	56.33	33.86	733.50
FDI	Foreign Direct Investment	8.02	−1.75	4.68	1.49	692.10
IV1	Industries*times aid received	14.12	8.54	10.91	1.00	556.20
IV2	UN Voting unanimity	0.86	0.00	0.61	0.21	751.50

Note: The data was collected and classified by the author.

Table 3 illustrates that the Variance Inflation Factor (VIF) for all variables is below 10, with the average VIF significantly under 10, indicating the absence of substantial multicollinearity. This study conducted correlation tests for each relevant element. The test findings indicate that the majority of correlation coefficients are below 0.50, suggesting an absence of significant collinearity issues.

Table 3. VIF test.

Variable	VIF	1/VIF	Variable	VIF	1/VIF
Aid	0.99	0.76	debt	1.068	0.739567
Risk	1.78	0.42	grants	1.066	0.76332
Resource	1.18	0.58	exchange rate	1.019	0.797198
Open	1.13	0.70	IV2	0.999	0.808438
GDP per	1.68	0.48	IV1		
FDI	1.12	0.72	1.35	1.125	0.718626
Mean VIF					

Note: The data was collected and classified by the author.

4.2. Results and Analysis of Regression

Table 4 presents the formula for ordinary least squares (OLS) regression (1), the formula for random effects generalized least squares (GLS) regression (2), and the results of fixed effects regression (3). The findings of the OLS regression analysis in (1) indicate a lack of a strong correlation between China's outbound investment and the advancement of Fintech in Africa. Model (2) indicates that China's financial assistance to Africa may be augmented by 6.5% at a significance level of 5%. Model (3) indicates that China's fintech advancement in Africa, at a 5% importance level, will enhance its economic growth by 6.7%. Despite the Hiseman test results endorsing the hypothesis of random effects, a fixed effect model is employed to illustrate the hypothesis below, as the presumed conditions of the random hypothesis are excessively idealistic and there exists a degree of consistency across the estimates. The empirical analysis demonstrates that China's financial assistance to African nations can significantly enhance their progress in financial technology. The rationale may lie in the close correlation between China's aid strategy to Africa and its secondary objectives in fintech growth, which successfully fosters fintech advancement in Africa.

Table 4. Basic regression results.

	(1)	(2)	(3)
	Fintech	Fintech	Fintech
Aid	0.048	0.065	0.067**
	(0.065)	(0.032)	(0.031)
Risk	1.790***	−0.576*	−0.782**

Continued

GDPPer	(0.455)	(0.2768)	(0.27321)
	0.002***	0.001***	0.001***
Exchangerate	(0.000)	(0.001)	(0.001)
	3.7322***	−2.04775**	−2.70229***
Grants	(0.699)	(0.778)	(0.785)
	−0.1499	−0.0444	−0.04178
Debt	(0.0444)	(0.01960	(0.01960)
	−0.001	−0.021	−0.021
Resource	(0.044)	(0.015)	(0.015)
	−0.061**	−0.081***	−0.079***
Open	(0.023)	(0.014)	(0.014)
	0.002	0.024	0.027***
FDI	(0.006)	(0.004)	(0.004)
	−0.488***	0.544***	0.560***
_cons	(0.127)	(0.066)	(0.064)
	52.648***	46.131***	45.970***
Yearfixation	Yes	Yes	Yes
Individualfixation	Yes	Yes	Yes
N	549	555	545
R^2	0.528	0.432	0.445
Adj.R^2	0.511		0.412

Note: *, **, *** in turn indicates that the reflection is obvious at the level of 10.0%, 5.0%, 1.0%, and the stable reference standard error is in parentheses.

4.2.1. Examination of the Mediation Effects

Table 5 demonstrates that (1) represents the fixed effect post-removal of political risk, revealing that China's financial support to Africa can enhance the fintech development of African nations by 6.9% at a 5% significance level, reflecting China's contribution to the "fintech development" of these countries. The rationale may be because China's aid strategy for Africa is closely aligned with its secondary objectives in fintech advancement, hence facilitating the growth of fintech in Africa. Analysis of the moderating impacts of (1), (2), and (3) reveals that the Chinese government's "Aid-Africa" initiative in African nations remains unaffected. Specifically, in (2), there is no evident positive correlation between the volume of China's aid to Africa and the political risks encountered by the recipient nations; thus, the financial assistance from China to Africa is not contingent upon the political risks of the recipient countries, aligning with China's established stance and practice regarding foreign aid. The correlation between the extent of

fintech development in Africa, the magnitude of China's aid to Africa, and domestic policy risks is statistically significant at the 5% level. Specifically, a 1% increase in China's foreign investment in Africa corresponds to a 6.7% enhancement in fintech development. Nonetheless, a 1% increase in the political risk of the recipient country results in an 82.6% decline in its fintech development; thus, greater political and social stability correlates with enhanced fintech development.

Table 5. Intermediate effect test.

	(1)		(2)		(3)	
	Fintech		Risk		Fintech	
Aid	0.078**	(0.027)	−0.0028	(0.004)	0.0617	(0.023)
Risk	0.001***	(0.000)	0.000	(0.000)	−0.826**	(0.286)
GDPPer					0.001	(0.000)
Exchangerate	−2.518**	(0.707)	0.071	(0.126)	−2.452*8	(0.815)
Grants	−0.053		0.0028	(0.004)	−0.041	(0.031)
Debt	−0.031	(0.031)	0.002	(0.002)	−0.022	(0.015)
Resource	−0.068***	(0.017)	−0.006**	(0.002)	−0.073***	(0.015)
Open	0.025***	(0.015)	−0.001	(0.001)	0.024***	(0.005)
FDI	0.581***	(0.005)	−0.015	(0.011)	0.578***	(0.069)
_cons	57.057***	(0.078)	−0.371***	(0.099)	45.732***	(0.646)
Yearfixation	Yes	Yes	Yes	Yes	Yes	Yes
Individualfixation	Yes	Yes	Yes	Yes	Yes	Yes
N	557		557		557	
R^2	0.555		0.033		0.573	
Adj.R^2	0.500		−0.072		0.508	

Note: *, **, *** in turn indicates that the reflection is obvious at the level of 10.0%, 5.0%, 1.0%, and the stable reference standard error is in parentheses.

4.2.2. Robustness Test

1) Data Information Set Submission Method

This study utilized samples from the Johns Hopkins China-Africa Research Initiative for stability testing, and data regarding China's OFDI, aid and loan recipient countries, industries, and financial institutions was acquired. The aggregate sum and quantity of money addressed by the China-Africa Institute are significantly less than those reported by Aid Data. The regression analysis presented in Table 6 indicates that the correlation between China's fintech development in Africa and China's foreign investment fails to achieve 1% significance, and the government has no discernible regulatory influence on fintech development in Africa.

Table 6. Variable replacement method.

	(1)	(2)	(3)
	Fintech	Risk	Fintech
CLAAid	0.347***	−0.015	0.34***
	(0.049)	(0.009)	(0.049)
Risk			−0.253
			(0.348)
_cons	49.070***	−0.454***	48.955***
	(0.617)	(0.109)	(0.638)
Controlvariables	Yes	Yes	Yes
Yearfixation	Yes	Yes	Yes
Individualfixation	Yes	Yes	Yes
N	313	313	313
R^2	0.519	0.0416	0.519
Adj.R^2	0.422	−0.119	0.421

Note: *, **, *** in turn indicates that the reflection is obvious at the level of 10.0%, 5.0%, 1.0%, and the stable reference standard error is in parentheses.

2) Data Information Set Submission Method

Table 7. Standard sample replacement for U.S. aid support.

	(1)	(2)	(3)
	Fintech	Pr	Fintech
USA_DAC	0.289***	−0.0570***	0.216***
	(0.0502)	(0.00886)	(−0.0504)
Pr			−1.276***
			(−0.213)
_cons	−21.30***	−1.459**	−23.17***
	−3.011	−0.48	−2.904
Controlvariables	Yes	Yes	Yes
Yearfixation	Yes	Yes	Yes
Individualfixation	Yes	Yes	Yes
N	711	711	711
R^2	0.618	0.089	0.655
Adj.R^2	0.589	0.026	0.609

Note: *, **, *** in turn indicates that the reflection is obvious at the level of 10.0%, 5.0%, 1.0%, and the stable reference standard error is in parentheses.

The United States has significantly contributed to the advancement of fintech in Africa. Table 7 demonstrates that model (1) predicts a 1% growth rate in US aid to Africa, correlating with a 0.289% increase in Africa's fintech development

score, suggesting that US funding facilitates fintech advancement in Africa. By synthesizing (2) and (3), we ascertain a specific association between American assistance to the United States and the political risk of the recipient nation. The United States intervenes in the internal matters of the recipient nation under the guise of assistance, or it engages the recipient nation due to its own political vulnerabilities.

4.3. Regression Methodology Categorized by Aid Kind

Table 8 indicates that, despite the limited sample size of ODA and the suboptimal results of regression analysis, ODA significantly contributes to the advancement of fintech in Africa at the 10% significance level. This finding aligns with our prior research hypothesis that China has facilitated the development of fintech in Africa.

Table 8. Sub-sample regression method.

	(1)	(2)
	Fintech	Fintech
ODA	0.013	
	(0.040)	
OOF		0.075
		(0.137)
Risk	−0.916***	−0.165
	(0.315)	(2.195)
_cons	46.201***	45.035***
	(0.855)	(0.0845)
Controlvariables	Yes	Yes
Yearfixation	Yes	Yes
Individualfixation	Yes	Yes
N	411	70
R^2	0.476	0.509
Adj.R^2	0.378	−0.039

Note: *, **, *** indicate significant at the level of 10%, 5%, 1% respectively, and the brackets are robust standard error.

4.4. Regression Methodology for the Purpose of Sub-Aid Support

This study categorizes aid purposes into four classifications: classical, economic, development, and mixed reasons. Nonetheless, the quantity of help designated for development purposes totals 310, whilst the quantity of aid not related to development goals is merely 28. Consequently, we concentrate on the impact of developmental aid on the advancement of fintech. This conclusion aligns well with the findings of the fundamental regression analysis in this study (Table 9).

Table 9. Regression method by purpose of aid.

	(1)	(2)
	Fintech	Fintech
Development	0.041	
	(0.034)	
No Development		−0.211
		(0.144)
Risk	−0.439	3.080
	(0.334)	(0.908)
_cons	47.065***	65.966***
	(0.809)	(2.607)
Controlvariables	Yes	Yes
Yearfixation	Yes	Yes
Individualfixation	Yes	Yes
N	309	27
R^2	0.465	0.978
Adj.R^2	0.359	0.866

Note: *, **, *** indicate significant at the level of 10%, 5%, 1% respectively, and the brackets are robust standard error.

4.5. Test for Endogeneity

Table 10. Endogeneity test.

	IV1		IV2	
	Phase1	Phase2	Phase1	Phase2
	Fintech	Fintech	Fintech	Fintech
Aid	0.622***	2.563***	2.237	12.484
	(0.077)	(0.845)	(2.029)	(40.500)
Risk	−1.302	3.481***	−2.375	8.678
Controlvariables	36.957***	9.279	10.934	−164.450
Yearfixation	Yes	Yes	Yes	Yes
Individualfixation	Yes	Yes	Yes	Yes
Underidentificationtest		11.520		0.085
		[0.0006]		[0.7696]
Weakidentificationtest		11.300		0.083
DWH		15.551		6.105
		[0.0003]		[0.0139]
N	519	505	517	559
R^2		−0.642		−2.968

Note: The joint identity test uses Klebergen-Papp rk LM statistical analysis, and the weight recognition test uses Klebergen-Papp Wald F statistics. The Stock-Yogo weighted ID located in "{}" tests for key values in the 15% confidence range. Represents the corresponding P value in "[]". DWH was tested by Dubinwu-Hausmann test.

We identified two instrumental variables: one pertains to China's steel output and its help to Africa; the other is derived from the works of Sun et al. (2024), and Dreher et al. (2008). Consequently, the two employed tools were utilized to modify the quantity. To ascertain the relationship between the volume of China's aid and support to Africa and the social and economic development of the recipient nations. The statistical Table 10 below indicates that employing IV1 (China's steel production and processing aid to China's supply) as an application tool to modify the quantity is justifiable, and the positive correlation between poverty alleviation and fintech development remains largely unchanged between these two factors. The recipient country did not successfully complete a series of internal assessments, including the identification flaw test, endogeneity test, and identification test, about China's voting outcomes at the UN.

4.6. Analysis of Heterogeneity

Table 11. Heterogeneity analysis.

	South	North	OilExp	Resource	NonResource
	Fintech	Fintech	Fintech	Fintech	Fintech
Lnaid	0.0495**	−0.0858	0.000846	0.0495	0.0505
	(0.0181)	(0.0478)	(0.0298)	(0.0391)	(0.0376)
Pr	−0.643**	−0.562	−0.458	−1.458***	0.0376
	(0.351)	(0.400)	(0.420)	(0.232)	(0.242)
_cons	3.538	−25.09**	20.28	−30.04**	10.75
	(2.813)	(11.38)	(15.68)	(6.038)	(5.457)
Controlvariables	Yes	Yes	Yes	Yes	Yes
Yearfixation	Yes	Yes	Yes	Yes	Yes
Individualfixation	Yes	Yes	Yes	Yes	Yes
N	560	76	77	321	350
R^2	0.634	0.925	0.932	0.606	0.682
Adj.R^2	0.787	0.698	0.664	0.765	0.677

Note: *, **, *** in turn indicates that the reflection is obvious at the level of 10.0%, 5.0%, 1.0%, and the stable reference standard error is in parentheses.

The heterogeneity of Africa is analyzed from two viewpoints: firstly, the continent is segmented into North Africa and sub-Saharan Africa; according to the African Economic Prospects 2022 classification, countries are categorized into three groups: oil-exporting, resource-intensive, and non-resource-intensive. The models (1) and (2) in Table 11 below demonstrate a substantial positive association between the aid and support from sub-Saharan African countries to China and its fintech growth, although no such correlation exists in North Africa. This is primarily due to the scarcity of statistical data in North Africa, with just 67 papers available, resulting in an insufficiently evident correlation degree. Secondly, North

Africa, being more economically advanced than the continent of Africa overall, has received comparatively limited money and, in many instances, insufficient assistance. Models 3, 4, and 5 in Table 11 below indicate that China plays an insignificant role in fostering fintech development in Africa, although its contribution to other resource-intensive sectors in Africa's fintech development is 10%. The causes may stem from the limited data on African crude oil exporting nations and the intricate industrial framework of non-resource-based countries. This circumstance has led to Chins involvement in fostering fintech development in these nations to a degree.

5. Conclusion

This research analyzed China's financial aid to Africa from 2000 to 2017, using panel data and the fintech index to assess its impact on fintech development. The findings highlight that China's financial aid significantly contributes to fintech development in Africa, largely unaffected by the political risks typically associated with such regions. In contrast to the United States, which exerts influence through political risks, China's aid model focuses on providing substantial infrastructure and public welfare support, which, in turn, facilitates the development of fintech in the continent. Moreover, the impact of China's aid is particularly pronounced in sub-Saharan Africa and resource-rich countries, excluding oil exporters, where aid flows tend to differ.

China's aid approach, characterized by non-interference and respect for recipient nations' autonomy, contrasts sharply with Western models that often come with political conditions and influence. This approach has been increasingly well-received in Africa, which favors cooperation with nations that share similar historical experiences. Moving forward, China is likely to play an even more significant role in African development, as the international aid system is reformed and African nations continue to seek partnerships that offer mutual benefit and respect.

To enhance its impact, China should implement policies and practice that focus on actionable and practical strategies. Firstly, improving the transparency of its foreign financial aid system by establishing a globally centralized, accessible database for statistical data to ensure accountability and build international trust. Secondly, promoting its aid initiatives through international platforms and strategic public relations efforts will help China engage with global stakeholders and foster stronger diplomatic relationships. Additionally, developing market-oriented financial aid mechanisms and encouraging Chinese businesses to tailor their operations to African needs, particularly in the fintech sector, will drive fintech and economic growth. These efforts are especially crucial, especially have shown interest in partnering with China and have joined and signed for the Belt and Road Initiative, ensuring that all investments align with shared development goals. Finally, strengthening third-party collaborations with organizations like the European Union and the United Nations can alleviate financial burdens, enhance

knowledge exchange, and improve the financial and technological infrastructure of African nations. By adopting these measures, China can solidify its role as a key partner in Africa's long-term development while fostering global cooperation and financial innovation.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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