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Assessing the "Angola Model" finance: the case of Angola

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Mestrado em Economia Política

Orientador:
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ISCTE - Instituto Universitário de Lisboa

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CIÊNCIAS SOCIAIS
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Departamento de Economia Política

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RESUMO

O papel da China como financiador em África tem sido amplamente discutido nas últimas décadas. Neste contexto, China tem representado para Angola um importante parceiro de desenvolvimento, devido à dependência angolana de financiamento chinês para apoiar projetos de desenvolvimento. Central para a estratégia chinesa de crédito para desenvolvimento em África é um modelo de financiamento onde os empréstimos são amortizados pelos devedores através de commodities. Esta forma de financiamento ficou conhecida como "Angola Model" e tem sido frequentemente utilizada em Angola, onde o país recorre às suas vastas reservas de petróleo de forma a garantir financiamento para o desenvolvimento de infraestruturas. Esta pesquisa visa a análise do financiamento "Angola Model" em Angola, explorando as suas principais características e a sua repercussão na relação China-Angola. Através de um estudo quantitativo elaborado com dados provenientes de uma base de dados relativa a empréstimos chineses e informação complementar relativa a dados estatísticos externos de Angola, os resultados identificam os termos e a distribuição dos empréstimos e sugerem uma influência do financiamento "Angola Model" no aprofundamento das relações comerciais e financeiras entre China e Angola.

PALAVRAS-CHAVE: China; Angola; África; Angola Model; desenvolvimento; cooperação económica

Classificação JEL: F34; O55

ABSTRACT

China's increasing role as a financier to Africa has been extensively discussed in the last decades. In this context, Angola has come to see China as an important developmental partner, owing to the country's reliance on Chinese financing to support development projects. Key to China's developmental lending strategy in Africa is a model of financing whereby loans are repaid by the borrowers with commodities. This form of finance became known as the "Angola Model" and has been widely used in Angola, where the country leverages on its vast oil reserves to secure infrastructure developing funding. This research aims to assess the "Angola Model" finance in Angola, exploring its main features and implications on the China-Angola relation. Through a quantitative study conducted on data sourced from a database on China's lending and additional information on Angola's external statistical data, the results identify the loans' terms and distribution in Angola and suggest an influence of the "Angola Model" finance on the deepening of the China-Angola commercial and financial relations.

KEYWORDS: China; Angola; Africa; Angola Model; development; economic cooperation

JEL Classification: F34; O55

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LIST OF ACRONYMS AND ABBREVIATIONS

BNA – Banco Nacional de Angola

CARI – China Africa Research Initiative

CDB – China Development Bank

CNPC – China National Petroleum Company

EPC – Engineering, Procurement and Construction

Exim Bank - Export-Import Bank

IMF – International Monetary Fund

LIBOR – London Interbank Offered Rate

MPLA – Movimento Popular de Libertação de Angola

SINOPEC – China Petroleum & Chemical Corporation

UNIPEC – China International United Petroleum & Chemical Corporation

UNITA – União Nacional para a Independência Total de Angola

CHAPTER I - INTRODUCTION

China's increasing presence in Africa has been a recurring topic in the last decades. A major point of contention lays in China's role as financier on the continent. As some argue that China's economic relations with Africa are set under the framework of mutual cooperation and south-south solidarity, others argue that China is, instead, committed to a widespread resource grab in the African continent. Angola, in this context, has come to see China as a key developmental partner, as a result of Angola's enormous reliance on Chinese financing to support large-scale development projects in the country along with China's willingness to provide loans free from any political or economic conditionalities, unlike other traditional lenders such as the IMF, making Angola the biggest recipient of Chinese loans in Africa. Central to China's developmental lending strategy in Africa is one particular type of financing whereby Chinese loans are repaid by borrowing countries with natural resources. Following a 2008 World Bank report (Foster et al, 2008b) this type of commodity-backed loans came to be known as the "Angola Model" owing to the paradigmatical significance that a set of major Chinese loans to Angola at the turn of the century had in defining this concept. This form of lending, albeit facilitating the access to infrastructure development financing for countries with weaker economies that are not able to provide financial guarantees, it also has the potential of rapidly turning into a burden for the country's finances. There is, however, an absence of research on how these agreements are structured and their actual overall effect on the countries on the receiving end. This is explained largely due to the opaque nature of these dealings along with Beijing's general lack of transparence. This research attempts to fill this gap by assessing the "Angola Model" financing in Angola. This chapter introduces the study by first providing a background and contextualization of the China-Angola economic partnership, followed by the research problem, the statement of the aims and objectives, the research limitations, and finally, the outline of the study.

The birth of the Sino-Angolan relationship dates back to the period of the Angolan Independence war and the subsequent civil war, where China had a tumultuous intervention by alternating its support and providing military assistance to several liberation movements, including both the MPLA and UNITA. Following the end of the Angolan civil war in 2002, the MPLA-led government found the country in a complicated financial situation and in need of post-war reconstruction. A search for international financial support then ensued, however a general skepticism from Western donors regarding corruption practices in the oil sector among

Angolan elite accompanied by an aversion from the Angolan government to comply with any form of conditionality imposed by foreign financiers in exchange of aid meant that Angola had to turn to China for financing, the only willing to refrain from interfering in Angola's internal affairs. This culminated in the first major "Angola model" type of loan agreement between the two, establishing an oil-backed line of credit from China's Exim Bank to Angola. This deal served as the precursor for the current China-Angola economic strategic partnership, one of mutual need, where Angola makes use of its large oil reserves to supply China's growing demand, while China provides Angola with financing, fundamental for the country's development process. As the Sino-Angolan partnership steadily deepens and becomes more intertwined, demonstrated by China's position as the main lender in Angola, as well as in trade, where China is both Angola's leading export destination and import source, a debate has emerged concerning the repercussion that this level of dependency may have on the country. According to data from Banco Nacional de Angola, in 2021, the amount of external debt owed by Angola to China amounted to 42,5% of the total external debt (BNA, 2022d), which in turn places a severe pressure on Angola's finances, with servicing costs for Chinese debt accounting for nearly 5% of the country's GDP, the highest in the world (RTP, 2022).

Due to the implications that it has on international finance, China's involvement in Africa has garnered a lot of attention in recent years, with a current literature not short on topics centered on China's role in Africa, such as Chinese loans, debt distress and debt relief. The literature tends, however, to generally overshadow the idiosyncrasies of the Chinese financing in Africa, as in the case of the "Angola Model". Considering the prominence that this form of financing has in several resource-rich African countries, like Angola, the lack of research on the "Angola Model" is significant, since it makes fully determining whether or not Chinese financing has a comprehensively beneficial outcome for African countries more difficult. The knowledge of how these types of loans are structured and how they are then invested in infrastructural development is, therefore, of paramount importance to help understand if pursuing this model of "natural-resources for infrastructure" can be an advantageous strategy in the long-term for less-developed countries.

Given the scarcity of research on this topic, this study will aim to provide an assessment of the "Angola Model" financing, using the case of Angola, the main destination for Chinese loans in Africa. Through an investigation into how China lends, identifying the terms and conditions of these type of financing, an analysis of data from oil-backed Chinese loans in Angola, exploring its characteristics and how they are employed in the country and an interpretation of the results gathered, this research will attempt to add to the literature by seeking

to answer as to what are the “Angola Model” main features and how does this form of financing influence commercial and financial ties between borrower and lender. This study intends, also, to add to the existing body of knowledge by contributing to the understanding of the effectiveness of the “resource for infrastructure” as a development strategy in developing economies.

The difficulty to gather comprehensive data on Chinese lending, is, however, the main shortcoming of this research, since very few contracts of the agreements between Chinese lenders and borrowing countries are publicly available and complete data on Chinese loans in Angola and the ensuing debt are not accessible. In addition to the general lack of transparence, characteristic of both Chinese and Angolan governments, Chinese loans arrangements frequently include confidentiality clauses that do not permit the borrower from unveiling the terms of the contract of even the mere existence of debt (Gelpern et al, 2021, p. 22). The single use of the Angolan case in this study may also be seen as drawback since the sole focus on the “Angola Model” financing in Angola does not allow for a generalizability of the findings as this assessment only considers how these loans are employed by the Angolan government and does not account for how other African governments make use of the Chinese funding.

The dissertation is structured as follows: in the first chapter the study is introduced, with the research problem, objectives and limitations identified; chapter two consists of a review of the existing literature, divided into two sections: the first on the role of China in Africa and the second on the role of China in Angola; in chapter three, an overview of the “Angola Model” finance is presented, identifying its origins, structure, lending institutions and terms; chapter four discusses the methodology; in chapter five the results of the research are presented, followed by the discussion of the results; the dissertation ends in chapter six with the conclusion.

CHAPTER II – LITERATURE REVIEW

2.1. CHINA-AFRICA

The role of China in Africa and the intentions behind China's economic activities in this continent have been extensively studied in the past. The outcomes of these studies are, however, far from consensual. According to Chris Alden (2007), the existing analysis of the role of China in the African continent falls under three different interpretations, which the author encapsulates as: China as a "development partner", China as an "economic competitor" and China as a "colonizer". China as a development partner to Africa perceives China as pursuing a "long-term strategic commitment", one that, although guided by China's own economic needs, intends on building "effective cooperative partnerships across the developing world" (Alden, 2007, p. 5) and transmitting China's past development experiences to its African partners. The second interpretation regards China has been "engaged in a short-term 'resource grab'" (Alden 2007, p. 5) that, just like some Western countries, does not take into consideration local needs and interests, such as developmental, environmental, or humanitarian issues. In this scenario, Chinese competitiveness has the potential of undermining Africa's development gains, due to the China-Africa trade and the Chinese manufacturing capabilities. The third interpretation sees China's role in Africa as a new colonizer with a long-term strategy aiming at exchanging Africa's traditional Western orientation by devising alliances and partnerships with African elites under the guise of south-south solidarity and cooperation. Under this perspective, China has the capacity to attain some political control in this continent.

At the same time that China is increasingly expanding its presence in the African continent, debt levels in Africa have also increased drastically. This led to some concerns being raised about the sustainability of the debt and the likelihood of a new debt crisis in Sub-Saharan Africa. Coulibaly, Gandhi and Senbet (2019) analyzed whether Sub-Saharan Africa could be headed to a new sovereign debt crisis, similar to the previous one in the 1990's. According to the article, public debt in Africa has been growing rapidly. The median debt has gone from 31% of the GDP in 2012 to 53% in 2017. Due to this ongoing increase in debt burden "about one-third of the countries in Sub-Saharan Africa are either in or at high risk of debt distress", which includes most of the countries in this region affected by the debt crisis of the 1990's. While the authors concluded that a new sovereign debt crisis is not "imminent", they remark that the rapid pace of the debt increase is indeed concerning and not sustainable. The increase in debt itself is not, however, the only concern. It is also the changes in the structure and designs features of

the recent debt accumulation, as well as the servicing costs associated to it. The authors identified four important changes: First, the external debt is predominant and amounts to 60% of the total debt. This exposes African countries to swings in global market conditions, potentially increasing debt servicing costs even further in the case of a rise in global interest rates, for example. Second, this recent debt build-up is characterized by a higher share of debt contracted under commercial terms and a lower reliance on concessional loans, meaning that, with the higher interest rates and shorter maturities, not only the servicing costs are higher, but also the financing of long-term economic development projects is more complicated. Third, there is a very diffuse creditor base in this region, and, even though one of the aspects of the current African external debt structure is the significant role that China has as a creditor, the debt is spread through a plurality of creditors making coordination more difficult, such as in scenarios of debt restructure. Fourth, the reliance on commodity backed debt. This type of loans usually associated with China have raised concerns about the harmful impacts that a badly design one can have economically and socially in a country.

Thus, while indebtedness in Africa has been increasing rapidly along with the major role of China as a creditor in this region, there is a debate as to what extent has China contributed to debt distress, particularly in the Sub-Saharan region of the continent. Central to this discussion are China's development aid commitments in the form of loans and the ensuing debt owed by African countries to China. In her book "The Dragon's Gift", Deborah Brautigam (2009) describes China's views on development and debt sustainability. In a meeting with China's state-owned Eximbank president in the wake of the 2008 financial crisis, it was explained to her that this bank does not take into consideration development sustainability as, according to the Chinese official, the IMF's debt sustainability framework is too static, while China's emphasis on a dynamic sustainability framework allows countries to develop quicker, remarking that the IMF and the World Bank "were wrong to rate an entire country as 'debt distressed' rather than looking at individual projects" (Brautigam, 2009, p. 186). In a more recent article, Brautigam (2019) claims that exists a negative bias from the West towards China. This bias is seen in the West's attitude to the role of China in Sub-Saharan Africa. According to the author, even though China had been involved in the financing of infrastructure in Sub-Saharan Africa since the 1960's, it was only around 2006 that the West, largely through the media and in political discourse, began to perceive China as a threat to Africa and as "new imperial power". With the increasing presence of China in Sub-Saharan Africa and its considerable role of creditor to African countries, China has been accused of using a strategy of debt-trap, meaning that China purposely traps the borrowing countries in unsustainable

amounts of debt so that, when the receiving countries are unable to repay the loans, China is able to secure strategic advantages or seize assets. The idea of a Chinese "debt-trap diplomacy" was firstly suggested in 2017 when Sri Lanka sold the majority of shares of the Hambantota port to a Chinese company. This transaction was, according to Brautigam (2019), wrongly characterized as being an asset seizure on the behalf of China as it was portrayed that China had forcefully taken control of the port when Sri Lanka was unable to repay the Chinese loans used to fund the construction of the port. The "debt-trap diplomacy" idea has since been a recurring topic in the Western political discourse and has been advocated by several news outlets, especially in the USA.

In order to assess the sustainability of Chinese loans to Africa, a study by Eom, Brautigam and Benabdallah (2018), using one of the most reliable database on Chinese loans in Africa, published by the China Africa Research Initiative (CARI) of the John Hopkins University, where the loans from China to Africa were tracked through 2017, the authors analyzed the 17 low-income countries with the highest risk of debt distress and determined that from the 17 countries, in 8 of them (Burundi, Gambia, Cape Verde, Central African Republic, São Tomé and Príncipe, South Sudan, Chad and Mauritania) Chinese loans represented only a small fraction of the total debt and did not contribute considerably to debt distress. In other 6 countries (Ethiopia, Ghana, Mozambique, Cameroon, Zimbabwe and Sudan), although the number of Chinese loans was higher, these countries also borrowed high amounts from other financiers, such as the World Bank and the Paris Club. Thus, in this period, there were only 3 African countries where Chinese loans were in fact the largest contributor to high risk of or actual debt distress - Zambia, where the debt stock at the end of 2017 was at 8.7 billion dollars and had borrowed at least 6.4 billion dollars from Chinese creditors, Djibouti, where Chinese creditors held close to 77% of this country's debt and the Republic of Congo, where their debt situation was so dubious even for the IMF, that the president had to visit Beijing to confirm how much was owed.

A similar study from 2018 done by the Jubilee Debt Campaign (2018), a coalition of organizations and groups which advocate for debt relief for developing countries, on a country-by-country analysis of 48 African government's external debt, using data from the World Bank, the IMF, and from the CARI loan database concluded that China is not the major driver of debt distress in Africa and estimated that China presently accounts for at most 20% of the total external debt owed by African governments, with the majority being owed to multilateral institutions (36%), such as the World Bank and the IMF, and private creditors (32%). Additionally, the study found that only 17% of African government external interest payments

are made to China, contrasting with 55% made to private creditors. Regarding the 16 African countries classified by the World Bank and IMF as to either be in or at high risk of debt distress, the mean average of external debt owed to China is merely 15%, with only three (Djibouti, Zambia, and Cameroon) owing more than a quarter of their external debt to China.

Conversely, other literature found Chinese loans to be a lager peril to debt sustainability. In 2019, a World Bank study by Bandiera and Tsiropoulos (2019), evaluating the impact of the Belt and Road Initiative (BRI) on debt sustainability in 45 countries (with the Sub-Saharan countries of Kenya and Tanzania included) found that one third of the Chinese lending, in the context of the BRI, went to low-income countries in debt distress. Additionally, this study uncovered that 28% of the recipients of the BRI investment are expected, in the medium-term, to experience an increase in debt vulnerability as a result of the BRI, with 7 of them being considered low-income developing countries (LIDC's) and 5 other considered emerging markets (EM's). In the long-term, the projections for debt sustainability found that 37% of the countries analyzed are likely to experience, as a consequence of BRI investment and financing, an increase in their debt-to GDP ratio, of which 5 are considered LIDC's and 6 EM's.

Furthermore, Horn, Reinhart and Trebesch (2021) in a more recent work, explore the role of China in international finance by providing a comprehensive analysis of the Chinese overseas lending, focusing on the loan flows and the subsequent debt burden in developing and emerging economies. For this, the authors built a new database with data from sources such as other publicly available databases, historical archives, country-specific debt reports and from existing literature ranging from 1949, when the People's Republic of China was established until 2017 that "documents the size, destination, and characteristics of China's overseas lending systematically and estimate the outstanding debt stocks of recipient countries" (Horn, Reinhart, and Trebesch, 2021, p. 1). This study found that the 50 countries owing the most to Chinese creditors saw a surge in the average debt stock owed to China, going from less than 1% of the borrowing country GDP in 2005 to 15% of the GDP in 2017. The average debt borrowed by these countries from Chinese creditors amounts to more than 30% of the total reported external debt. China's official loans tend, also, to be made in commercial terms with higher interest rates and shorter maturities. Moreover, the authors estimated the fraction of Chinese lending that goes unreported and found that the hidden loans have grown to more than 200 billion dollars as of 2016. This is concerning to developing countries as, according to the authors, hidden debt makes it more difficult to analyze the sustainability of the country's debt since the true debt burden is unknown. Secondly, this is also an obstacle to debt relief considering that the

knowledge of the composition and the size of a country's debt is important to better manage in case of a crisis.

Consequently, due to the preponderance given to the debate around the role of China on African debt distress and debt sustainability, to understand China's role as a lender in the African continent it is also important to examine how China manages debt when countries are not able to repay it. In a 2020 article, Chris Alden (2020) states that when it comes to debt management China has used several options, such as "debt restructuring, debt forgiveness and debt-for-equity swaps" (Alden, 2020, p. 6). Alden claims that debt restructuring is the alternative adopted by China toward some outstanding payments on dollar-denominated loans by oil-rich countries in Africa (Cameroon, Chad, and the Republic of Congo) and Latin America (Venezuela and Ecuador), which were compromised by the sharp fall in commodity prices" (Alden, 2020, p. 6). As for debt forgiveness, this option is usually applied to financially insignificant loans borrowed during the Maoist era. The use of this form of debt relief has a more symbolic value and marks the stage for a new cycle of borrowing. Debt forgiveness recently has only been applied to interest-free loans and grants and concessional loans between 2010-2012, as well as in the case of Mozambique in 2017 when the country defaulted on its debt, resulting in four of its loans to China being cancelled. The debt-for-equity swap was the one used in the controversial Hambantota port case in Sri Lanka. In this paper, Alden (2020) argues that China is acknowledging the criticisms coming from the West regarding its role as creditor. First, China has distanced itself from debt-for-equity solutions for debt managements after the accusations of debt entrapment. Second, Beijing recognized that loans for infrastructure development secured by commodity exports have the consequence of increasing repayment instability due to the volatility of commodity prices. Third, China understood that borrowing to countries with a weak capacity to repay was, in fact, putting a strain on the Chinese lending banks and that a more comprehensive approach to development finance was needed. The author concludes that, even though, China is currently developing a framework for a comprehensive external debt management system, it has much further to go.

It was with the aim of researching China's practices of debt relief in Africa that Acker, Brautigam and Huang (2020), drawing data from the CARI loan database and from their previous research on this topic, analyzed data and case studies of the Chinese management of loans in circumstances where borrowers are unable to repay the loans. According to the authors' data, consisting of more than one thousand Chinese loan commitments in 49 African countries since 2000, the study found that between the period of 2000-2019 China have cancelled at least 3.4 billion dollars of African debt, belonging to older mature and interest-free loans that had

defaulted. The study additionally found that, between this period, Chinese lenders restructured or refinanced at least 26 loans in this region, amounting approximately to 15 billion dollars of African debt. It was also found that China chooses to approach debt relief on a loan-to-loan basis rather than to approach it on the entire debt portfolio of a country basis. Regarding the "asset seizure" strategies that China has been accused of pursuing, the authors did not find, in the restructuring cases analyzed, any evidence of China seizing any asset. Lastly the authors concluded that China prefers to negotiate debt relief on bilateral terms and, following China's non-interference approach to foreign countries domestic affairs, it has never applied political and economic conditions to the recipient countries unlike other traditional lenders such as the IMF and the Paris Club.

2.2. CHINA-ANGOLA

In his book "Magnificent and Beggar Land", Ricardo Soares de Oliveira (2015) places China's role in Angola as part of its broader strategy in Africa, where the main ambitions are the access to natural resources, such as the Angolan oil and the opportunities offered to China in the reconstruction of Angola. As for the Angolan perspective, China offers three important benefits: "reconstruction, balancing vis-à-vis Western powers, and elite enrichment opportunities" (Oliveira, 2015, p. 170).

Through an analysis of the CARI database, Brautigam and Hwang (2016) found that Angola, between 2000 and 2014, was by far the biggest borrower of Chinese loans, receiving 21.1 billion dollars over this period. Furthermore, while only around a third of the Chinese loans to Sub-Saharan Africa were secured by commodities or exports of natural resources, Angola was also the biggest borrower of oil-secured loans with almost every single loan being insured by this natural resource. The authors claimed, however, that the purpose of this guarantee was not to capture natural resources, but rather to reduce the risks of lending to "poor and unstable countries" (Brautigam and Hwang, 2016, p. 4). Additionally, according to the database, more than 83% of the Chinese loans in the mining sector went to Sonangol, Angola's state-owned oil company. Lastly, Brautigam and Hwang (2016) noted that, even though China imported 49% of Angola's oil, partly as a form of repayment for the loans, the Chinese oil companies themselves owned only around 10% of the oil being produced in this country, unlike Western companies like ExxonMobil and Total that had the control of Angolan oil investments for decades.

Similarly, in the 2020 article mentioned above, Acker, Brautigam, and Huang (2020) used Angola as a case study to analyze debt restructuring in China-Africa loans. Drawing on

the CARI loan database, they found that, since 2000, Angola, China's largest borrower in Africa, secured more than 40 billion dollars in loan commitments from a variety of Chinese lenders to both the Angolan government and Sonangol, the state-owned oil company. Additionally, even though not every loan is covered by Angola's oil export income, an important part are. Offshore escrow accounts are made with the lending banks for these oil-secured lines of credit. The Chinese oil buyers will then deposit a share of the payment expected "to cover the annual level of payment on a particular line of credit" (Acker, Brautigam and Huang, 2020, p. 19). The fall in oil prices between 2014 and 2016 put a strain on both the Angolan government and Sonangol finances, however, these escrow accounts serving as collateral for the oil-secured loans were sufficient to avoid a need for debt relief as they were said to "contain enough revenue to cover the annual debt repayment obligations" (Acker, Brautigam and Huang, 2020, p. 19).

CHAPTER III – THE "ANGOLA MODEL" FINANCE

The "Angola Model" refers to a method of financing frequently employed by the Chinese Government and its financial institutions, such as the China Ex-Im Bank and the China Development Bank (CDB), in resource-rich developing countries. These deals are structured in a manner whereby the financing, almost always tied to infrastructure development, is secured using the proceeds from the export of natural resources as repayment for the loan. These Chinese resource-backed loans have established themselves as a viable alternative for resource-rich nations that have difficulty in providing adequate financial guarantees to back their loans commitments to access infrastructural development funding. The "Angola Model", thus, allows for the implementation of infrastructural development projects within these countries using Chinese financing, while simultaneously ensuring the supply of natural resources essential to China, such as crude oil (Jurenczyk, 2020). These deals tend, also, to perform better in contexts where there is a high degree of state of control over the natural resources as opposed to contexts where the sector is more liberalized (Alves, 2013, p. 124), which may explain its widespread use by China in the African continent.

3.1. ORIGINS OF THE "ANGOLA MODEL"

The death of Jonas Savimbi in 2002 and the subsequent waning of the UNITA resistance signified the end of the Angolan Civil War. In the aftermath of the conflict, the Angolan government headed by the MPLA found the country going through a catastrophic humanitarian crisis where millions were displaced and lacked access to basic needs, such as water and health, and with a basic infrastructure almost entirely destroyed. Angola at the turn of the century, was, hence, in dire need of funding in order to assist the complex task of rebuilding the country. Nevertheless, "this need for foreign money never translated into a willingness to accommodate any degree of conditionality" (Oliveira, 2015, pp. 59-60), meaning that what the Angolan government intended was to mobilize all the international contribution accessible and then subject it to the government's own political agenda without any interference from said donors. At a time where Angola's opaque dealings in the oil sector were starting to be the focus of increasing international criticism under suspicions of corrupt practices among the Angolan elite in this sector, Western donors, headed by the IMF, demanded more transparency along with a macroeconomic stabilization policy that could help reduce inflation through cuts in public spending. Thus, while manifestly open to provide funding, any large-scale infrastructure project

to be funded by the IMF would only be able to "get the green light" once Angola had improved its fiscal situation (Corkin, 2011, p. 171). These conditions were not aligned with the Angolan elite's interests and, as a result, Angola's president José Eduardo Do Santos turned to China, the only international partner willing to refrain from interfering with Angola's internal affairs. It was in March of 2004 that, during a visit from China's Vice-Premier Zhang Peiyeang, the first major oil-backed loan agreement between China and Angola was signed. It was this landmark loan agreement that helped popularize this form of lending in Africa, and it was due to its paradigmatic significance that it, ultimately, caught the attention of the World bank in a 2008 report (Foster et al, 2008a; 2008b) where this form of lending began to be termed "Angola Model" (or "Angola Mode").

The agreement, channeled through China's Exim Bank, consisted in a 2-billion-dollar credit line to the Angolan government. The line of credit was to be disbursed in two equal installments, with the first tranche payable in September of 2004 and the second in March of 2005. The loan, handled by the Angolan Ministry of Finance, had the goal of tackling Angola's lack of vital infrastructure and was payable at the London Interbank Offered Rate (LIBOR) plus 1.5 percent over a period of 17 years with a grace period of 5 years. In exchange, China was guaranteed 10000 barrels of crude oil per day (Burke, Corkin and Tay, 2007, p. 23). Under this agreement it was Sonangol, the Angolan national oil company, that would act as the guarantor and the repayment was to be made with the proceeds of oil sales from Sonangol to its Chinese counterpart Sinopec, more specifically to Sinopec Group's trading company, UNIPEC (Alves, 2013, p. 108). Nonetheless, albeit devoid from any good governance conditions imposed by the other lenders, the loan still followed the pattern of tied aid in that it was agreed that the public tenders for the projects involved were to be granted for the most part to Chinese enterprises approved by Beijing (70%) with only 30% awarded to the Angolan private sector (Burke, Corkin and Tay, 2007, p. 24).

Given its importance in defining the concept and in contributing, subsequently, to its widespread implementation, the 2004 Sino-Angolan loan agreement gained the status of the archetypal "Angola Model" loan. The quintessential nature of this loan led to a general belief that it was the first of its kind. The assumption that this agreement was novel and groundbreaking is, however, inaccurate. The origins of the first "Angola Model" deal are far from consensual. According to Zongwe (2010), there are three different arguments pinpointing the period when this model first appeared. The first account comes from the aforementioned World Bank report that states that this sort of loan formula follow "a long history of natural resource-based transactions in the oil-industry" (Foster et al, 2008a, p. 55). The World Bank's

position is, nevertheless, debatable, as it is merely grounded on a book concerning production sharing agreements as well as on an account from a Human Rights Watch report about how Angola acquired weapons with proceeds from future oil sales during the war. Both instances involve different types of transactions from what the "Angola Model" entails (Zongwe, 2010, p. 5). Brautigam in her book "The Dragon's Gift" (2009) claimed that resource-backed loans can be traced all the way back to a Japanese concessional loan to India in 1958 to develop an iron ore mining sector in Goa in exchange for iron ore and later, in 1978, with a long-term trade agreement between Japan and China, where Japan used low-interest loans "to finance the export of $10 billion of its modern plant, industrial technology, and materials, and China agreed to pay by exporting the equivalent in crude oil and coal to Japan" (Brautigam, 2009, p. 46). This argument also fails to explain the origin of the "Angola Model" since both are cases of long-term agreements and represent instances of countertrade and not investment contracts like the "Angola Model" (Zongwe, 2010, p. 6). The last argument alleges that the "Angola Model" is a product of the 21st century, born in Africa, with the construction of the Congo River power dam purportedly signifying the first case of this type of deal. This argument is supported by experts who claim to have never encountered resource-backed contracts before 2001 (Zongwe, 2010, p. 6).

3.2. STRUCTURE OF THE LOANS

China's approach to these resource-backed deals in Sub-Saharan Africa translate, to a certain extent, the complementarities between China and Africa into contractual terms. Whereas China possesses, arguably, the largest and most powerful construction industry in the world and an enormous demand for natural resources, Africa is known for its shortage of basic infrastructure and its vast supply of raw materials. The "Angola Model" entails, thus, an arrangement between lender and borrower where it is established that the repayment for the provision of funding for infrastructure development is to be made with the export of a natural resource. The "Angola Model" is increasingly being used by Chinese institutions to finance countries with poor creditworthiness but an abundance of natural resources. This arrangement allows for these countries to leverage on their large supplies of raw materials in order to develop infrastructure assets, at the same time that enables China to ensure a stable supply of natural resources and to help expand Chinese enterprises' ventures abroad, all the while reducing the lending risk.

The primary borrowers of the "Angola Model" financing are governments and state-owned natural resources companies and, albeit the most common borrowing entity being the governments themselves, the line separating the central governments in Africa and their state-

owned enterprises is frequently blurry. This resource backed finance can come with two formulas, either in loans to finance individual projects or in lines of credit to finance several projects, as in the case of the 2004 Angola loan that financed over 50 different projects (Mihalyi et al, 2022, p. 13). In its conventional and most complex form, the "Angola Model" loans directly involve a myriad of actors, such as the borrower's government, the Chinese lending institution and state-owned natural resource companies from both countries.

The process starts after a letter of application from the borrower's Minister of Finance along with an EPC contract with a Chinese firm, a project feasibility study and an environmental impact assessment is sent to the Chinese bank involved. Subsequently, a Chinese natural resource company signs an agreement with the borrower's state-owned company for the acquisition of a commodity. Another agreement is, then, signed between the borrowing government and the Chinese bank establishing that the proceeds of the export are to be used for the repayment of the EPC contract loan (Brautigam and Gallagher, 2014, p. 348). The "Angola Model" loans comprehends, therefore, a framework agreement between the borrower's government and a Chinese financial institution, usually China's Exim Bank or the China Development Bank (CDB), where the lending institution extends a financial loan for investment in one or several infrastructure projects. These projects are contracted to Chinese construction firms. At the same time, the loan is backed by a separate deal between an exporting state-owned enterprise from the borrower's country and an importing Chinese enterprise which stipulates that the first is required to sell a specific amount of a commodity to its counterpart over the period of the loan. The receivables from the sale are, then, deposited directly by the Chinese importing company into a current account held both by the borrower's government and the bank and used to service the loan.

Thus, in contrast with what is widely believed, the "Angola Model" loans are not repaid in kind (through shipments of the commodity), and the Chinese lending institution only has a lien on the proceeds of the commodity's export to the Chinese enterprise involved in the deal rather than on the commodity itself. Such resource-backed arrangements involving resource sales receivables "require agreed specific amounts of natural resources (barrels per day, tons, etc.) to be sold to designated buyers. The amount that the designated buyers are obligated to pay for the resource is paid for the benefit of the lender" (Mihaliy et al, 2022, p. 9). For instance, assuming that the resource agreed-upon for the transaction is oil, a defined number of barrels per day will then be sold, throughout the loan repayment period, to a Chinese national oil company, usually Sinopec or CNPC, which, in turn, will deposit the payment into an account from which the Chinese bank, usually the Exim Bank or CDB, will withdraw the sum owed by

the borrower. Furthermore, it should be noted that when the repayment method is tied to the sale of a pre-specified amount of a commodity, the sale of that quantity may, nonetheless, fall short of the required payback amount over the stipulated duration owing to fluctuations in the price of that commodity. Consequently, it may be necessary for the actors involved to calculate and define the repayment length of the resource-backed loan based on estimations about the commodity's expected price levels (Mihaliy et al, 2022, p. 11).

Another feature of the "Angola Model" loans is the recurrent use of special accounts that the borrower is required to maintain in order to service the loan. These banking accounts, held either at the lending institution or at a bank acceptable to the lender, are where the Chinese importing company deposits the payment for commodities and from which the bank withdraws the principal, interest and any other fee owed by the borrower. They are used much more extensively by Chinese state-owned banks than by other lenders and serve security purposes since, in this way, the funds from the loan never enter the borrower's banking system and are, therefore, beyond the borrower's control (Gelpern et al, 2021, p. 6).

Furthermore, similarly to the landmark credit loan to Angola in 2004 which assigned 70% of the contracts for the projects involved to Chinese enterprises and only 30% to the Angolan private sector, the loan agreements employing this model tend to follow a pattern of tied finance whereby the funds are used primarily on the purchase of Chinese goods and services. These prerequisites were detailed on the China Exim Bank's website which stated that for the export buyer's credit offered by this bank "the Chinese content of export products should be no less than 50 per cent of the total contract value. For the overseas contracting projects, no less than 15 per cent of the project shall come from the export of Chinese equipment, construction mechanics, materials, engineering work, technical and managerial expertise, and labor services" (Brautigam and Gallagher, 2014, p. 351).

3.3. THE LENDING INSTITUTIONS

The "Angola Model" resource-backed loans have been predominantly extended through two Chinese state banks: The China Exim Bank and the China Development Bank. Despite the fact that the Exim Bank is a state policy bank, operating in close coordination with Beijing, and the CDB is a commercial bank, operating on commercial terms with its own objectives, through a confluence of interests both manage to advance the central government's strategic goals.

CHINA EXIM BANK

The China Exim Bank is a state policy bank established in 1994 with the purpose of implementing "state industrial policies, foreign economic and trade policies, and diplomatic policies" (Foster et al, 2008a, p. 52). The bank provides four varieties of finance: letters of guarantee to Chinese companies in order to lessen the risk related to doing business abroad, export seller's credits to support Chinese companies' overseas construction contracts and investments projects, export buyer's credits on a government-to-government basis allowing for Chinese enterprises to undertake projects for foreign governments and, lastly, concessional foreign loans (Brautigam and Hwang, 2016, pp. 23-24). Concessional loans are defined by their lower interest rates compared to commercial loans and/or lengthier grace periods. China Exim Bank is the sole lending institution authorized to extend this form of loan to finance foreign projects. The bank's focus on providing lines of credit to Chinese enterprises and foreign governments looking to acquire Chinese goods and services is aligned with Beijing's strategy of promoting the expansion of national firms overseas.

CHINA DEVELOPMENT BANK

China Development Bank also founded in 1994 with the purpose of financing infrastructure and strategic industries internally. Nonetheless, after the turn of the century, China's concerns about shortages of natural resources along with a new strategy of promoting the expansion of Chinese enterprises overseas prompted the CDB to internationalize its operations (Downs, 2011, p. 43). Throughout the years, the CDB has provided numerous resource-backed loans in Africa. This has led to the perception that the CDB is an extension of Beijing's foreign policy, aiming at securing natural resources overseas. This is not the case as the CDB, albeit being a policy bank with the aim of supporting the government's policy goals, operates as a commercial lender. This means that it has its own agenda and interests, and the loans are offered at market rates. In this way, the CDB manages to balance its "commitment to profitability with its responsibility to the government" (Downs, 2011, p. 47).

3.4. TERMS OF THE LOANS

There is not a lot of information available on the terms of the contracts since the "Angola Model" agreements have a tendency to be quite opaque as China chooses not to disclose the details included in these contracts. Moreover, on the borrower side, most African countries relying on this form of financing are generally less transparent in their debt reporting, and

consequently, tend to withhold information regarding the terms of the arrangements signed. It is, however, known, that, on average, resource-backed loans from both the Exim Bank and the CDB involve sizable sums of capital, and have far shorter disbursement periods compared to their Western counterparts. Additionally, the borrower is not subject to any policy prerequisites from these banks. Nevertheless, in exchange, the borrower is obligated to acquire Chinese goods and services (Alves, 2013, p. 100).

The World Bank reported in 2008 that resource-backed Chinese loans in Sub-Saharan Africa, on average, offered an interest rate of 3.1%, and a maturity of 13 years with a grace period of 4. It was noted, however, that these criteria vary considerably amongst different borrowers, with interest rates ranging from 1% to 6%, maturities from 5 to 25 years, and grace periods ranging from 2 to 10 years. Furthermore, given the considerable variation of financial conditions across the borrowers, the loans extended by the Exim Bank are not always concessional, with part of the loans falling above the concessionality threshold (Foster et al, 2008a, p. 60). A more recent World Bank report (Mihaliy et al, 2022) analyzing a set of "Angola Model" loans in Sub-Saharan Africa revealed that the maturities ranged from 8 to 25 years, and the interest rates were offered at fixed or floating rates. The fixed rates, offered by the Exim Bank in every instance, varied between 0.25% and 2%. As for the floating interest rates, it was generally used the LIBOR reference rate, with rates ranging from Libor plus 1% and Libor plus 2.95% (Mihaliy et al, 2022, p. 12). This suggests that, while some of these loans do have exceptionally low interest rates, most Chinese finance is in line with the interest rates offered in global capital markets.

The "Angola Model" is used to finance individual or multiple infrastructure projects in a variety of sectors. Between 2001 and 2007, the bulk of the Chinese infrastructure funding was allocated mostly to the transport and energy sectors, specially through initiatives involving the construction of railroads and hydropower projects, respectively (Foster et al, 2008b, p. 2). The Exim Bank's line of credit extended to Angola in 2004 was one instance of funding being employed on a multitude of projects in different sectors. Construction of electricity lines, building of schools and hospitals, water supply projects and the acquisition of equipment and vehicles were among the projects undertaken (Mihaliy et al, 2022, p. 13). As for the natural resources used in these arrangements, although most of the resource-backed loans are secured by the revenues coming from the sale of oil to Chinese enterprises, other commodities are also utilized to service the loans. Throughout the years China has signed loan agreements with African countries to provide financing with the sale of a diversity of natural resources being used to pay back the loan, including iron, copper, cocoa, and even sesame seeds.

CHAPTER IV – METHODOLOGY

Considering China's significance in international finance and its expanding engagement in Africa, there is a scarcity of research on the "Angola Model" financing, which is frequently overlooked by the existing literature. In a context of a lack of research on this form of financing, and with the aim of assessing the "Angola Model" finance, the present research is centered on the case of the "Angola Model" finance in Angola. The selection of the Angolan case study is justified by Angola's position as the largest recipient of Chinese financing, the paradigmatic significance of the first "Angola Model" loan extended to the country that contributed to its wider adoption and the fact that, despite China-Angola relations being recent, having been established around the turn of the century, there is a deep entrenchment of both countries commercial and financial ties. Considering the aim of the research, these three factors deem the study of the "Angola Model" finance in Angola the most appropriate case.

To assess the "Angola Model" finance, and to better understand the effects of this form of financing in Angola, its features and its influence on the China-Angola relations were examined. For this purpose, a quantitative study was conducted using secondary data on "Angola Model" loans granted by China to Angola, as well as on Angola's imports, crude oil exports and external debt.

The secondary data on the "Angola Model" loans was sourced from the William and Mary's AidData Global Chinese Development Finance Dataset (Custer et al, 2021). With the aim of providing a comprehensive view of China's overseas develop finance, this dataset tracks projects financed by Chinese institutions across 165 countries between the period of 2000 and 2017. For Angola, the dataset comprises 350 loans between this period, 118 of which (33.7%) constitute cases of "Angola Model" loans since information is provided disclosing that these loans were backed by the proceeds from the sale of natural resources. The resource-backed loans were all pledged by the lenders between 2004 and 2016 and each of these loan agreements were to be repaid with the incomes from oil exports. As for Angola's external statistics, data was sourced from the annual statistics provided by the BNA on the imports' main countries of origin (BNA, 2022c), the crude oil exports' destination (BNA, 2022a) and the external debt by country (BNA, 2022d).

The data for the first segment, referring to the terms of the loans in Angola, is taken from the "Angola Model" loans of the William and Mary's AidData database (Custer et al, 2021). The sample consists of the "Angola Model" loans which have complete information on the interest rate, maturity, and grace period. The loans with incomplete information regarding

any of these terms were excluded from the sample. This resulted in a sample of 84 loans committed to Angola between the period of 2004 and 2008. For the second segment of the analysis, referring to the distribution of the loans within the country, data was again taken from the William and Mary's AidData database (Custer et al, 2021). From the "Angola Model" loans in this database, the loans with information regarding the allocation sector and amount committed were selected. Excluded from this sample were the loans with missing information on these two elements, as well as loan committed to projects in multiple sectors. Accordingly, a sample consisting of 86 loans extended between 2004 and 2016 was formed. In the last segment of the analysis, the data was taken from BNA's statistics concerning Angola's Chinese imports, exports of crude oil to China and external debt to China. For Angola's imports and exports of crude oil, the time frame selected was from 2003 to 2021. This range allows for a reliable analysis of the effects of the "Angola Model" as it covers both the period prior to the first "Angola Model" loan and the present, providing an insight into its evolution. Angola's data on the external debt to China, due to absence of information on previous years, ranges from 2009 to 2021. The data remains, nonetheless, relevant as the "Angola Model finance continued after 2009. Moreover, the effects of the "Angola Model" loans extended since 2004 are already reflected in the period from 2009 to 2021.

CHAPTER V – RESULTS AND DISCUSSION

5.1. ANALYSIS OF THE "ANGOLA MODEL" FINANCE IN ANGOLA

This section presents the results of the analysis on the Chinese "Angola Model" type loans to Angola. For this analysis, the findings were supported by the William and Mary's AidData Global Chinese Development Finance Dataset (Custer et al, 2021). The oil-backed loans in the dataset were extended by the lenders between 2004 and 2016. However, due to disparities in information, different time frames were used for the analysis, with the first segment considering loans from 2004 to 2008 and the second loans from 2004 to 2016. Moreover, in order to complement the findings, data from BNA's annual statistics (BNA, 2022) regarding the origin of imports, the destination of crude oil exports and the external debt stock by country was also used.

5.1.1. TERMS OF THE LOANS IN ANGOLA (2004-2008)

With the signing of the landmark "Angola Model" loan agreement between China and Angola in 2004, that consisted in a 2-billion-dollar line a of credit committed by the Exim Bank, marking the first deal involving this type of financing, an increasing number of similar loans followed in the subsequent years. The dataset contains comprehensive data on the terms of 84 loans committed between 2004 and 2008[1]. Following the internationalization of its operations, the CDB began providing resource-backed loans after 2008; however, the dataset does not include complete information on their terms; hence, every loan in this sample shares the same lending institution, China's Exim Bank.

With its role of pursuing state policy abroad, China's Exim Bank has established itself as a major provider of finance to the African Continent, with the great majority of China-Africa loan finance originating with the Exim Bank (Brautigam & Hwang, 2016, p. 4). Angola follows the same pattern, with the Exim Bank's funding being predominantly chosen to finance projects in the country. This is due in part to the fact that the Exim Bank is the only Chinese lending agency with the authority to grant concessional loans to borrowers overseas. In Angola, between 2004-2008, the period covered by the data, from the 84 loans extended by the Exim Bank, 51 were concessional and 33 non-concessional, meaning that the vast majority (60.7%) of the finance provided by this bank was characterized by lower-than-market interest rates. Furthermore, all the finance provided to Angola between 2004 and 2006 was made in

[1] See Appendix: Table A1

concessional terms, as it was only in 2007 that the Exim Bank began extending non-concessional lines of credit.

Examining the data, it is possible to identify that the loan agreements' interest rates, averaging at 4.3%, were offered with three separate rates. The interest rates varied from 2.6% in concessional loans to either 6.86% or 7% in non-concessional loans. As for the other terms, in every instance the loan's maturity and grace periods were agreed on 22 and 5 years, respectively.

Table 5.1 - "Angola Model" loan terms in Angola (2004-2008)

Concessionality (%)	Average interest rate (%)	Maturity (years)	Grace Period (years)
60.7	4.3	22	5

Source: AidData (2022)

When the loan terms in Angola are compared to the average "Angola Model" loan terms in Sub-Saharan Africa reported by the World Bank in 2008 (Foster et al, 2008), it is possible to observe that the average interest rate offered by Chinese lenders in Angola (4.3%) is slightly higher than the average rate in the Sub-Saharan region (3.1%). Furthermore, the interest rate range in Angola is also marginally larger, ranging from 2.6% to 7%, compared to Sub-Saharan Africa, which ranges from 1% to 6%. Regarding the loan maturity, the agreed 22-year term in every loan from 2004 to 2008 in Angola meets the Sub-Saharan region's range of 5 to 25 years, although it is several years longer than the average (13 years) in this region. The same is true for the grace period, agreed upon in every instance as a 5-year period in Angola, whereas in Sub-Saharan Africa it spans from 2 to 10 years, averaging at 4 years.

5.1.2. ALLOCATION OF THE LOANS IN ANGOLA (2004-2016)

The "Angola Model" financing is generally used to finance projects with the aim of reducing the infrastructure deficit characteristic of most countries resorting to this form of finance. In Angola, a country suffering from a serious lack of infrastructure following the civil war, the Chinese "Angola Model" loans were used to finance a myriad of projects in different sectors.

From the data gathered from the AidData Global Chinese Development Finance Dataset (Custer et al, 2021), between 2004 and 2016, there is information on the allocation sector and

amount of 86 loan agreements.[2] Loans used to finance multisector projects and with incomplete information on the figures involved were excluded from this sample. The financing was provided by two Chinese lending institutions, the Exim Bank (80) and the CDB (6), with the Exim Bank responsible for all loans from 2004 to 2008 and the CDB the subsequent loans, from 2011 to 2016. The loans were allocated to projects in 9 different sectors: Agriculture, Forestry and Fishing; Communications; Education; Energy; Government and Civil Society; Health; Industry, Mining and Construction; Transport and Storage; and Water Supply and Sanitation.

Table 5.2 - Allocation of the "Angola Model" funds by sector in Angola (2004-2016)

Sector	Number of loans	Amount in Original Currency (million dollars)	Amount in Constant USD 2017 (million dollars)	Amount in Constant USD 2017 (%)
Agriculture, Forestry and Fishing	9	477.5	868.3	4
Communications	6	362.4	635.5	3
Education	19	578.3	1,020.6	4.7
Energy	17	12,862.7	13,404	62.3
Government and Civil Society	1	37	69.6	0.3
Health	13	367.7	646.3	3
Industry, Mining and Construction	1	2,000	1,927.5	9
Transport and Storage	12	1,626.7	2,574.4	12
Water Supply and Sanitation	8	228.7	375.9	1.7
Total	86	18,541	21,522.1	100

Source: AidData (2022)

[2] See Apendix: Table A2

Analyzing the number of projects financed in each sector, the "Angola Model" loans funded projects primarily in the Education (19), and the Energy (17) sectors, with the Government and Civil Society and the Industry, Mining and Construction sectors receiving the least attention, each securing only one loan. Looking at the amount pledged for each sector, through an analysis of the figures in constant 2017 US dollars for a better comparison, it is discernible that, for the most part, the "Angola Model" funding was employed in Energy related projects, with this sector receiving 13,404 million dollars disbursed through 17 loans, which amounts to roughly 62.3% of the total "Angola Model" finance between 2004 and 2016. On the opposite end, the sector of Government and Civil Society only received 69.6 million dollars from a single loan to finance the completion of *Palácio da Justiça* in Luanda (Custer et al, 2021).

The "Angola Model" Chinese-backed loans are almost invariably tied to the construction and improvement of infrastructure in less developed countries. As a result, how these funds are allocated to the different sectors impacts the development process differently. According to the data, at first glance, the "Angola Model" finance in Angola appears to have been predominantly directed to projects in sectors related to the suppression of basic needs and the building of vital basic infrastructure, such as Education, Health, Water Supply and Sanitation, and Energy. In total, from the 86 Chinese loans, 57 were channeled to these four sectors, which amounts to more than 15 billion dollars in 2017 constant US dollars, meaning that, between 2004 and 2016, nearly 72% of the "Angola Model" finance in this sample was committed to projects in these sectors. The employment of these funds in projects contributing to a healthier life, a higher degree of education and a more decent standard of living seems to indicate a deliberate attempt on Angola to channel the resource-backed finance to the promotion of human development within the country. This analysis is, however, misleading as these figures are inflated by the enormous amount committed to the Energy sector, in projects connected, for the most part, to the construction, rehabilitation and expansion of the national power grid, which received the large bulk of the financing.

Additionally, taking into account the influence that these projects have, not only on the human dimension of development, but also on the economic dimension, an analysis excluding the Energy sector and only considering the three other sectors related to the promotion of human development (Education, Health, and Water Supply and Sanitation) reveals that these sectors received, across 40 loans, only around 2 billion dollars in 2017 constant US dollars, just a little over 9% of the committed "Angola Model" finance. When this number is compared to projects in Agriculture, Forestry and Fishing, Transport and Storage, and Industry, Mining and

Construction, the sectors more closely connected to the economic aspect of development (also excluding the Energy sector), although only 22 loans were committed to projects in these sectors, a smaller number compared to the 40 loans received by the first group of sectors, the amount extended to projects fostering economic development, just over 5 billion dollars in 2017 constant US dollars, around 25% of the overall “Angola Model” finance, was larger than the amount committed to projects promoting human development.

Furthermore, the data shows an absence of finance tied to the environment, such as projects aimed at reducing the impact of the economic activity on the environment or projects supporting nature conservation. The paucity of loans directed to an environmental sector demonstrates a lack of concern regarding the sustainability of the environment and suggests that the “Angola Model” financing in Angola does not stimulate a sustainable development process.

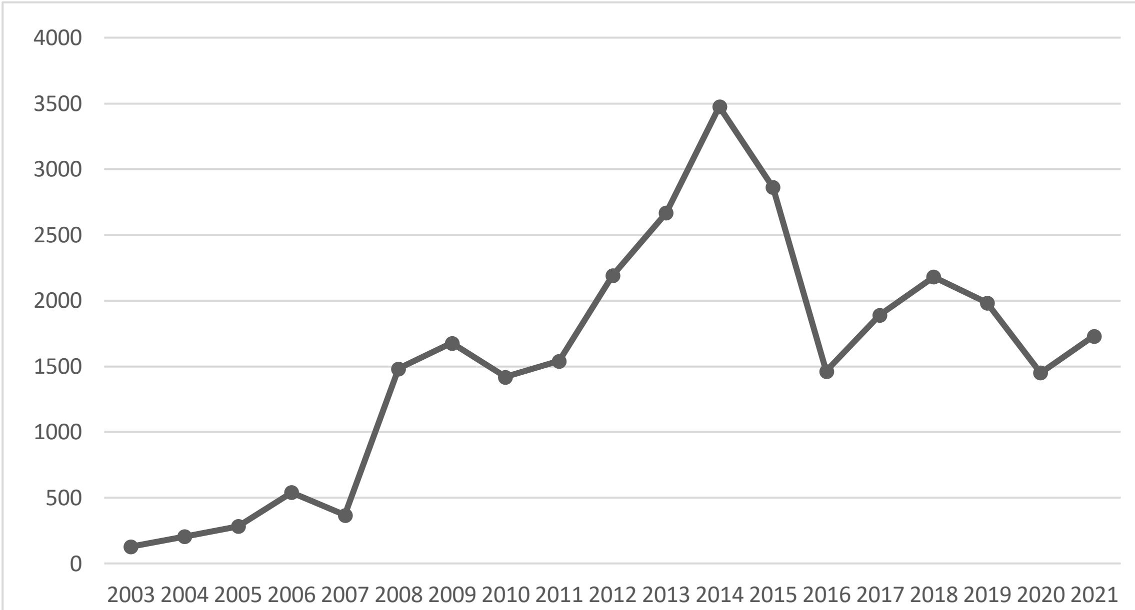
5.1.3. EFFECTS OF THE “ANGOLA MODEL” FINANCE ON THE CHINA-ANGOLA COMMERCIAL AND FINANCIAL RELATIONS

The Chinese oil-backed loans to Angola have influenced the relations between both countries. Thus, in order to complement the analysis of the “Angola Model” finance in Angola and with the aim of better understanding the full scope of the “Angola Model” finance’s repercussions on the China-Angola commercial and financial relations, data was taken from the BNA annual data statistics (BNA, 2022). The data refers to the Angola’s Chinese imports and Angola’s exports of crude oil to China between the period of 2003, before the first “Angola Model” loan extended to Angola, until 2021. Furthermore, data from Angola’s external debt to China, from 2009 to 2021, is also examined.

Angola’s imports from China since 2003, a year before the first “Angola Model” agreement between the two countries, have greatly increased. With the exception of a sharp decline between 2014 and 2016, the import value has been steadily increasing. While, in 2003, Angola’s major partners were Portugal, South Africa, and Brazil, China was only ranked sixth in terms of biggest origin country of Angola's imports, exporting around 128 million US dollars in goods and services to Angola. The country, however, surpassed Portugal as the largest exporter to Angola for the first time in 2015. In 2021, Angola imported approximately 1,730 million US dollars’ worth of goods and services from China, accounting for nearly 15% of the total Angolan imports. The "Angola Model" finance has contributed to the increase in import value, owing to the fact that these agreements follow the pattern of tied finance, in which both parties agree that the loans are “to be used preferentially to procure goods and services from

China” (Brautigam and Gallagher, 2014, p. 351). This is confirmed by the Exim Bank that states that export products from China should be no less than 50% of the total contract value and that, for the overseas contracting projects, no less than 15% must come from the export of “Chinese equipment, construction mechanics, materials, engineering works, technical and managerial expertise, and labor services” (Brautigam and Gallagher, 2014, p. 351).

Figure 5.1 – Angola’s Chinese imports in million US dollars

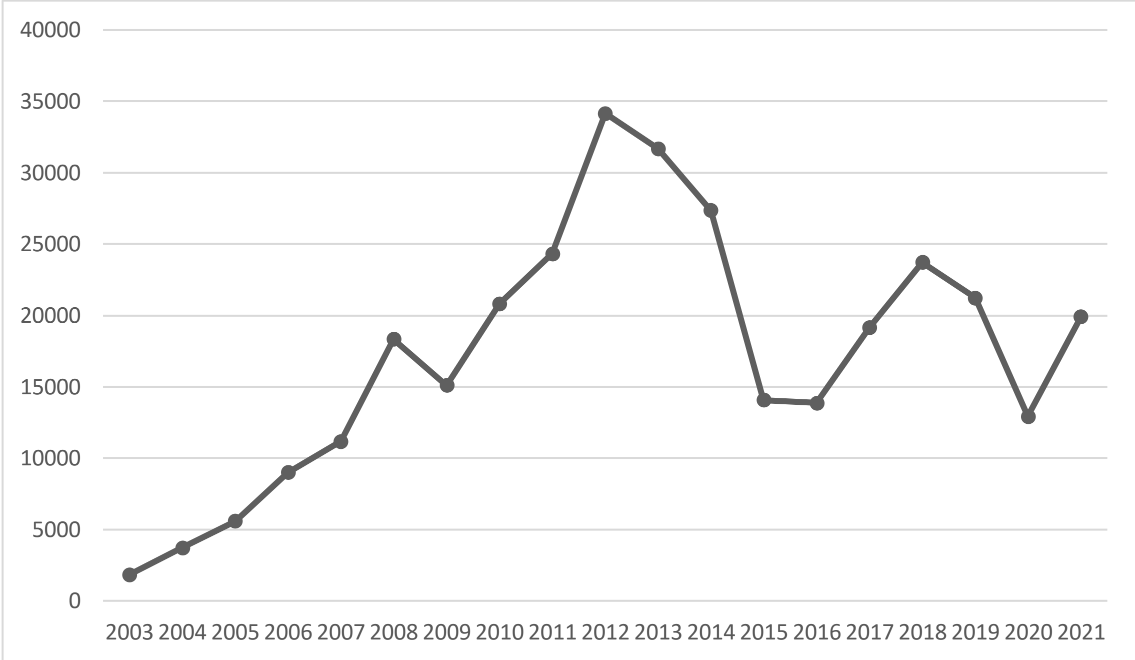


Source: BNA (2022)

Despite some fluctuations in its value throughout the years, Angola's crude oil shipments to China have also climbed significantly between 2003 and 2021. While China imported just under 2 billion US dollars of crude oil in 2003, the amount imported in 2021 was worth almost 20 billion US dollars. China's position as the primary destination for Angolan crude oil has also grown in importance. Historically, the United States was Angola’s major partner in terms of crude oil purchased, importing over 3 billion US dollars worth of crude oil in 2003. China, however, surpassed the United States in 2007, and today is the main destination for the Angola’s oil by a wide margin, importing approximately 71% of the total Angolan crude oil exports in 2021. Considering Angola’s enormous reliance on the sale of crude oil, accounting for 95% of its exports in 2021 (BNA, 2022b), these numbers take on greater relevance and reflect the mounting entrenchment of both countries' commercial ties. Moreover, this data reveals the effects of the “Angola Model” oil-backed finance on the exports of crude oil to China. As the “Angola Model” agreements require the sale of a determined amount of oil

to a designated Chinese enterprise in order to service the loan, the amount of Angolan oil destined to China increases.

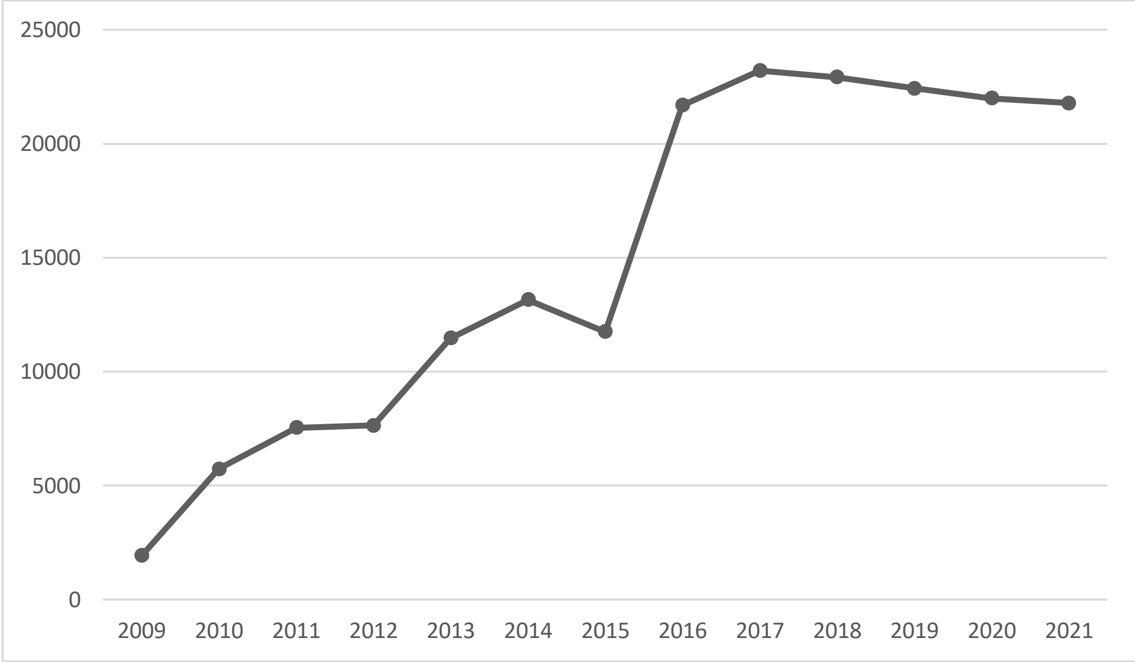
Figure 5.2 - Angola's exports of crude oil to China in million US dollars



Source: BNA (2022)

Contrarily to the previous statistics, which have more extensive data, Angola’s external debt to China only contains data available dating back to 2009. Regardless, this data remains relevant. Angola's debt to China has grown considerably since 2009, with China rising from third largest creditor in 2009, after Great Britain and Brazil, with roughly 13% of Angola's external debt, to the largest creditor in 2021, holding 42.5% of the debt. The deepening of the financial relations, shown by the growing indebtedness and financial dependence of Angola towards China, depicts a country and, consequently, an economy, more vulnerable and exposed to China. And, although constituting just a fraction of the Chinese finance, and thus being only partially responsible for the growing indebtedness, the “Angola Model” loans, nevertheless, have directly contributed for this trend.

Figure 5.3 - Angola's external debt to China in million US dollars



Source: BNA (2022)

5.2. DISCUSSION OF THE RESULTS

The results of the analysis presented above, with the aim of assessing the experience of "Angola Model" finance in Angola, identify the main features of this type of financing, with data revealing the loans' design and its terms. The results also reveal how the financing was employed, exhibiting its trends. Furthermore, it shows the influence and contribution of the "Angola Model" finance on Angola's commercial and financial relations with China.

According to the results from the research, when it comes to the features of the "Angola Model" loans, the data suggests that the great majority of the loans were issued on concessional terms, defined by their lower-than-market interest rates, and that non-concessional loans only began to be extended in 2007. Three distinct interest rates were offered: 2.6% for concessional loans and either 6.86% or 7% for non-concessional loans. Every loan had a maturity and a grace period fixed at 22 and 5 years, respectively. Additionally, in terms of loan volume, the Education and Energy sectors received, respectively, 19 and 17 loans to finance projects, making them the biggest recipients of loans. However, when it comes to the amount committed, the Energy sector clearly stands out as it captured more than 60% of the overall "Angola Model" funds to finance projects in the sector. Regarding the China-Angola commercial and financial ties, the data reveals that Angola's imports from China have increased from 128 million US dollars in 2003 to 1,730 million US dollars in 2021, making China the leading source of Angola's imports. Angola's crude oil shipments to China have soared, rising from less than 2

billion US dollars in 2003 to almost 20 billion US dollars in 2021, making China also the main destination for Angola's crude oil exports, importing around 71%. As for Angola's debt, China went from being the third largest creditor to Angola in 2009, owning around 13% of the Angolan debt, to the largest creditor in 2021, holding 42.5% of Angola's external debt.

The findings on loan concessionality are consistent with the findings of Foster et al (2008), which claims that "Angola Model" loans are not always concessional (Foster et al, 2008a, p. 60). Although over 60% of the oil-backed loans analyzed were extended on concessional terms by the Exim Bank, the only Chinese state bank allowed to provide concessional financing, these loans with lower-than-market interest rates (2.6%) began to lose prevalence in Angola after 2006. This is evidenced by the fact that, from the 51 concessional loans analyzed, only four were granted after 2006, whereas non-concessional loans became the norm. The predominance of concessional loans from 2004 to 2006 suggests that the concessionality of the "Angola Model" loans may have been linked to the period shortly after the end of the Angolan civil war, when Angola was in dire need of infrastructure development funding but could only provide very limited financial guarantees, and, once, the economic situation in Angola stabilized, the oil-backed lending began to be made more on commercial terms. Furthermore, the loan terms in Angola, despite some slight variations, are very similar to those of the resource-backed loans in the Sub-Saharan region, outlined in Foster et al (2008), indicating that when it comes to the three terms examined: interest rate, maturity, and grace period, the "Angola Model" finance in Angola is not too disparate from the other countries in this region.

The findings of this study also contributed to a better understanding of how the "Angola Model" finance is distributed within the country. The data shows that, in Angola, the majority of the funds were allocated to the Energy sector, mostly to finance projects related to the improvement of the national power grid. And, although, the funding was used to address the country's problem of scarcity of basic infrastructure, the data suggests that the amount channeled to projects aimed at improving the living conditions and well-being of its citizens appears to be insufficient when compared to the amount committed to projects in other sectors. Moreover, the apparent absence of finance destined to environmental protection, raises questions regarding the significance that the sustainability of the development assumes for Angola. These shortcomings can lead to a distorted development, where both the human aspect and the long-term sustainability are relegated to a secondary role, which the "Angola Model" finance may have exacerbated.

Regarding the Sino-Angolan relations, the results from the research demonstrate the effects that the "Angola Model" finance had on the deepening of the commercial and financial ties. The rise of Chinese imports into Angola between 2003, the year before the first "Angola Model" loan, and 2021, can be partially attributed to the condition stipulated in the "Angola Model" loan agreements specifying that the loans must be used to preferentially acquire Chinese goods and services (Brautigam and Gallagher, 2014, p. 351). The tied finance imposed in these loan agreements, although advantageous for China, leaves the borrower entirely reliant on Chinese imports to complete the projects, acting, therefore, as a constraint to the local economy. Moreover, the required procurement of Chinese services for the projects, which makes Chinese enterprises responsible for the "engineering works, technical and managerial expertise, and labor services" (Brautigam and Gallagher, 2014, p. 351), is detrimental for the Angolan economy, as it leaves no room for job creation and, impedes the transfer of technology and know-how to the Angolan sectors

The surge in Angolan crude oil exports to China over the same period might also be attributed in part to the "Angola Model" finance. The required sale of a determined number of barrels of oil per day to a designated Chinese enterprise throughout the loan repayment period specified in these oil-backed agreements lead to a significant increase in Angolan crude oil moving to China. Despite allowing for Angola to leverage on its large supply of crude oil in exchange for infrastructure development finance and for China to secure a consistent supply of oil to meet its growing demands and expand its firms' overseas ventures with a reduced risk, these arrangements carry drawbacks for Angola. In an economy so reliant on the sale of oil, with its exports accounting for 95% of the total Angolan exports in 2021 (BNA, 2022b), the "Angola Model" deepens the Angolan economy's problem of lack of diversification, making it not only vulnerable to the fluctuations in global oil prices, but also potentially slowing down the development of other sectors. Moreover, considering that China was the destination of around 71% of Angola's crude oil exports in 2021, the oil-backed deals contribute to the Angolan economy' extreme dependence on China.

The last point is further supported by Angola's growing indebtedness towards China. Angola's reliance on China is not only commercial, but also financial, with China owning almost half of the country's external debt as of 2021. The "Angola Model" finance, albeit representing only a portion of the Chinese funding to Angola, has nonetheless, helped to bolster this dependence. Angola's high levels of financial dependence increases the exposure of the country towards China, leaving it more vulnerable, and potentially harming the country's development process.

CHAPTER VI – CONCLUSION

The expanding presence of China in Africa, and particularly, the role of its financing on the continent are topics that have attracted considerable interest recently. The "Angola Model" financing have been, however, overlooked by the existing literature. In order to gain a new insight into how these agreements are designed and their effect on borrowing countries, the present research provided an assessment of the "Angola Model" finance in Angola. Through a quantitative study with data from a database on Chinese loans to Angola and additional statistical information on Angola's external data, this research intended to examine the features of the "Angola Model" finance and its influence on the China-Angola relations

Two samples of "Angola Model" loans to Angola were constructed for the analysis in order to assess the interest rate, maturity and grace period of the loans, as well as the allocation sector and amount committed. Additionally, statistical information on Angola's imports from China, exports of crude oil to China and external debt owed to China was gathered and analyzed.

Regarding the terms included in the loans, the results indicate that concessional loans, with lower-than-market interest rates, formed the majority of the sample. The concessionality began, however, to lose prevalence over time, suggesting that the predominance of loans with low interest rates seen in the early years of the "Angola Model" lending may have been tied to Angola's inability to provide financial guarantees due to its economic instability. Furthermore, the results indicate that, despite minor variations, the loan terms considered in this research are parallel to the terms of the resource-backed loans observed in the other countries of the Sub-Saharan region of Africa, outlined in Foster et al (2008). Another feature of the "Angola Model" finance in Angola is the prominence of funding used to finance projects in the Energy sector, as well as a general lack of finance allocated to projects aiming at improving the citizen's well-being and living conditions, which, combined with the absence of environmentally friendly projects, may lead to a skewed development.

Additionally, the results indicate a deepening and entrenchment of the China-Angola commercial and financial relations over the period of the "Angola Model" finance, with Angola's imports of Chinese goods and services, crude oil shipments to China and external debt to China increasing significantly. The tied finance imposed in the "Angola Model" agreements contributes to the increase in imports and leaves Angola reliant on Chinese goods and services to complete the projects, as well as having a harmful impact for the Angolan economy as it does not contribute to job creation or to the transfer of technology and know-how. The "Angola

Model" oil-backed finance contributed also for the increase of crude oil exports to China, exacerbating the problem of lack of diversification in Angola's economy, and leaving the country more vulnerable to fluctuations in global oil prices. Lastly, Angola's growing external debt to China, bolstered by the "Angola Model" finance, increases the dependence of the country towards China.

The assessment of the "Angola Model" finance using the case of Angola, aim of this study, allows to acquire a new perspective and understanding on the topic. The results obtained in the present dissertation, regarding the features and implications of this form of financing in Angola, contribute to filling the vacuum in the existing literature on the topic. Moreover, at a time when Chinese financing to Africa is ramping up, the research adds to the literature by contributing to the understanding of the effectiveness of this model as a development strategy for these developing economies.

For the research, among the limiting factors were the difficulties in gathering comprehensive data on the Chinese loans, as information on Chinese lenders and borrowers is scarce and complicated to obtain, due to Beijing's lack of transparence. Furthermore, the use of a single case study may also be regarded as a limitation of the research, as it only contemplates and accounts for Angola's use of the funding, not allowing for a generalizability of the findings to other African countries.

In conclusion, the present dissertation may serve as a starting point and foundation for future research on the "Angola Model" finance in order to further develop and expand the current body of knowledge. This study, in particular, may be considered an incentive and opportunity to conduct future field work, such as observational research and data collection from privileged actors, in order to gain a deeper knowledge and understanding of the "Angola Model".

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APPENDIX

Appendix A

Table A1 – Sample of the "Angola Model" loans in Angola by terms (2004-2008)

Year	Concessionality	Interest Rate	Maturity	Grace Period
2004	Concessional	2,612	22	5
2004	Concessional	2,612	22	5
2004	Concessional	2,612	22	5
2004	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5

Source: AidData (2022)

Table A1 (cont.) – Sample of the "Angola Model" loans in Angola by terms (2004-2008)

Year	Concessionality	Interest Rate	Maturity	Grace Period
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2005	Concessional	2,612	22	5
2006	Concessional	2,612	22	5
2006	Concessional	2,612	22	5
2006	Concessional	2,612	22	5
2006	Concessional	2,612	22	5
2006	Concessional	2,612	22	5
2006	Concessional	2,612	22	5
2006	Concessional	2,612	22	5
2006	Concessional	2,612	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	7,008	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	7,008	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	7,008	22	5
2007	Non-Concessional	7,008	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	7,008	22	5
2007	Non-Concessional	7,008	22	5
2007	Non-Concessional	7,008	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	7,008	22	5
2007	Non-Concessional	7,008	22	5
2007	Non-Concessional	7,008	22	5
2007	Concessional	2,612	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	7,008	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	7,008	22	5

Source: AidData (2022)

Table A1 (cont.) – Sample of the “Angola Model” loans in Angola by terms (2004-2008)

Year	Concessionality	Interest Rate	Maturity	Grace Period
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	7,008	22	5
2007	Non-Concessional	7,008	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	6,86	22	5
2007	Non-Concessional	6,86	22	5
2008	Concessional	2,612	22	5
2008	Concessional	2,612	22	5
2008	Concessional	2,612	22	5
2008	Concessional	2,612	22	5

Source: AidData (2022)

Table A2 - Sample of the "Angola Model" loans in Angola by sector and amount (2004-2016)

Year	Lender	Sector	Amount in Original Currency (USD)	Amount in Constant USD 2017
2004	Exim Bank	Agriculture, Forestry and Fishing	20,131,281	39,798,754.48
2004	Exim bank	Energy	40,058,383.52	79,193,856.1
2004	Exim Bank	Transport and Storage	12,456,421	24,625,856.7
2005	Exim Bank	Agriculture, Forestry and Fishing	28,871,211.6	54,380,238.78
2005	Exim Bank	Agriculture, Forestry and Fishing	63,792,501.1	120,156,074.2
2005	Exim Bank	Agriculture, Forestry and Fishing	85,775,400	161,561,863
2005	Exim Bank	Agriculture, Forestry and Fishing	88,062,484.5	165,869,690.6
2005	Exim Bank	Agriculture, Forestry and Fishing	88,307,572.5	166,331,324.9
2005	Exim Bank	Communications	60,214,680	113,417,085.6
2005	Exim Bank	Education	12,881,716.77	24,263,298.8
2005	Exim Bank	Education	15,255,315.95	28,734,080.7
2005	Exim Bank	Education	16,163,641.55	30,444,953.23
2005	Exim Bank	Education	41,006,416.61	77,237,448.76
2005	Exim Bank	Education	41,242,776.05	77,682,642.5
2005	Exim Bank	Education	43,578,000	82,081,142.91
2005	Exim Bank	Education	7,180,467.48	13,524,736.73
2005	Exim Bank	Education	53,044,838.28	99,912,362.93
2005	Exim Bank	Energy	13,134,754.4	24,739,906.67
2005	Exim Bank	Energy	25,423,762.5	47,886,811.77
2005	Exim Bank	Energy	26,564,923.8	50,036,240.92
2005	Exim Bank	Energy	34,530,930.9	65,040,577.22
2005	Exim Bank	Government and Civil Society	36,963,000	69,621,489.87
2005	Exim Bank	Health	10,809,387.9	20,359,973.22
2005	Exim Bank	Health	16,674,955.2	31,408,035.72

Source: AidData (2022)

Table A2 (cont.) - Sample of the "Angola Model" loans in Angola by sector and amount (2004-2016)

Year	Lender	Sector	Amount in Original Currency (USD)	Amount in Constant USD 2017
2005	Exim Bank	Health	26,266,949.1	49,474,992.04
2005	Exim Bank	Health	3,603,129.3	6,786,657.74
2005	Exim Bank	Health	32,134,308.99	60,526,430.96
2005	Exim Bank	Health	36,469,557.9	68,692,069.25
2005	Exim Bank	Health	39,424,950	74,258,684.55
2005	Exim Bank	Health	43,254,389.19	81,471,607.25
2005	Exim Bank	Health	7,206,258.6	13,573,315.48
2005	Exim Bank	Health	8,337,477.6	15,704,017.86
2005	Exim Bank	Transport and Storage	190,515,690.6	358,844,959.1
2005	Exim Bank	Water Supply and Sanitation	19,385,342.1	36,513,172.59
2005	Exim Bank	Water Supply and Sanitation	22,374,027	42,142,496.39
2005	Exim Bank	Water Supply and Sanitation	40,225,877.1	75,767,267.13
2006	Exim Bank	Communications	52,871,211.9	93,234,854.34
2006	Exim Bank	Communications	61,195,280.4	107,913,793.7
2006	Exim Bank	Communications	66,898,156.5	117,970,435.2
2006	Exim Bank	Communications	67,747,821.3	119,468,762.4
2006	Exim Bank	Education	60,581,824.02	106,832,004.3
2006	Exim Bank	Education	62,187,062.04	109,662,734.5
2006	Exim Bank	Education	8,667,630.88	15,284,788.71
2006	Exim Bank	Education	83,909,196.7	147,968,269.5
2007	Exim Bank	Agriculture, Forestry and Fishing	18,000,000	28,105,831.82
2007	Exim Bank	Agriculture, Forestry and Fishing	36,000,000	56,211,663.65
2007	Exim Bank	Agriculture, Forestry and Fishing	48,606,262.2	75,895,523.94
2007	Exim Bank	Communications	53,500,000	83,536,777.92
2007	Exim Bank	Education	33,578,373.95	52,430,451.73
2007	Exim Bank	Education	12,795,299.39	19,979,029.6
2007	Exim Bank	Education	26,550,000	41,456,101.94
2007	Exim Bank	Education	10,767,600	16,812,908.6
2007	Exim Bank	Education	13,297,500	20,763,183.26
2007	Exim Bank	Education	9,024,750	14,091,561.43
2007	Exim Bank	Education	26,564,950	41,479,445.39
2007	Exim Bank	Energy	129,479,301	202,173,525.5
2007	Exim Bank	Energy	20,250,000	31,619,060.8
2007	Exim Bank	Energy	20,613,159	32,186,110.01
2007	Exim Bank	Energy	44,911,873.08	70,126,975.09
2007	Exim Bank	Energy	9,593,874	14,980,211.62
2007	Exim Bank	Health	65,359,493.2	102,054,606.9
2007	Exim Bank	Health	68,325,951.92	106,686,539.7
2007	Exim Bank	Health	9,787,500	15,282,546.05
2007	Exim Bank	Transport and Storage	396,000,000	618,328,300.1
2007	Exim Bank	Transport and Storage	101,836,419.8	159,010,960.4

Source: AidData (2022)

Table A2 (cont.) - Sample of the "Angola Model" loans in Angola by sector and amount (2004-2016)

Year	Lender	Sector	Amount in Original Currency (USD)	Amount in Constant USD 2017
2007	Exim Bank	Transport and Storage	144,000,000	224,846,654.6
2007	Exim Bank	Transport and Storage	429,710,921.1	670,965,715.6
2007	Exim Bank	Transport and Storage	44,300,000	69,171,574.99
2007	Exim Bank	Transport and Storage	50,702,850	79,169,209.72
2007	Exim Bank	Transport and Storage	55,773,180	87,086,200.96
2007	Exim Bank	Transport and Storage	65,728,217.52	102,630,346
2007	Exim Bank	Transport and Storage	75,685,500	118,177,996.4
2007	Exim Bank	Water Supply and Sanitation	25,918,537.82	40,470,114.73
2007	Exim Bank	Water Supply and Sanitation	4,865,432.24	7,597,056.682
2007	Exim Bank	Water Supply and Sanitation	74,950,920	117,030,997.4
2007	Exim Bank	Water Supply and Sanitation	8,801,560.37	13,743,065.31
2008	Exim Bank	Energy	25,637,692.92	33,933,281.48
2008	Exim Bank	Energy	26,866,210.66	35,559,310.72
2008	Exim Bank	Energy	45,627,512.4	60,391,207.06
2008	Exim Bank	Water Supply and Sanitation	32,217,270.62	42,641,813.21
2011	CDB	Energy	2,000,000,000	2,136,018,656
2012	CDB	Energy	1,000,000,000	1,018,504,692
2013	CDB	Energy	2,500,000,000	2,429,154,676
2014	CDB	Industry, Mining and Construction	2,000,000,000	1,927,502,394
2016	CDB	Energy	6,900,000,000	7,072,447,560
2016	CDB	Transport and Storage	60,000,000	61,499,544

Source: AidData (2022)