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Chinese Economic Activities in Sub Saharan Africa: A Substitute for Europe?

Ineke Keers* and Bartjan J.W. Pennink**

This paper aims to investigate if the Chinese economic ties with Sub Saharan Africa serve as a substitute for the existing European-African relationship. Three types of economic activities are studied to determine a possible substitution effect: 1) trade (imports and exports) 2) foreign direct investment (FDI) flows; and 3) development aid from China and the European Union towards six African countries. Because natural resources, especially oil, appear to be a driver for Sino-African trade this study focuses on oil-importing and oil-exporting African countries. The group of oil-importing African countries is formed by South Africa, Ghana and Kenya. The oil-producing countries are represented by Nigeria, Angola and Sudan. We found that there is no Chinese substitution effect for European imports and exports and the European and Chinese FDI flows seem to be complementary rather than a substitute for each other, which then could lead to the development of African industries. Moreover, the combination of European and Chinese trade, aid and FDI could lead to the development of infrastructure, manufacturing industries and the improvement of social-economical standards in Africa.

Keywords: FDI, development aid, trade, China, European Union, Africa, substitute

Introduction

The economic activities between China and Africa have increased substantially over the past decades. And while the Western critics are skeptical about this new South-South alliance, the African public remains positive about the Chinese presence in the Sub Saharan region. Additionally, the economic ties with China have some positive outcomes for the African continent.

This article surveys the trade, investment and aid links of China and Europe with Sub Saharan Africa. It will aim to explain the consequences for the European continent of China's economic ties with African oil-exporting and non- oil-exporting countries. Most importantly this paper attempts to detect a possible substitution effect of European economical ties with Africa that are displaced by new Sino-African relationships.

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Literature Review

The Sino-African and EU-Africa relationships in literature

The economic ties between China and the Sub Saharan African region have been rapidly expanding over the last decades. China's search for oil, other commodities and new export markets has resulted in a tightened Sino-African relationship. The "Chinese investment boom" on the African continent has not remained unnoticed. But while many authors describe the outcomes of the South-South alliance for China and the involved African countries, they leave out the consequences of this partnership for third parties like Europe. Because China's interest in Africa is mainly driven by its hunger for natural resources this could lead to energy scarcity and diminishing trade for other African partners like Europe or the United States. Goldstein, et al. (2006) describe the Chinese and Indian quest for oil and their role on commodity and energy markets. In their report for the Development Centre of the Organization for Economic Cooperation and Development (OECD), Goldstein et al. (2006) propose better informed policies and strategies to maximize the net benefits for the African countries that cooperate with China and India. Jenkins and Edwards (2004) also examine the effect of Chinese and Indian trade on Africa without discussing possible consequences for other African trade partners.

While Jenkins and Edwards focus on the Chinese perspective, Wang (2007) discusses the driving forces behind the Sino-African relation and focuses on the changing private and public sectors of China. In his article, he states that the Chinese private sector is becoming more important and influential. According to Wang (2007), commercial activities such as trade and investments now drive the Sino-

African economic relationship instead of official development aid.

The most recent important and extensive research on the development of the relationship between China and the Sub Saharan Africa region is written by Broadman's (2007), who describes the growing economic ties of China and India with Sub Saharan Africa. He stresses that China's commerce with Africa is not solely about natural resources but the new South-South trade between China and Africa can present a great opportunity for the African continent to integrate into the global economy. Broadman also focuses on multiple Sino-African economic relationships such as trade, foreign direct investments and loans. He addresses the difficulties and problems of the commercial relationships between China and Africa and then suggests several reforms for all countries that are involved to eliminate these problems and to create a strong and competitive African market.

However, Broadman's research does not include the consequences of the growing relationships between China, India and Africa for third parties. The World Bank study gives a detailed description of the economic ties and possible reforms for China, India and the Sub Saharan African countries but it fails to explain the effects of the Sino-African relationship for other African partners like the United States or Europe.

This article intends to fill the research gap by investigating the effects of the growing Sino-African relationships for Africa's traditional trade partner: the European Union. Moreover, the aim of this article is to discover whether Chinese economic activities in Sub Saharan Africa form a substitute for existing European-African ties.

Looking at trade, FDI and aid

The European and Chinese economic relationships with the African countries are comprised of three elements. The first type of economic activities is trade. Trade can be further defined as imports and exports of services and goods. African imports from the EU and China can result in competition on the African domestic markets. But at the same time imports of cheap consumer goods can enhance the purchasing power of African citizens. The exports from Africa towards China and Europe are most beneficial for resource-rich countries, since commodity prices are high and the demand for resources continues to rise. Exports can boost the African economy, especially when the growing demand from developing economies like India and China pushes the amount and prices of African exports. Jenkins and Edwards (2004) call this the complementary effect. However, African exports in manufactured goods, such as textiles, also face Chinese competition in third markets.

The second economic aspect in the relationship with Africa is foreign direct investment (FDI). The European Commission defines FDI as "*a cross-border investment made by a direct investor with the intent of obtaining a lasting interest in an enterprise resident in another country. International investment is classed as FDI when an investor owns 10 percent or more of ordinary shares or voting rights of an enterprise abroad*" (European Union, 2007). Examples of foreign investments in Africa are Chinese infrastructural projects or Dutch agricultural companies. These investments are characterized by a long term commitment and a significant managerial influence of the Chinese and European partners (OECD, 1996).

Official development aid is the third economic factor that is studied to determine whether European financial ties with Africa

are substituted by Chinese economic activities on the African continent. The OECD provides a very elaborate definition of Official Development Assistance (ODA): *Grants or loans to countries and territories on Part I of the DAC List of Aid Recipients (developing countries) which are: (a) undertaken by the official sector; (b) with promotion of economic development and welfare as the main objective; (c) at concessional financial terms [if a loan, having a grant element (q.v.) of at least 25 per cent]*". In addition to financial flows, technical cooperation is included in aid. Grants, loans and credits for military purposes are excluded. Transfer payments to private individuals are in general not counted. Trade, FDI and aid are the three economic factors which will be observed to find out whether the African continent is getting the best of both worlds with increasing economic bonds with China as well as Europe or if one is just a substitute for the other.

Methodology

African oil-exporters vs. non oil-exporting countries

Chinese investments and trade flows seem to be resource oriented, it can be expected that the European economic ties face more Chinese competition in the resource rich countries. This could mean that the European ties with Africa are declining in oil-rich countries while this may not be the case in scarcely endowed countries. The differentiation between oil-rich countries and non oil-producing countries might show a larger substitution effect in the oil-producing countries.

Therefore, the African countries that are studied will be divided into a group of oil-exporting Sub Saharan African countries and another of oil-importing Sub Saharan Africa nations. Both groups will contain

one of the two African “superpowers”¹. For the oil-producers this will be Nigeria which is an important European partner² and the largest oil-producer in Africa. South Africa is China second largest trading partner (Esther, 2007) and Europe’s most important trade partner and it will be Nigeria’s equivalent in the group of oil importers.

Angola is an important trade partner for the EU as well as China³ and it is the second largest producer of oil in Africa followed by Sudan which is China’s third most important partner. These two countries will also represent the Sub Saharan Africa oil-exporting countries.

Because the Darfur region of Sudan has been much disrupted the other dataset also needs a country that has been socially or politically instable. The Sudanese counterpart will in this case be Kenya. Despite the violent riots in Kenya in December 2007 the country still is an emerging market and a lucrative destination for foreign investors according to World Bank. In the World Bank annual report “Doing Business” Ghana and Kenya are among the top 10 reformers. These countries have imposed the most important policy changes to alleviate doing business in that country. Ghana has implemented the most reforms of all Sub Saharan countries. Therefore, Ghana will make up the third of the oil-importing countries data set. The two datasets are now comprised as following.

Six countries are geographically spread across Sub Saharan Africa which makes

Table 1. Dataset

Oil exporting SSA countries	Oil Importing Countries
Nigeria	South Africa
Angola	Kenya
Sudan	Ghana

the comparison more balanced with regard to the regions formed in the negotiations for the European Economic Partnership Agreements (EPAs).

Result and Discussion

Chinese economic relationships with Sub Saharan Africa

Now that it is clear which African nations will be studied and why, it is time to examine the economical relationships of these countries with China and the European Union. In the following section the Chinese economical relationships with Sub Saharan Africa will be discussed first.

The People's Republic of China has experienced rapid economic growth over the last decades and it is seeking new export markets to sustain this economic growth by becoming the world’s largest exporter.⁴ At the same time it needs more and more natural resources to maintain this growth.⁵ Africa can fulfill both needs for China. The Chinese state-owned oil companies have difficulties to compete with the well established U.S. and European players in the Middle East oil market. Negotiations for Russian oil were not successful either.

¹ The International Monetary Fund (IMF) defines Sub Saharan African oil-exporting countries on the basis of net oil export and they include Angola, Chad, the Republic of Congo, Cameroon, Cote d’Ivoire, Equatorial Guinea, Gabon and Nigeria.

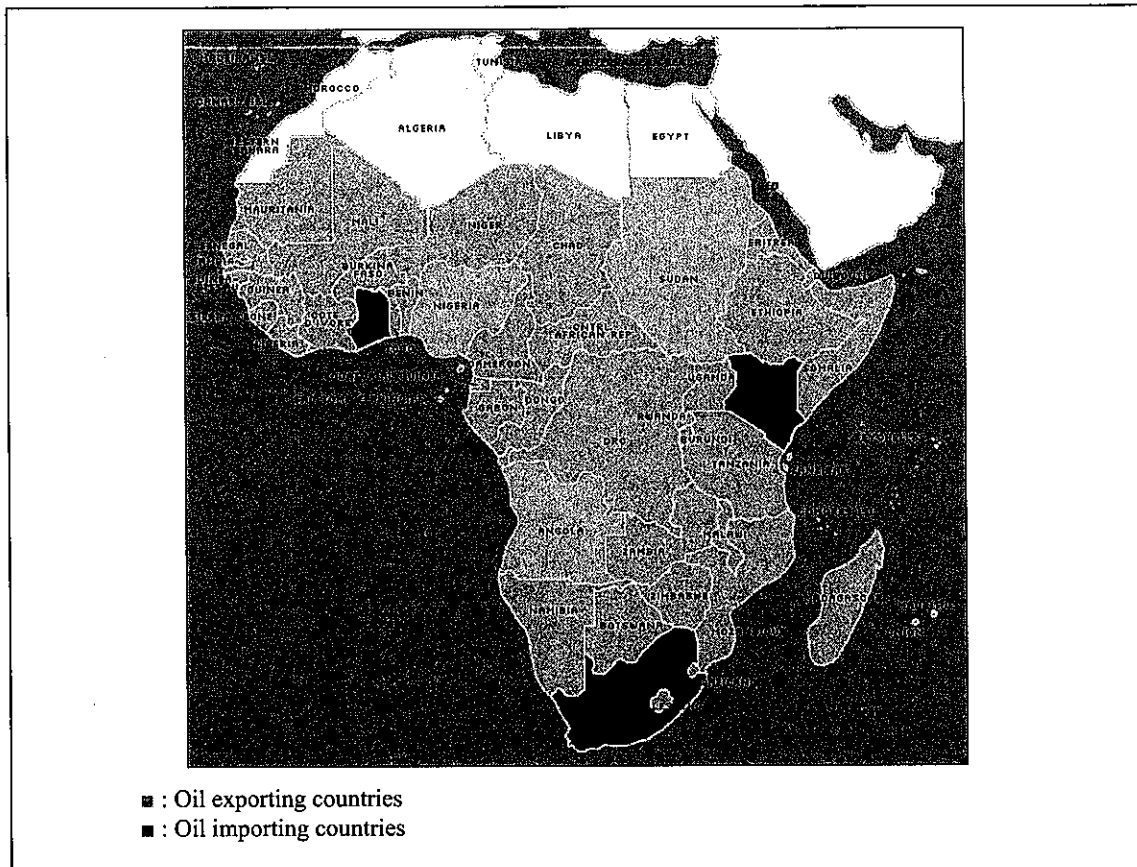
² Nigeria, Ivory Cost and Angola are the three largest exporters to Europe. South Africa is the overall most important trading partner for Europe according to the European Commission.

³ China’s most important trading partners are Angola, South Africa and Sudan according to the IMF, Direction of trade statistics (2005)

⁴ Between 1975 and 2001 the Chinese GDP per capita has risen with an annual average percentage of 8.2% while the total world economy with only grew with an average of 1.2% each year. Jenkins and Edwards (2004) predict that China will have a 14% share of the total world exports in the year 2015.

⁵ After 1993 China was no longer able to satisfy the domestic oil demand. From then on China’s oil imports have been increasingly growing. In 1993 the Chinese oil imports accounted for 6.4% of the total domestic oil consumption and this increased to 31% in 2002. Currently, China is already the second biggest consumer of oil and energy consumption per capita is expected to continue to rise (Ofon, 2007)

Figure 1. Sub Saharan Africa



Therefore, the People's Republic of China has discovered the African continent and its oil market as an area of economic and strategic importance. Hence, China has started investing increasingly in the African continent. The African countries have gladly accepted the new economic aid and investment by Chinese companies. In turn, the Chinese government and firms are often willing to ignore political and humanitarian conditionality's (Alden, 2005).

The Chinese oil diplomacy on the continent has two goals according to Taylor (2006). First, it helps to secure oil supplies for the enormous domestic demand in China. Second, China wants to position itself on the international oil market in the long run. In addition, Forney (2004) argues that it is China's goal to avoid buying all its crude oil on the open market and to reduce exposure to price risks. To do so China

invests in the exploration and development of oil fields in countries that lack the capital or technology to develop these fields (Forney, 2004).

Sudan, for instance, is one of the main beneficiaries from Chinese investments. The China National Petroleum Corporation (CNPC) is the single largest shareholder with 40% of the shares in the Greater Nile Petroleum Operating Company which controls Sudan's oil fields (Brookes and Shin, 2006). The CNPC has invested more than USD 15 billion in Sudanese oil and this investment helped the Sudanese government capture USD 2 billion in windfalls (Zafar, 2007). The Chinese government has also built a USD 700 million oil refinery and it is also currently building a pipeline running from the Heglig oil field in Kordofan Province to Port Sudan on the Red Sea (Blair, 2005).

However, Broadman (2007) has pointed out that China is not solely interested in Africa's oil reserves and therefore it will be interesting to study the Sino-African trade figures.

Chinese trade with Sub Saharan Africa

Over the last few years, there has been a significant increase in the Chinese trade with Sub Saharan African countries, especially since 2001 (UN, 2006). Africa's regional trade arrangements condensed trade barriers, while China reduced its tariffs at the same time (Zafar, 2007). These developments allowed the Sino-African trade to progressively increase. This boost of commercial trade was driven by China's appetite for commodities and the economic growth of Sub Saharan Africa causing an increase in demand for cheap manufactured goods from Asia (Broadman, 2007). The new commercial trade flows between China and Africa are different from the existing European and US trade flows with Africa because these previous economic transactions with the EU were stimulated by preferential agreements. China's non-interference policy results in an economic relationship with the Sub Saharan countries with "no strings attached". In other words, China does not interfere with domestic

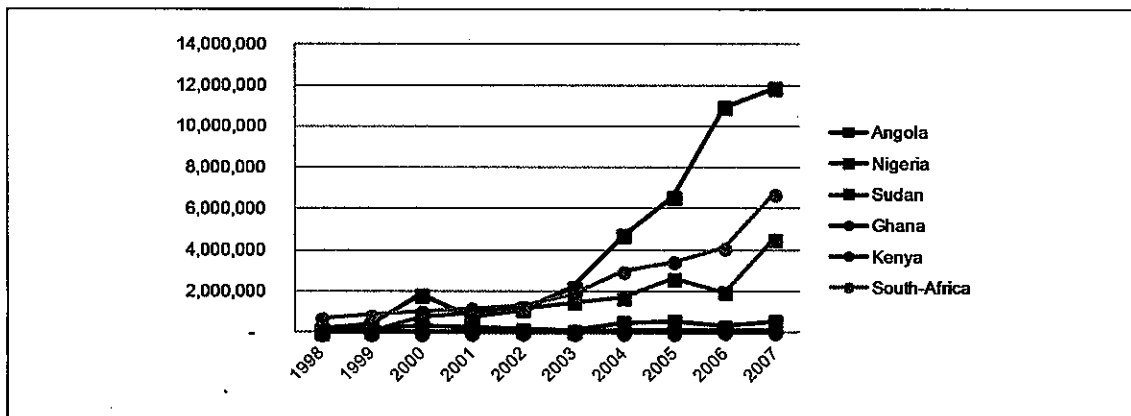
politics or even asks questions about dictatorial regimes or corruption. China's international trade relationships are strictly business.

Although Sino-African trade is growing rapidly, it only accounts for a small percentage of world trade (Sautman, 2006). In fact, while Africa's share in world trade and FDI is decreasing, Sino-African trade and investments have increased. China is now the third largest trader with Africa after the US and France. However, the majority of Africa's trade partners are European (Sautman, 2006).

Another characteristic of Sino-African trade is that China's interest is limited to a few, mostly oil-producing countries. Approximately 75% of the Sino-African trade occurs with only four countries: South Africa, Sudan, Angola and Nigeria. This supports the hypothesis that China is mostly interested in the oil-rich African nations.

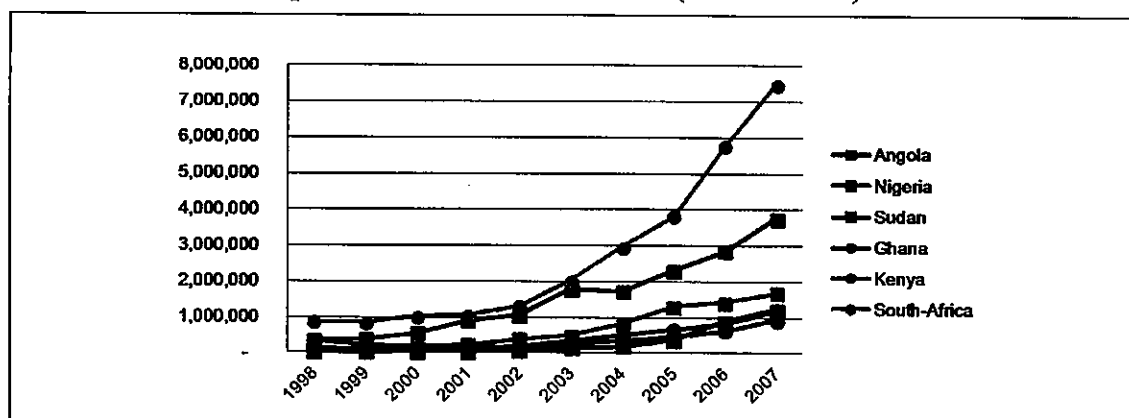
Figure 2 and 3 show the total amounts of annual Chinese imports and exports to the six Sub Saharan Africa countries in the datasets. It is to be expected that China imports more from oil-producing countries (with a square in the graphs) and it will export more to countries without oil reserves (with a triangular graph). China's high exports to and low imports from Nigeria form an exception to this theory. The high

Figure 2. Chinese import from Sub Saharan Africa (USD million)



Source: IMF (2008)

Figure 3. Chinese exports to Sub Saharan Africa (USD million)



Source: IMF (2008)

imports from South Africa are also notable. The overall imports exceed China's exports which supports the assumption of resource driven Sino-African trade.

Chinese FDI in Sub Saharan Africa

Along with the rise in Sino-African trade, the Chinese direct investments in Sub Saharan Africa have also increased significantly. Whereas the Chinese investments per year only accounted for approximately USD 20 million in the early 1990s, China invested over USD 1 billion in 2006 (Zafar, 2007). To be more accurate, in Broadman (2007), the stock of Chinese FDI towards Africa is estimated at USD 1.18 billion over 2006. Even though the Chinese investments in Sub Saharan Africa are rapidly increasing the Chinese investments only account for close to 1% of the total FDI inflows of Africa.

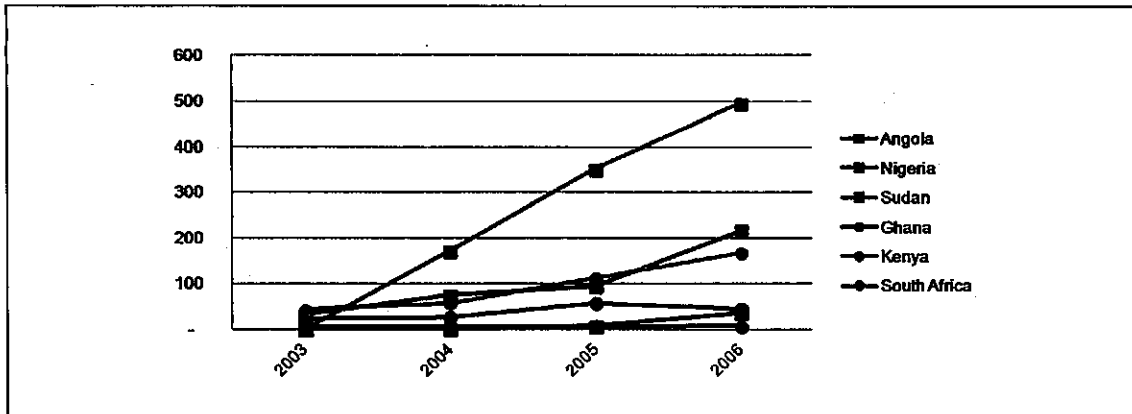
The majority of the foreign direct investments into Africa still come from its traditional European partners such as France and Great Britain, that making up two thirds (66%) of Africa's total FDI inflows. Another 20% of foreign direct investment is injected into the African continent by the United States (Sautman, 2006).

The Chinese foreign direct investments to Africa represent a small portion of

China's total FDI portfolio but Africa is the second largest destination of Chinese investments just behind the Asian region (Broadman, 2007). Although a large proportion of the Chinese investments have gone to oil-rich countries, China is also very much active in other sectors such as construction and infrastructure projects in Ethiopia and Sierra Leone (Zafar, 2007). A lack of infrastructure hinders FDI inflows and African exports but Beijing invested USD 6.3 billion in construction contracts in 2005. Above all China is willing to transfer technology (Sautman, 2006). In 2002, the Chinese authorities allowed 585 Chinese enterprises to invest in Africa, accounting for 8% of total approvals. Currently, approximately 750 Chinese firms are operating in Africa. The companies are usually state owned and they hold majority or minority stakes in African enterprises. The Chinese firms are heavily subsidized and can therefore operate with low capital costs and low profit margins.

In 2004 China had invested USD 2 billion in the construction of roads, railroads, offices and oil exploration in Angola. This credit was guaranteed by oil sales from a field that generates 10,000 barrels a day. These Chinese construction practices also soften the Chinese image in the overall unequal trade relationship between countries.

Figure 4. Chinese outwards FDI stock to Sub Saharan Africa (USD million)



Source: Statistical Bulletin of Chinese Outward Foreign Direct Investment (2006)

The Statistical Bulletin of Chinese Outward Foreign Direct Investment of 2006 shows that USD 2.5 billion went to Africa in 2006, compared to only USD 491.23 million three years earlier. These figures clearly show a dramatic increase in FDI from China to Africa.

As shown in Figure 4, Sudan is China's most important destination for FDI stock. The construction of the oil refinery and the pipeline towards the Red Sea in Sudan mentioned earlier illustrate these FDI figures. While the exports of crude oil and other natural resources could "drain" a country without developing domestic industries, these direct investments could actually benefit the African markets and their competitiveness.

Chinese development aid in Sub Saharan Africa

Another way to develop domestic industries in Sub Saharan industries is by donations. The third economic link between China and the Sub Saharan Africa countries consists of official development aid.

While China used to be a recipient of development aid it is now becoming a growing donor.

Due to the Chinese non-interference policy China's aid is not used as a political tool while the US have multimillion dollar

programs to undermine governments of Burundi, Angola, Sudan and Zimbabwe. Chinese aid also differs from US aid because the recipient may decide where the money is spent. This so-called untied aid is similar to the development aid flowing into Africa from most of the EU countries. An earlier study by Davies (2007) has put the main Chinese institutions that grant development aid to Africa into perspective. That same study also attempted to explain the volume of Chinese aid and its criteria to donate development aid.

Davies states that the Ministry of Commerce, under supervision of the Chinese State Council, is the main governmental institution that is in charge of Chinese aid.

Another important Chinese institution that is involved in the donation of development aid is the China Exim Bank which is also controlled by the State Council. The Exim Bank activities include the funding of overseas construction contracts and other investment projects, it also provides exports credits. The total of its outstanding loans in 2006 accounted for RMB 231 billion (China Exim Bank, 2006). The Exim Bank is the only lending bank for Chinese government concessional loans with a separate Concessional Loan Department (Davies, 2007).

The third significant player is the China Development Bank. Again, this bank is supervised by the State Council and while it was initially set up to fund domestic development it is now extending its activities overseas. In 2006, the China Development Bank total assets amounted up to RMB 2,314 billion (China Developments Bank, 2006) which equals approximately USD 300 billion, making it one of the biggest financial institutions worldwide. In that same year the bank also signed a framework agreement with the East African Development Bank to finance commercially viable projects in East African Countries. An indicative term sheet was signed in September 2006 for a RMB 30 million credit line (Website East African Development Bank).

Although some Chinese bank loans to Sub Saharan Africa might be traced through African institutions, China does not disclose how much aid it gives to foreign countries. Neither does China reveal to which countries or projects this aid flows nor in what form of aid modality (Davies, 2007).

However, there have been scholars who have made estimates of the annual Chinese aid flows on the basis of press releases and information from official government speeches. Premier Wen Jiabao, for instance, said that Beijing has spent RMB 44.4 billion on developmental aid to African countries in the period from 1949 to 2006. This equals approximately USD 5.6 billion and Chinese scholars state that this figure is too low. During the Sino-African summit in 2006, president Hu Jiantao promised to double Chinese aid by 2009. He also promised to grant USD 5 billion in preferential loans and export credits to Sub Saharan Africa in the period between 2006 and 2009. Additionally, he pledged to set up a USD 5 billion China-Africa development fund. Earlier in 2004 China had already cancelled approximately USD 1.2 billion in debt for

31 African countries (Zafar, 2007). If these statements are true, China will become the most important donor of development aid to Africa in 2010, granting approximately USD 10 billion annually (Financial Times, 2007).

The China Exim Bank stated in February 2007 that it has expanded Chinese concessional loans to Africa with an outstanding balance of around USD 8 to USD 9 billion. According to the China Statistical Yearbook of 2005, China had spent USD 731.2 million on external assistance in 2004, but once more scholars argue that this presented figure is too low. Kurlantzick (2006) states that in 2004 China's development aid towards Africa was USD 2.7 billion, making China a significant donor. Consistent with this estimate the French development cooperation agency estimated that USD 2 billion of these expenditures go to Sub Saharan Africa.

Despite these estimates by scholars and announcements by government officials it is problematic to compare the Chinese, data with the European figures of Official Development Assistance (ODA). The Chinese government still does not publish the total volume of their grants. The reasons for this lack of transparency are diverse. Firstly, Chinese development aid is often part of a package deal consisting of investment and trade deals which makes it hard to detach the ODA from this package. Another factor that makes it hard to define the volume of Chinese development aid, is the different Chinese ministries that distribute development aid. While the Ministry of Commerce (MOFCOM) is the most important distributor of aid other ministries like the Ministry of Health also grants aid. Lancaster (2007) also mentions the fear of domestic criticism if the Chinese government would provide an annual accounting of aid, since there still exists a lot of poverty in China.

In short, Chinese president Hu Jiantao has promised to double the Chinese loans to Sub Saharan Africa in the period from 2006 to 2009. This will contribute to the growing economic relationship between China and Africa. However, the lack of annual accounting of Chinese official development assistance prohibits a sound comparison of European and Chinese aid.

Concerns about China's foreign policy

The lack of transparency in Chinese development aid might raise international questions but it is not the most important issue that concerns the Western critics.

The West is mostly concerned about China as the new trade partner that is quickly growing. Whereas Western diplomacy is very focused on condemning rogue states and the promotion of good, transparent governance, the Chinese international relations are characterized by the vision that one country should not intervene with state affairs of another country. Non-interference in state sovereignty has always been an important theme of the Chinese foreign policy (Taylor, 2007). However, even within Africa, China is being criticized for this no-strings-attached policy. A South African newspaper stated that China's non-interference buy-in to large oil producers such as Angola will undermine the Western efforts to open up its oil books for public inspection (Star, 2006). Taylor points out the cases of Angola and Sudan as examples of how Chinese foreign policy sustains a lack of transparency and does not promote good governance.

Angola is currently Africa's second oil producer and China's second largest trading partner in Sub Saharan Africa. The regime in Luanda is very appreciative of China's non-interference standpoint. After the civil war in Angola the country was negotiating

a new IMF loan. Due to malgovernance of Luanda, the IMF wanted to include transparency measures to restrain corruption and to improve economic management. However, Angola stopped the negotiations with the IMF because Luanda had received a USD 2 billion offer for a loan by China's export-credit agency Exim Bank. The credit loan came with an interest repayment of 1.5% over 17 years and the supply of 10,000 barrels of crude oil a day. This number of barrels was to increase later to 40,000 barrels a day. On top of these repayment deals came the condition in the loan that substantial construction contracts should be granted to China. Thus the real costs of the loan are far higher than the published rates. Although the loan is utilized to finance the restoration of three main railroads and to construct a new airport, many projects will not be subcontracted to Angolan companies. Another concern is that the new relationship allows the government in Luanda to remain corrupt and to disregard governance norms under the flag of non-interference policy.

China strives for non-interference policy when doing business. However, by not acting against corruption and humanitarian issues in Africa, China cannot avoid becoming politically involved with the continent (Taylor, 2006). Another example of this is the Chinese involvement in Sudan. Beijing is exporting large amounts of weapons to Sudan while the country has been torn apart by a civil war.⁶ According to Taylor, profits derived from these arms deals are not the only motivation for China to deliver weapons to Sudan. He states that these arms sales help protect the Chinese shares in the exploitation of the Sudanese oil reserves. The Chinese CNPC oil company owns 40% of the shares of the Greater Nile Petroleum Operating Company which is Sudan's largest oil venture and China's largest overseas project. During the

⁶ The Sudanese air force is equipped with USD 100 million worth of brand new Shenyang jet fighters built in China: http://www.worldnetdaily.com/news/article.asp?ARTICLE_ID=20622

civil war, the Sudanese government army used Chinese weapons and CNPC bases to attack non-Muslim groups who lived near new oilfields in South Sudan (Taylor, 2006). The Chinese ambassador in Sudan even stated that he was opposed to an intervention in Sudanese internal affairs by the United Nations under the pretext of human rights violations (CNN News, 1999). Although China did welcome the peace agreement for Sudan and Beijing has sent 200 troops to control the ceasefire, China has recently used its seat on the UN Council to deter Western pressure on the Sudanese government in Khartoum to end the Darfur crisis.

While Western oil companies were forced to downscale their activities in Sudan in the 80s and 90s, the Chinese firms came to the region to replace them. By non-interfering China has become politically involved and the most obvious substitution effect took place.

European economic ties with Sub Saharan Africa

Besides the ethical concerns, the European Union also concerned about competing with China for market access and resources on the African continent. Dr. Rob Davies is South Africa's deputy minister of trade and industry and he states that the European Union is taking action to preserve its partnership with the African countries. One of these actions to restore and maintain the European economic relationship with Africa are the negotiations for new trade deals called Economic Partnership Agreements (Mannak, 2008).

In December 2007, the European Union-Africa summit was held in Lisbon. While the media reported about the controversy around the boycott by British prime-minister Gordon Brown due to the presence of the Zimbabwean president Robert Mugabe, the key issue of the summit was the Economic

Partnership Agreements. These Economic Partnership Agreements will promote trade, cooperation and political dialogue (Karingi, et. al., 2005). The reciprocity of the Economic Partnership Agreements will replace the current arrangements in which African goods were given special access to the European Union markets without the requirement for Sub Saharan Africa countries to ease import tariffs on European Union goods and services. In reality, the new economic arrangements mean that there are free trade agreements to be established between the European Union and regional trading blocs. The 77 African, Caribbean and Pacific countries will have to create these so-called Custom Units themselves. But the trading blocs are difficult to determine because many African countries belong to several regions at the same time.

Another problem is the presence of least developed countries (LDC) within the regional trading blocs. These LDCs are entitled to a different treatment under the Cotonou Agreement. This means that less developed countries are unlikely to have to reciprocate and open up their domestic markets in order to sustain their favoured access to the European Union (Hinkle, 2004). These contradicting interests within the regional groups make regional integration and negotiations with the European Union complicated.

European trade with Africa

Regardless of all the criticism, 31 African countries have already signed the Economic Partnership Agreements on trade in goods with Europe and the European Union remains the most important partner for Sub Saharan Africa with trade amounting up to EUR 43 billion in 2004. In the same year, 34% of Sub Saharan exports went into Europe (Website European Union) and 40% of Sub Saharan

Africa merchandise imports came from Europe (Hinkle and Shiff, 2004). In the year 2006, the European member states together imported EUR 126 billion worth of goods from the African continent while it exported only EUR 93 billion. To put these amounts into perspective, Africa accounts for 9% of all European imports and most of these imported goods are energy products (50%), manufactured goods (23%) or food and agricultural products (11%).

Of all European Union exports 8.3% flow to Africa. The Sub Saharan African countries mostly import chemicals, machinery and manufactured products from Europe.

From an African perspective Europe is the main destination of Sub Saharan

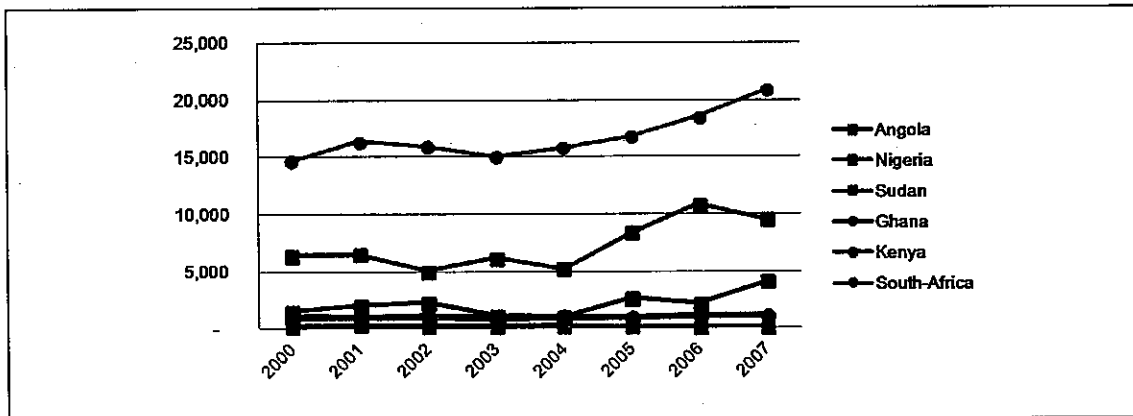
African exports with 34% compared to 16% of exports received by the United States.

Figure 5 and 6 show that South Africa is Europe's most significant trade partner, followed by Nigeria and Angola. The most striking difference with the Chinese trade statistics is the European-African trade balance. The European exports to and imports from Sub Saharan Africa countries are approximately equal.

European FDI in Africa

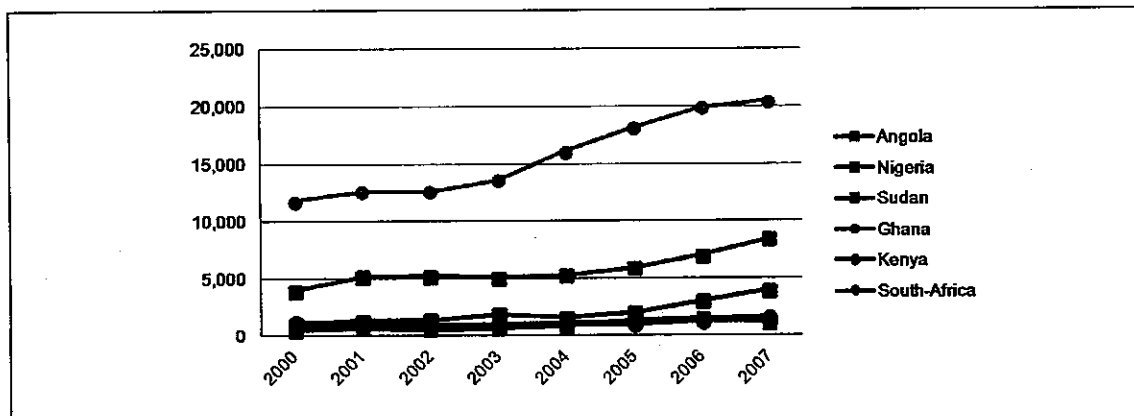
Although China is rapidly expanding its trade relationship with the African continent and while the European Union is revising its trade agreements with African countries, the European FDI stock held in

Figure 5. European imports to Sub Saharan Africa (in EUR million)



Source: www.eurostat.com

Figure 6. European exports to Sub Saharan Africa (in EUR million)



Source: www.eurostat.com

Africa increases steadily each year. In fact the outward FDI stock from Europe to the African continent has increased with 51% from EUR 60 billion in late 2001 to EUR 91 billion in the end of 2004 (European Union, 2007).

Since 2002, the European FDI flows⁷ to Africa have increased with 146% from EUR 7 billion in 2002 to EUR 17 billion in 2005. Although the FDI figure for Africa seems high, the continent is only the fourth largest recipient of European foreign direct investment accounting for 10% of the total European outward FDI. The most important destinations for European foreign direct investments are America, Europe and Asia.

The most important European investor is the United Kingdom that accounted for 27% of all European outward FDI to Africa in 2005. The investments from the UK are mainly flowing towards South Africa. France ranks second as a significant EU investor on the African continent with investments primarily in Morocco. Finally, the Netherlands are the third largest investing country in the African region, investing mostly in Nigeria.

In 2005 South Africa was the main recipient of European FDI in Sub Saharan Africa with 53% followed by Nigeria receiving 16% of the European FDI inflows.

It is understandable why European investments on the African continent are increasing. Actually it is rather remarkable that Africa is only the fourth destination for European FDI because Africa had the highest rate of return overall between 2002 and 2005. In 2005, the yield on investments in Africa even reached its peak at 17%.⁸ This means that foreign direct investments in Africa are highly profitable.

Foreign direct investment flows from Africa towards the EU are relatively low. With EUR 1 billion and a share of 1% the African continent is the fifth foreign investor in the EU.

European development aid in Sub Saharan Africa

The third economic tie between the European and African continent is the disbursement of development aid. Official Development Aid (ODA) can be granted by the EU countries in bilateral form and through the European Commission and other multilateral organisations. The European continent is still the most important donor of development aid with a total net imbursement of USD 14,062 million in 2004. The European budget for Sub Saharan development aid was almost four times greater than the donations of the United States that year.

In 2004 France was the largest European donor of aid to developing countries and multilateral organisations in US dollars (USD 8,473 million) followed by the United Kingdom (7,883), Germany (7,534) and the Netherlands (4,204) (European Union, 2006).

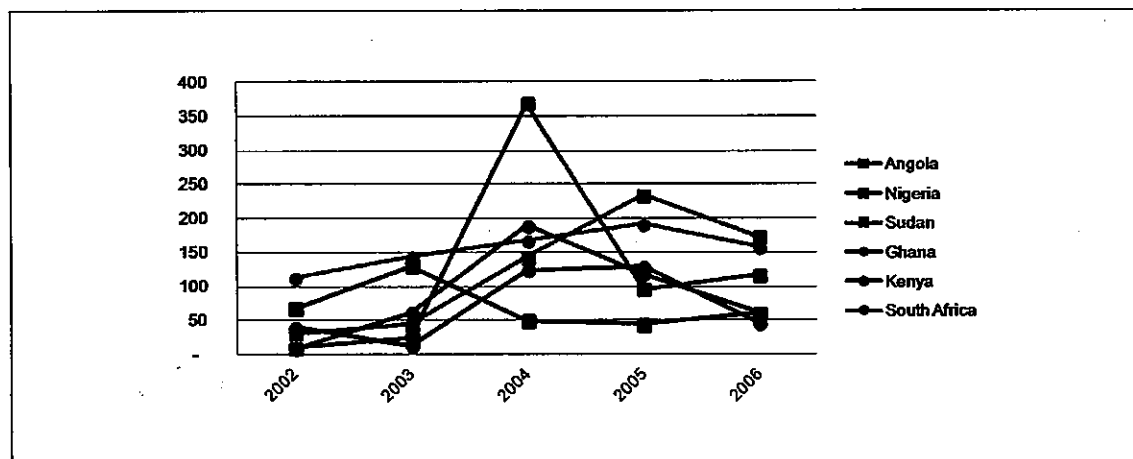
From the countries in the dataset Angola ranked third in 2004 in the top twenty of European aid recipients with a net total of USD 909 million. Ghana was the only other country of the dataset that ranked in this top 20, coming in at eighth place with USD 706 million in received development aid.

Figure 7 shows a slight annual increase in development aid from the European Commission towards the African countries. Despite the sharp peak of ODA towards

⁷ There is a difference between FDI stock and FDI flows. FDI flows are direct investment transactions between a partner and a reporting country (inward or outward). They include the net purchase of a company's equity capital plus the share in the company's reinvested earnings plus other capital. FDI stocks are a measure of a country or region's FDI assets (outward stocks) and liabilities (inward stock from the rest of the world) at a certain point in time. (European Union, 2007)

⁸ Rate of Return ratio in $t = \text{Income paid in } t / \text{Stock at the end of period } t-1$ (European Union, 2007)

Figure 7. European commission official development aid to SSA (in USD million)



Source: European Union and OECD (2006)

Nigeria in 2004, the amounts of EC aid flows to the different African countries are relatively similar.

Country specific ties with China and Africa

In the previous chapters, the three economic ties of the EU and China with Sub Saharan Africa were studied. Figures about the trade relationships of both regional powers with the African countries were widely available and should therefore lead to a balanced comparison. However, the European FDI data was not easily obtained. The European Union only has figures of their investment flows to Nigeria and South Africa. Luckily these are compatible countries since these are the African superpowers. And because Nigeria is an oil-exporting country and South Africa is a non-oil producing country it might be interesting to compare these two countries as a case study. The FDI flows to Nigeria and South Africa would then function as an example for other African economies.

The second difficulty that this research stumbled upon was the lack of transparency of Chinese development aid data. While Chinese government officials have mentioned amounts of Chinese aid granted

to Africa the annual reports about these amounts are nowhere to be found. The only way to compare the official European development assistance with China's development aid is to use the estimates of scholars like Zafar and the quotes of Chinese government officials.

With these problems in mind, it is now time to evaluate the trends in the development of economical ties of the EU and China with Africa for each of the six nations studied in this research.

The evaluation of the trends in development of economical ties between the European Union and China

Trade with oil exporting Sub Saharan Africa countries

This article aims to find a possible substitution effect in which the traditional European ties with Africa are replaced by the growing Sino-African relationships. Additionally, this study also suspects a resource driven expanding relationship between China and the Sub Saharan Africa countries. This hypothesis would suggest an increase of Chinese imports from oil-producing countries and a simultaneous decrease of European imports from these

resource rich countries. Though when taking a closer look to the import and export figures this is not the case.

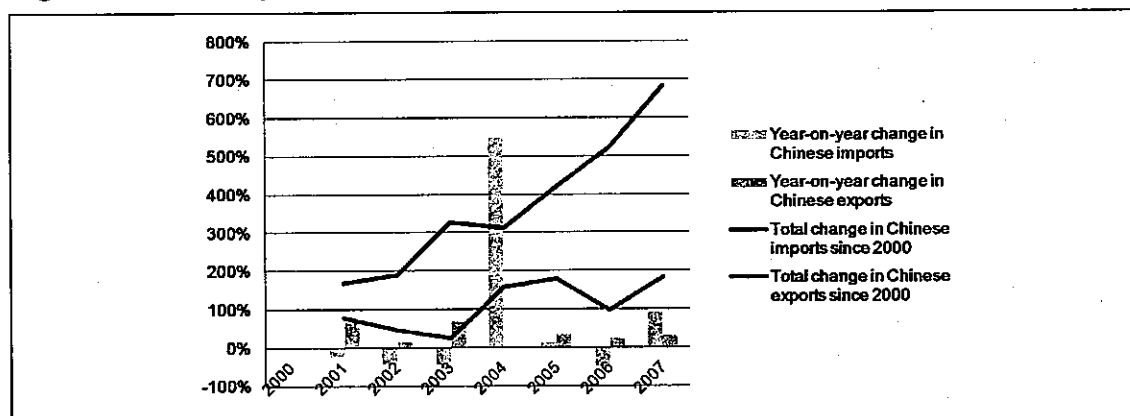
Nigeria

In the dataset of oil-exporting countries consisting of Angola, Nigeria and Sudan, this rise of Chinese imports is not present in the Nigerian case. The Chinese exports to Nigeria have risen progressively over the last decade while the Chinese imports from Nigeria are lagging behind. Since Nigeria is the largest oil producer on the African continent this finding does not support the assumption that China's trade relationships

are solely resource driven. Actually, in the last seven years China's exports to Nigeria have increased at a much faster pace than its imports from the resource rich country. This trend of growing exports from China to Nigeria illustrates the Chinese search for new markets to place their (consumer) goods on.

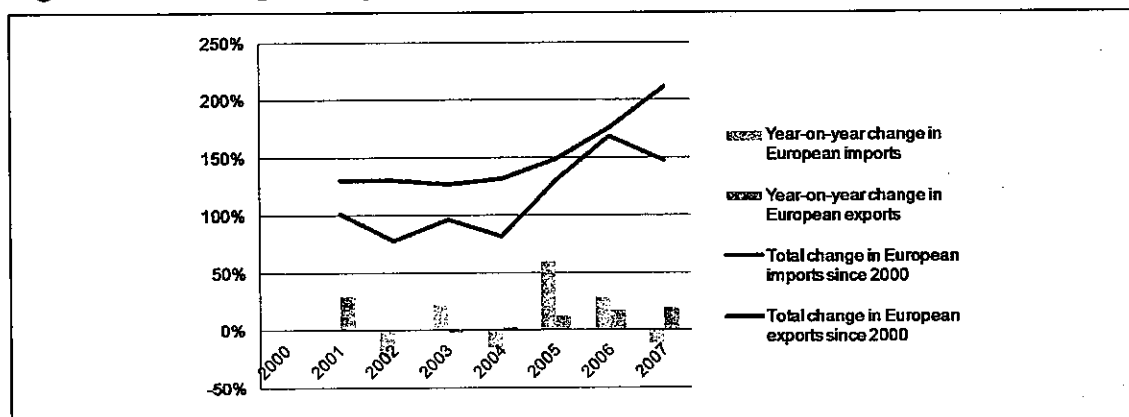
Contrary to the substitution hypothesis, the European imports from and exports to Nigeria have also continued to rise steadily, although at a less rapid pace than the Chinese increase in exports. As to be expected the European imports from oil endowed Nigeria are larger than the European exports⁹. Overall, the trend of

Figure 8. Percentage change in China-Nigeria trade



Source: IMF (2008)

Figure 9. Percentage change in EU-Nigeria trade



Source: www.eurostat.com

⁹ Appendices 5 and 6 show the European import and export figures for Nigeria

European and Chinese trade with Nigeria shows no signs of any substitution. The Chinese-Nigerian import and export figures show a more rapid growth since 2000 with a total increase in exports of 684% in 2007 since 2000. However, the European year-on-year exports to Nigeria continue to rise and in 2007 the total European Union imports from Nigeria were 148% of the total imports in 2000 (compared to an increase of 183% of Chinese total imports). In 2006, the total growth of European imports from Nigeria had rise with 168% since 2000. In 2006, the EU even surpassed the Chinese import figures from Nigeria that had grown by 95% since 2000.

The continued rising trend of trade between Europe and Nigeria contradicts the hypothesis that the China-Africa trade relationship forms a substitute for Europe's trade with the Sub Saharan African region.

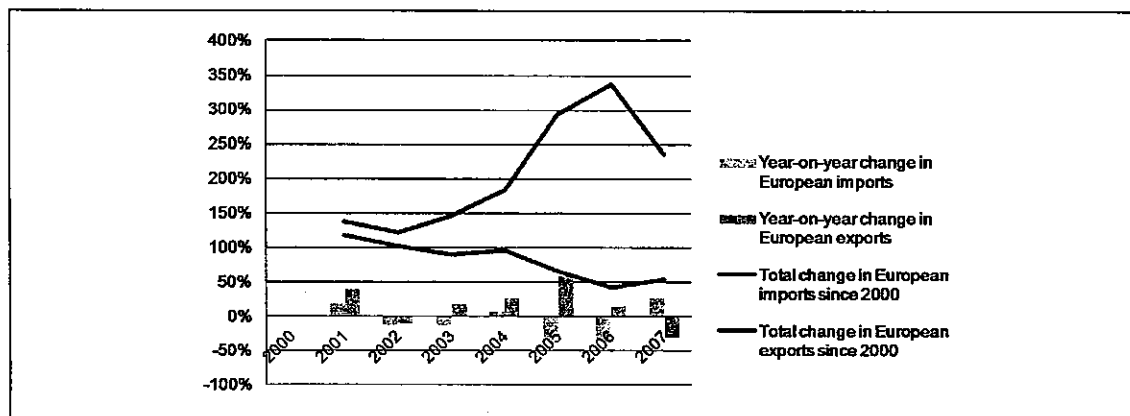
Sudan

Evidence for the substitution effect can however be found in the case of Sudan where European imports have gradually decreased over the last ten years. The European exports to Sudan have flourished until 2006 when a sharp decrease in European exports to Sudan occurred.

However, the diminishing exports could be a result of the global trade boycott in the Darfur region to end the genocide instead of the expected substitution effect. It is at least remarkable that the Chinese imports from Sudan soared in 2006 while European exports to Sudan plummeted in the same year. This phenomenon might reveal the worldwide boycott of Sudan to end the Darfur conflict and the subsequent entry of China on the Sudanese oil market. This Chinese business move is still criticized by Western scholars and it raises discussion about the ethics of Chinese trade relationships.

The European imports and exports from and to Sudan are outsized by the Chinese trade figures. In 2007, European imports from Sudan amounted up to EUR 143 million compared to USD 4.5 billion of Chinese imports.¹⁰ These figures reflect the Western embargo and the Chinese quest for natural resources. Sudan is China's third largest trading partner by imports and at the same time it is Africa's third largest oil producer. Therefore, it is likely that especially China would import more from Sudan than it would export to it. Figure 2 and 3 above support this assumption because China's imports exceed its exports to Sudan. For Europe, however, it is the

Figure 10. Percentage change in EU-Sudan trade



Source: www.eurostat.com

¹⁰ Appendices 2 and 5 show the Chinese and European imports from Sudan

other way around. European exports to Sudan surpass its imports and European exports have experienced a more rapid growth in the period between 2000 and 2007 than imports from Sudan to European countries.

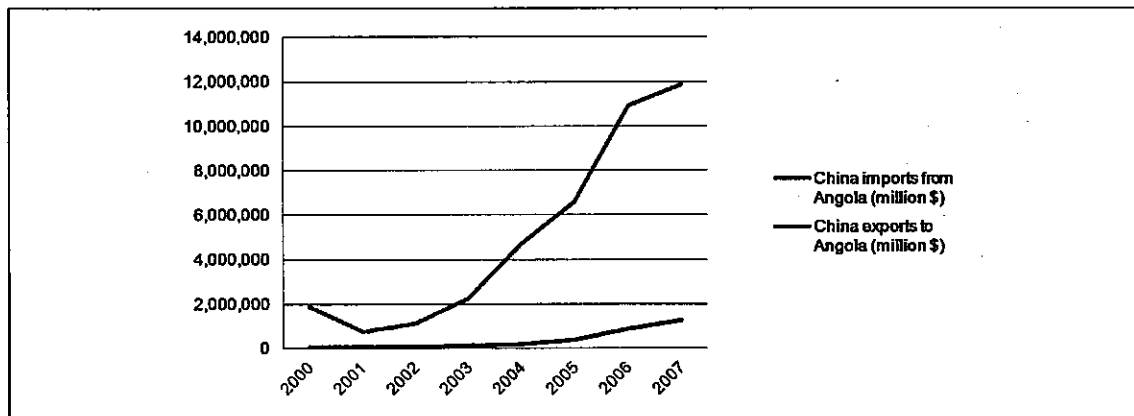
This trend of fast growing exports to Sudan is also demonstrated by the Chinese trade growth figures. This is remarkable because it suggests that China does not only perceive Sudan as a market for oil imports, but it implies a wider Chinese interest in the Sudanese market as an area to distribute goods and services.

Angola

The Angolan trade figures clearly show the Chinese quest for oil. Angola is China's

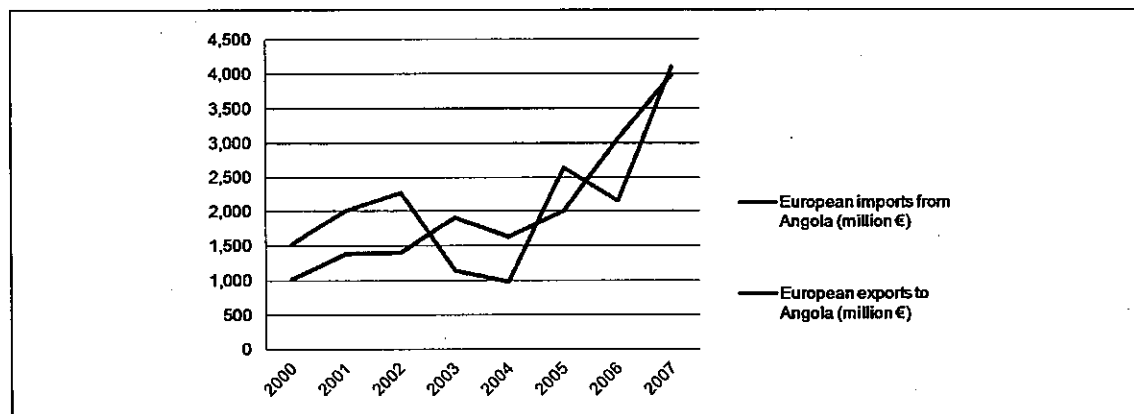
most important oil supplier and Chinese imports from Angola have risen increasingly from 2002. There is also a large imbalance between the staggering Chinese imports from Angola and the slowly rising exports. This finding would be congruent with China's interest in oil. But when the year 2000 is taken as t=0 the growth rate of Chinese exports from Angola is striking. In the period between 2000 and 2007, Chinese exports have augmented with 3,587%. Although the total amount of exports from China to Angola is still very small compared to the Chinese imports from this country, the figures show a rising interest of China to sell their products of the Angolan markets. This finding suggests that the Sino-Angolan trade relationship is not just resource driven. China might not solely be interested in the

Figure 11. China-Angolan trade figures



Source: IMF (2008)

Figure 12. European Union-Angola trade figures



Source: www.eurostat.com

Angolan oil and natural resources but it could see the country as a new economy to place their products and sustain China's export driven economic growth.

Again the European exports to and imports from Angola are also progressively expanding. In the period between 2000 and 2007, the European exports to Angola have grown by 387% and the imports show a rise of 268% in the same period. Although the Chinese trade figures show a staggering increase, this ongoing rapid growth of the European-Angolan trade relationship do not support the assumption of a substitution effect.

With these findings we can conclude the following for the trade relationships of the EU and China with the three oil-exporting countries. The European trade relationship with the oil-producing African countries continues to grow. The only exception to this is the Sudanese case. However, the sudden change in exports from the EU to Sudan might be explained by global (trade) boycott against the Darfur region. The Sino-African trade flows are increasing at a more rapid pace than the European trade relationships and the amounts of trade are notably larger for China than the EU. However, the European trade flows with Angola and Nigeria continue to grow indicating that the Chinese and European trade with Africa can co-exist. There is no substitution effect in the sense that Chinese trade flows replace European trade and cause a downward trend in European exports and imports.

Trade with oil importing Sub Saharan Africa countries

With the above conclusion, it will be interesting to see if the same can be said for the group of oil importing African countries. Based on the hypothesis that Chinese economic cooperation with Africa will substitute for European ties, one could

expect to find the same increase in Sino-African trade with non-oil-producing countries. It is likely that (especially the Chinese) imports from countries without any oil reserves are lower, but the possibility of new markets may attract trade.

Ghana

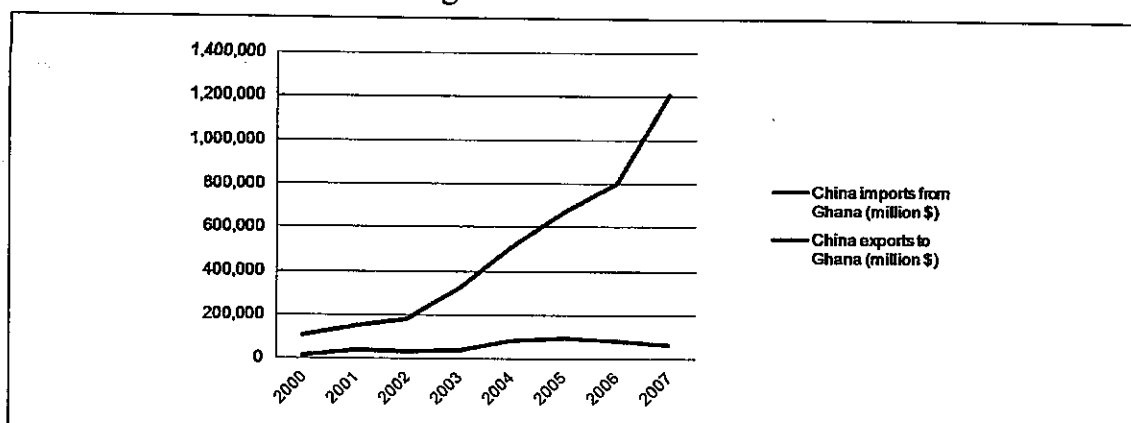
The potential for new consumer markets followed by increasing exports to these markets are displayed in the trade figures for Ghana below. The Chinese exports to Ghana have demonstrated a significant growth rate of 1135% in the period from 2000 and 2007. Ghana is well known for its quickly expanding mobile telephone market and its coastlines form an attractive destination for tourists. These flourishing industries may cause the increasing export flows from China as well as Europe, despite of the lack of natural resources in Ghana.

The trade flows between Europe and Ghana are as to be expected; the European Union exports to Ghana exceed the European imports possibly due to a lack of natural resources in Ghana and European Union exports have risen at a faster pace than imports over the last seven years. With the constant rise of European exports and imports there is no need to suspect a possible substitution of European trade by Chinese trade in Ghana.

The Chinese exports figures to Ghana also show a larger amount of exports to Ghana than its imports. The imports from Ghana grew faster than the Chinese exports in the period of 2003-2004 but imports faced a sudden drop in 2005. The reason for this prompt decline is unclear.

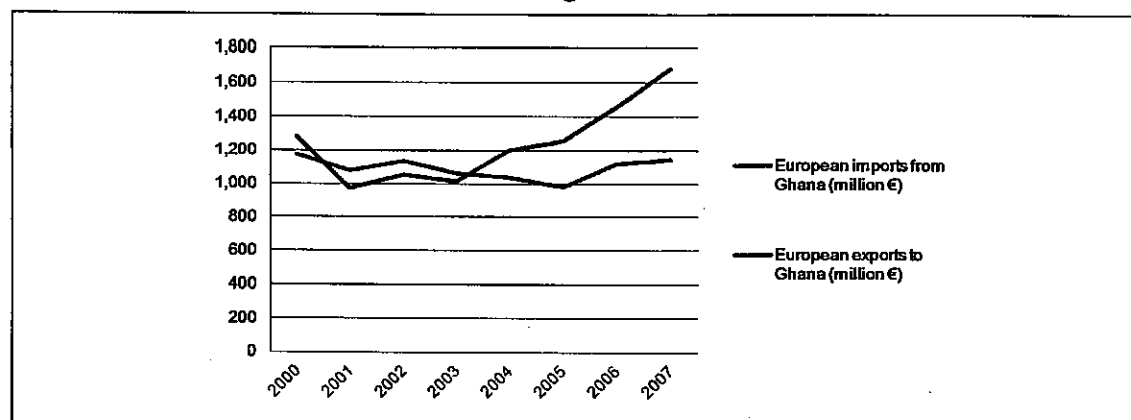
European exports to Ghana have gradually risen over the last few years while European imports from Ghana stagger around EUR 1,100 million annually. The total amount traded between China and Ghana surpasses the European Union-Ghana trade by far. Nonetheless, the

Figure 13. China-Ghana trade figures



Source: IMF (2008)

Figure 14. European Union-Ghana trade figures



Source: www.eurostat.com

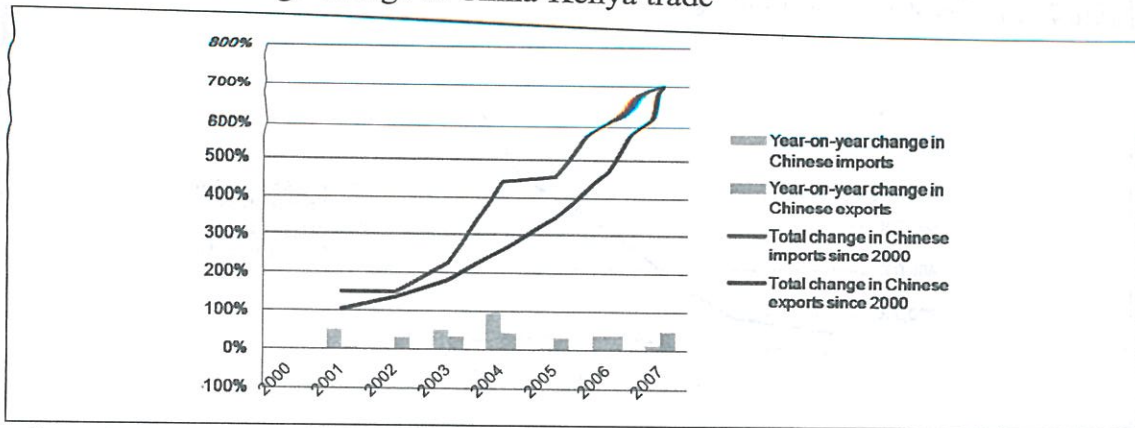
European imports from and exports to Ghana are annually increasing which does not support the hypothesis of substitution by growing Chinese trade flows.

Kenya

Similar to Ghana's trade figures, the Chinese and European exports to Kenya exceed the imports. In reality this means that Kenya imports a larger amount of goods compared to the local exports. This could eventually lead to a trade deficit. Although both European and Chinese exports to Kenya have experienced progressive growth over the last decade, the Chinese exports have increased with a noteworthy 693% in the period between

2000 and 2007. In that same period Chinese imports from Kenya have risen by 701%. Because Kenya is not a well endowed country, it was unforeseen that the Kenyan exports to China have expanded rapidly and it demonstrate that Chinese trade is not just a quest for oil. The percentage change in EU-Kenya trade shows an accumulated growth of 125% on imports and 141% on exports. The year-on-year imports and exports also reflect an expanding European trade relationship with Kenya. Although these growth rates are much smaller than those of the Chinese counterpart, it does prove that European trade is not negatively affected by the Chinese trade flows. Therefore these figures oppose any substitution effect.

Figure 15. Percentage change in China-Kenya trade



Source: Writers' calculation based on IMF Direction of Trade Statistics (2008)

South Africa

The trade flows of the largest African economy of South Africa are well balanced. Imports and exports from China and the EU countries are levelled and increase gradually at a parallel pace. The fact that Chinese imports and exports to South Africa are in equilibrium implies that China is interested in mutual trade if a country is well developed. It alters the assumption that China is only importing from resource rich countries or exporting to new markets that are scarcely endowed with oil or other natural resources.

Furthermore, the South African data reveal that the amounts traded with China are much larger than the trade relationship with all the EU member states. In 2007, the total Chinese exports to South Africa amounted up to USD 7.5 billion whilst the European exports represented a total value of EUR 20.5 million. The total Chinese imports of USD 6.7 billion also exceeded the European imports of EUR 20.8 million from South Africa in 2007. The Sino-South African trade relationship expands more rapidly. In the period between 2000 and 2007, China's exports to South Africa grew with 737% and imports from South Africa to China have risen by 648% while in the same period the European exports and

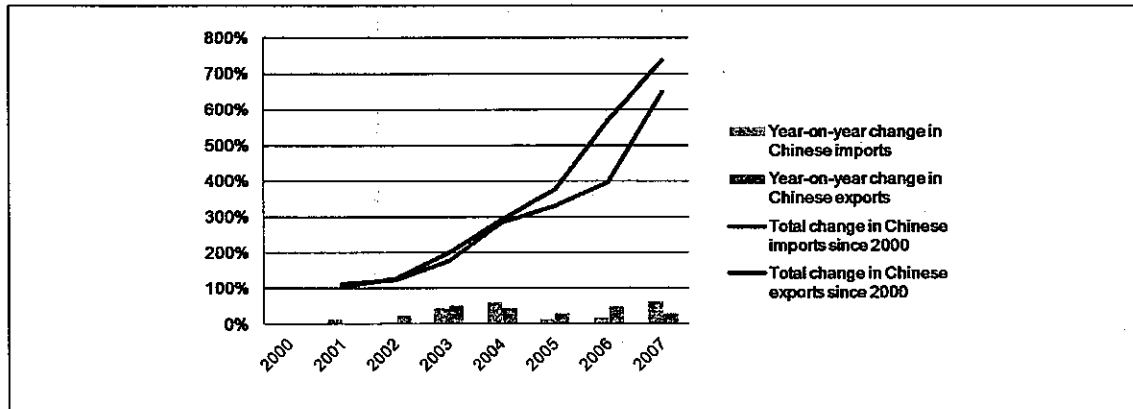
imports grew with respectively 173% and 142%.

Once more, the European trade figures show a sustained growth which leads to a rejection of the substitution hypothesis that states that Chinese trade replaces the traditional European African trade.

In conclusion, the trade figures of China with Angola, Kenya and Ghana reveal an imbalance between imports and exports. China exports an increasing amount of products to these countries without importing a similar amount of goods and thus creating a large difference on the balance of payments. The large flows of Chinese products into Kenya and Ghana result in a trade deficit for the African countries.

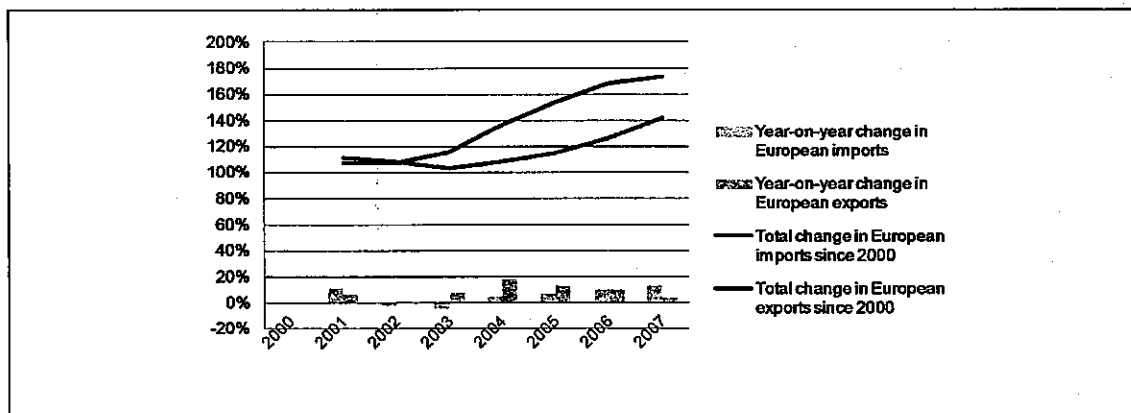
Both European and Chinese import and export figures are balanced in the case of South Africa, which suggests that China is interested in doing business in well developed markets and is not just looking for rent seeking activities in these economies. European exports to Ghana, Kenya and South Africa have gradually risen over the last few years while European imports from Ghana stagger around EUR 1,100 million annually and Kenyan imports have also experienced little growth. However, the European discrepancy between imports and exports in Ghana and Kenya remains small.

Figure 16. Percentage change in China-South Africa trade



Source: IMF (2008)

Figure 17. Percentage change in European Union-South Africa trade



Source: IMF (2008)

Chinese trade with non-oil-producing countries is growing at a faster pace than the European trade with these countries. The total amounts of trade between China and the non-oil-producing Sub Saharan African countries also exceed the European trade with these countries. However, the European-African trade data show less difference between imports and exports on the trade balance while the Chinese export goods might result in a trade deficit for the African countries.

More importantly, the European trade flows to Nigeria, Angola, Ghana, Kenya and South Africa show continued growth of import and export with these countries. Therefore, the European trade with the Sub Saharan Africa region seems to be

sustainable. This trend of increasing European Union-African trade contradicts a possible substitution effect of European trade by Chinese trade with Sub Saharan African countries. Actually, it seems more likely that Chinese and European trade with Sub Saharan African coincide. If Chinese and European trade enter African economies without competition, this could have great effects on economic situation of these countries.

FDI to Sub Saharan African countries

The previous comparison of Chinese and European trade with Sub Saharan Africa showed no signs of substitution between the two trade flows. This next

section will focus on the developments of FDI from China and the EU to the African continent.

The amount and growth of European-African trade stays far behind compared to the Sino-African trade which is much larger and grows faster. For the FDI figures this is the other way around. Although the growth rates of China's FDI might seem impressive, the European FDI flows to Sub Saharan Africa are considerably larger than the Chinese direct investments on the African continent.

The FDI flows of China and Europe to the Sub Saharan African countries are hard to compare because some of the data is missing. However, Nigeria and South Africa are the most important African "superpowers" and they are each

in a different dataset which makes them comparable.

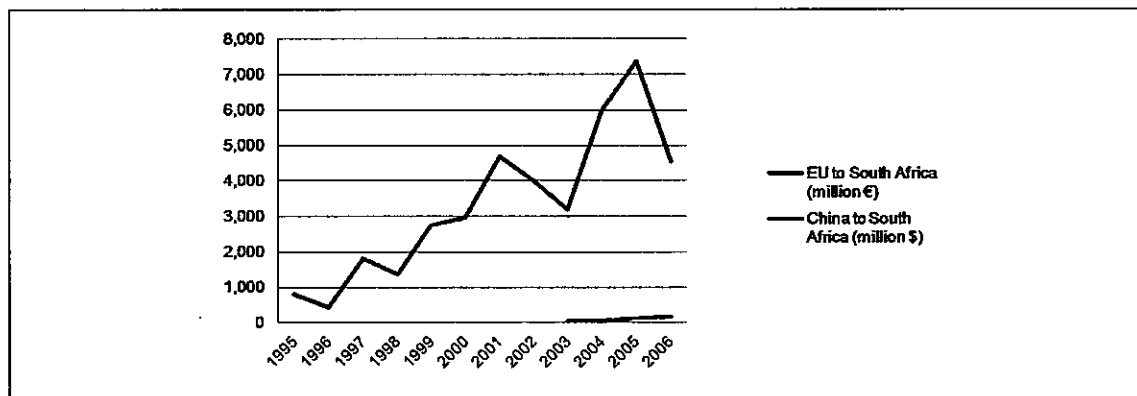
South Africa

When looking at the annual FDI flows towards South Africa, China's FDI seem to be augmenting rapidly, but the Chinese FDI flows are undersized when put into perspective with the European FDI data. The European direct investments in South Africa have been fluctuating over the last decade but the annual investments show a growing trend.

Nigeria

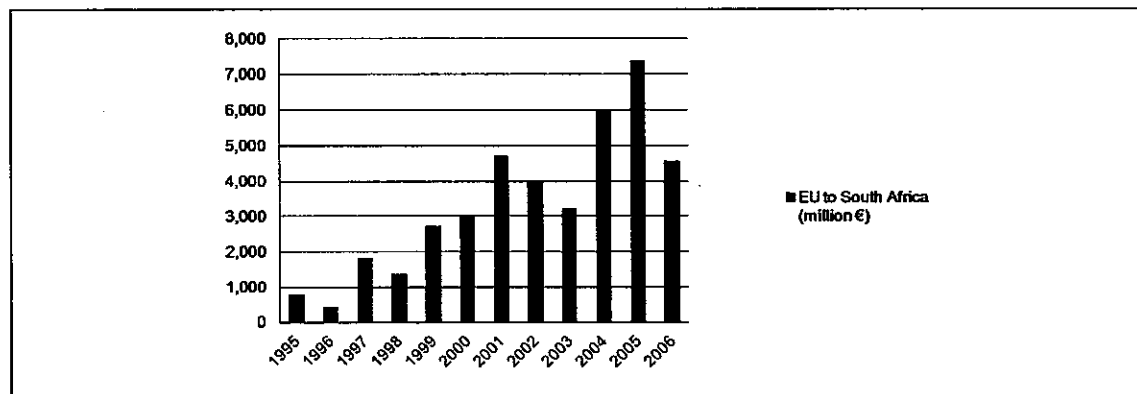
The same difference in proportions of Chinese and European investments

Figure 18. Chinese and European FDI flows to South Africa



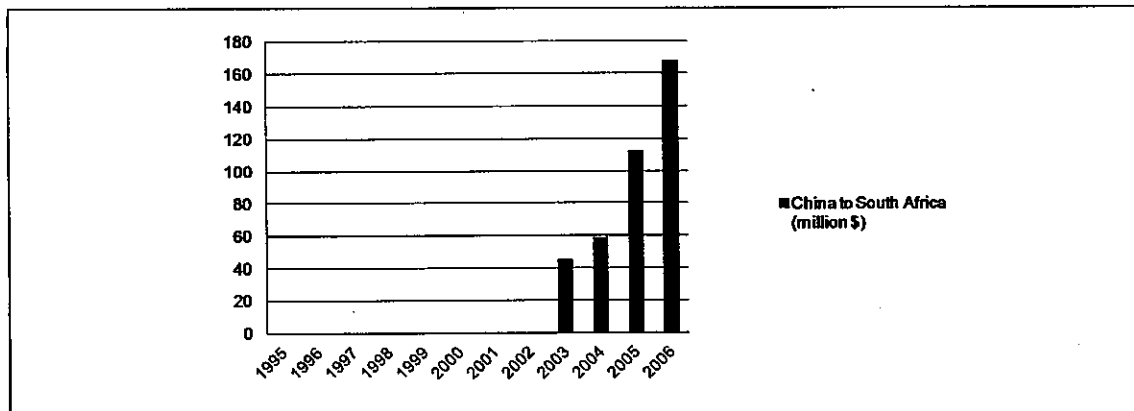
Source: 2006 Statistical Bulletin of Chinese Outward Foreign Direct Investment and www.eurostat.com

Figure 19. FDI flows from Europe to South Africa



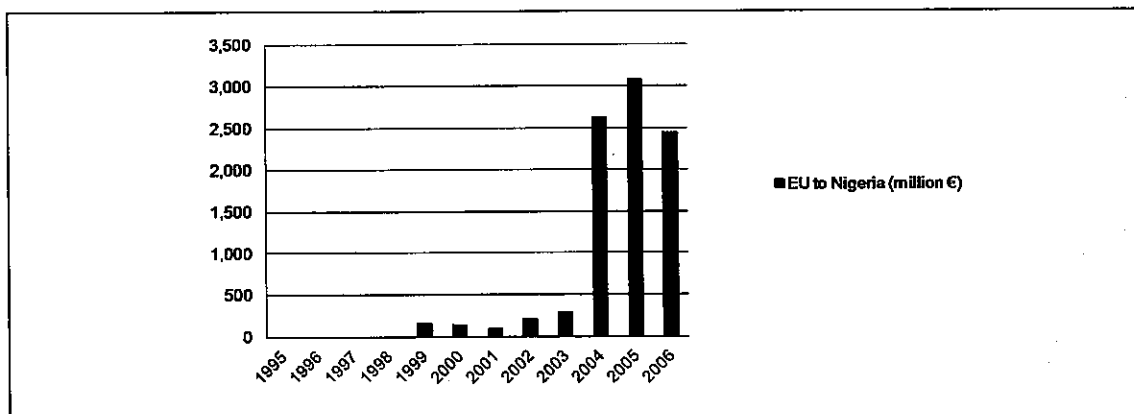
Source: www.eurostat.com

Figure 20. FDI flows from China to South Africa



Source: 2006 Statistical Bulletin of Chinese Outward Foreign Direct Investment

Figure 21. FDI flows from Europe to Nigeria



Source: www.eurostat.com

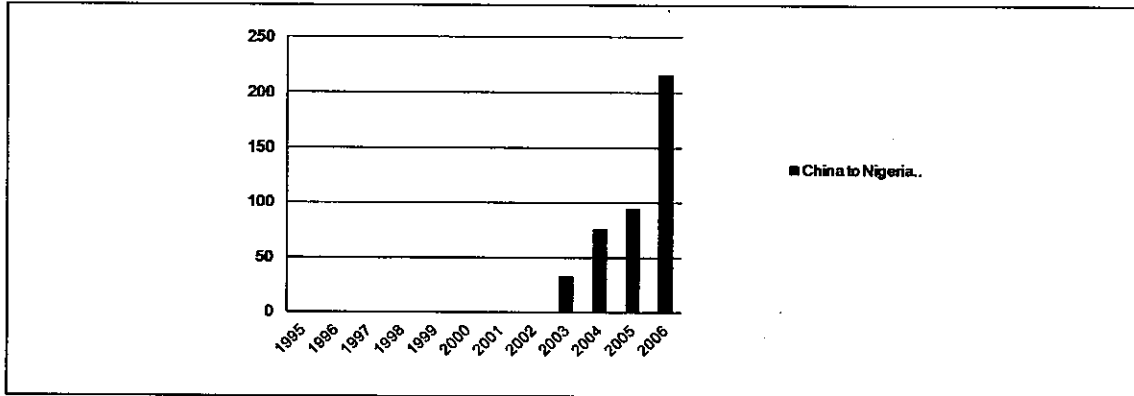
can be found in the case of Nigeria. Figure 23 clearly shows a far greater inflow of European FDI compared to the investments from Beijing. The FDI flows from the European Union to Nigeria have experienced a sudden increase in 2004. For both countries there is an average growing trend of European direct investments. When looking at the Chinese FDI figures to Nigeria and South Africa, these direct investments show a staggering growth rate. But when this data is put into perspective next to the European FDI flows, it becomes clear that the amounts Chinese FDI remain small compared to the annual European investment flows into Sub Saharan African countries.

When comparing the foreign investment figures for Nigeria and South Africa, it seems unlikely that the European investments on the African continent will soon be replaced by Chinese direct investments. Although China's investments have tripled in the last four years, the total of these investments stay far behind the amounts of European investments.

Aid to Sub Saharan Africa

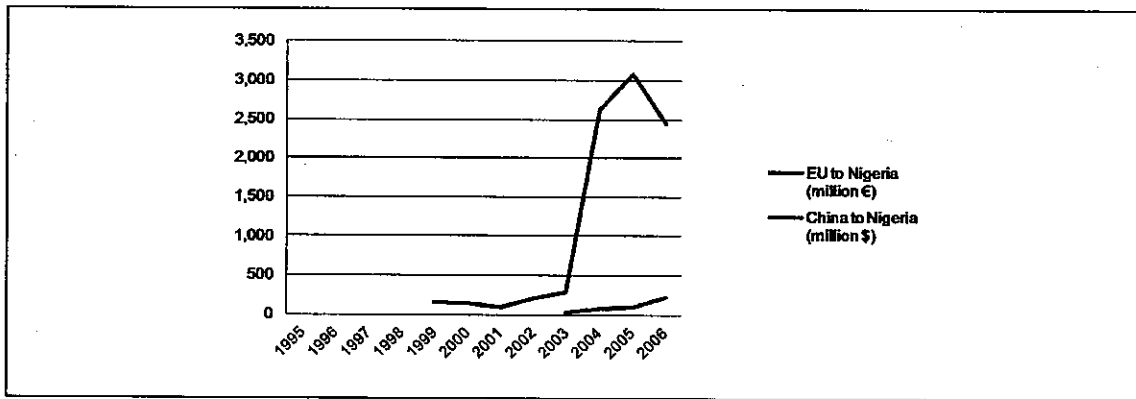
While the European data on FDI flows towards the six African nations was hard to find, it was simply impossible to find accurate data on the annual development aid from the People's Republic of China

Figure 22. FDI flows from China to Nigeria .



Source: 2006 Statistical Bulletin of Chinese Outward Foreign Direct Investment

Figure 23. Chinese and European FDI flows to Nigeria



Source: 2006 Statistical Bulletin of Chinese Outward Foreign Direct Investment and www.eurostat.com

towards Africa. The Chinese president Hu Jintao has promised to grant USD 5 billion in buyer's credit and preferential loans in the period between 2006 and 2009. This suggests an annual amount of USD 1.25 billion of Chinese aid to the African continent each year. This number does not include the debt relief of tens of millions of dollars that China has assured to give to the African countries.

In comparison, the total number of development aid from the European Commission to the six nations in our dataset (Angola, Nigeria, Sudan, Ghana, Kenya and South Africa) in the five year period of 2002 until 2006 amounted up to USD 3.15 billion. This equals an average of USD

630 million annually, but these amounts are only representing financial aid towards six countries while Sub Saharan Africa is comprised of 47 countries. Furthermore, bilateral aid flows and debt cancellation from EU member states towards African economies are amounting up to USD 21.9 billion dollars.¹¹

This comparison suggests that China and the European Union are both strong partners for Africa in terms of giving development aid. If Beijing's promises are kept the Chinese aid flows will double in the following years. This trend is not noticeable in the figures of aid from the European Commission below. It seems as if Chinese and European aid towards Africa

¹¹Debt relief is included in these numbers. This is not the case with the USD 5 billion promised by Chinese president Hu Jintao.

are equally as large but again China is aiming for rapid expansion.

Conclusion

Now that Chinese and European aid, trade and FDI relationships with the six Sub Saharan African nations are studied, it is time to draw some conclusions after recapturing the main objectives of this study. The research is intended to find a substitution effect between European and Chinese economic activities in Sub Saharan Africa.

This substitution effect would be confirmed if the data show a diminishing relationship between the European Union and the Sub Saharan African countries combined with an expanding Sino-African partnership. Furthermore, the distinction between oil-exporting and oil-importing African economies was made to reveal a possible resource driven partnership in China's case. In other words, it could be expected that China is pursuing economic relationships with oil-rich countries more than it aims for ties with countries that do not benefit from resource-endowment.

The most important finding of this research is that there is no substitution effect at this moment. The European economic activities in Sub Saharan Africa, such as import, export and FDI, still experience growth. But eventually there will come a time when natural resources are even more scarce and exports to Africa will face more competition. This could eventually lead to substitution, but at this moment it is not the case.

Another important outcome of this study is the interest of China in countries without many natural resources. The large amounts of Chinese exports to oil-importing countries and, surprisingly, to Nigeria support Broadman's view, who previously stated that China is not solely interested in Africa's resources (Broadman, 2007).

These two conclusions are further explained by a final discussion of the three types of economic relationships of The European Union and China with Sub Saharan Africa.

The first economic relationship studied was trade. The most important finding for the trade relationships with Sub Saharan Africa countries is that European trade with Africa is still rising (with the exception of Sudan). However, the total amount of Sino-African trade is much larger than the European trade with the African continent. Additionally, the Chinese imports and exports are experiencing much faster growth than the European trade flows. From the trade perspective, the answer to the research question would be "no" there is no substitution effect found.

Another remarkable finding is the growing exports to Nigeria. Because Nigeria is the largest African oil producer it is likely that China would import large quantities from this African superpower. However, the Chinese exports to Nigeria exceed the imports from Nigeria. Moreover, the Chinese exports to Nigeria continue to rise three times as fast as the imports from the West African country.

The other data show expected findings of large amounts of Chinese exports towards non-oil-producing countries and greater imports from oil-producing countries. This validates the view of a China's quest for oil and new markets to sell their consumer goods. But the Nigerian exception remains noteworthy.

While the African trade flows with the European Union members are notably smaller than the amounts of Sino-African trade, this is the other way around in the case of investments. Headlines in the newspapers talk about a Chinese investment boom on the African continent. When looking at the growth rates of the Chinese FDI in South Africa and Nigeria, this explosive growth is shown. However, the

“investment boom” appears to be insignificant when put into perspective and compared with the European FDI flows to the two most important African economic powers: South Africa and Nigeria. The European Union direct foreign investments toward Nigeria show a rapid expansion since 2003 along with the European FDI flows to South Africa which also show a rising trend line. The developments of Chinese and European foreign direct investments toward Sub Saharan Africa do not give any reason to suspect a substitution effect. In fact, the mutually increasing FDI flows could mean new possibilities for Sub Saharan African countries. Direct investments may lead to the development of industries, whereas sole imports may drain an economy and exports could pose competition on the domestic markets.

The aid flows towards Africa also predict possibilities for development on the African continent. Although the Chinese and European aid flows are hard to compare due to the intransparent development aid from China, the two African partners appear to grant similar amounts of development aid. This simultaneous inflow of Chinese and European aid can generate further development of Sub Saharan African economies and it does not support the hypothesis of Chinese substitution of the European economic ties with Africa.

The combination of European trade, aid and FDI together with trade, investments and development aid from China could lead to the development of infrastructure, manufacturing industries, and the improvement of social-economical standards. It is feared that the imports from China are just aimed at obtaining resources, but exceptions like the rising Chinese exports to Nigeria do not support this fear. The cheap Chinese exports of consumer goods to Africa can create competition on the domestic African market, but the rapid expansion on Chinese FDI can help

industries to develop. These industries might be able to face the new competition with the financial means and the knowledge sharing brought by the overseas direct investments.

For Europe and China the implications may not be as optimistic, because the African resources are scarce. Although this paper shows that there is no substitution effect at this moment, China and the European Union member states are direct competitors on the African market for natural resources. The growing hunger for oil and other commodities of newly developing countries like India and China can pose a threat to established African trade partners like Europe and the United States. But for Africa, it will offer new opportunities for economic development.

Managerial implications

For the government of African nations, the Chinese investments can offer new possibilities to stimulate the economy in their country. For local managers, the trade with Chinese offers new job opportunities and a way to increase their knowledge and skills by cooperating with the Chinese managers. However, the Chinese foreign direct investments in the form of local factories and the export of cheap consumer goods to the Sub Saharan African region can also pose a threat to the local industry and its entrepreneurs.

This article does not support the hypothesis that the Chinese economic ties with Africa are substitutes for the European economic relationship with the Sub Saharan African region. Moreover, Chinese and European trade flows with Africa co-exist and both continue to grow. Because the trade flows seem to be supplementary the African countries can benefit from multiple economic relationships. For instance, the Sub Saharan African countries can now strengthen their position by claiming its

place in the production chain and selling half fabricates instead of raw commodities.

Recommendations for further research

This paper has set out to study the possible outcomes of the growing Sino-African relationship for the European Union member states. Previous studies had all focussed on the effects on China and its Sub Saharan African partners. The consequences for third parties outside the Sino-African relationship were a research gap left to study. A part of this research gap is still uncovered. A future study could examine a similar substitution effect between China and another African trade partner, for instance the United States. Another possibility might be to investigate the effects of the economical relationship between Sub Saharan African countries and the new rising power of India. It would also be interesting to study the consequences for organizations like the IMF or the World Bank now that money lending activities are

partially taken over by the Chinese grants and trade flows. A similar study of China's involvement and results could be executed on the South American continent, since this would also entail "South-South" trade.

Reuters furthermore has published an article in May 2007 stating that China is doing business with Afghanistan while Western partners are still involved in military operations or granting development aid (<http://www.alertnet.org>). It could be interesting to focus future research on the cooperation between China and countries that are recovering from a (civil) war.

A future study could then use the same methodology to study the economical relationships like trade, FDI and development aid, but there are many other relationships that are overlooked in this study. It could be exciting to study not only the amount and growth of trade between countries, but to combine this data with the bilateral or multilateral trade agreements that are actually in place.

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Appendices

Appendix 1. Africa's largest oil producers

Rank	Country
1.	Nigeria
2.	Angola
3.	Sudan
4.	Equatorial Guinea
5.	Gabon
6.	Congo- Brazzaville

Source: Pan (2007)

Appendix 2. Chinese imports from Sub Saharan African countries (in USD million)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Oil exporting countries										
153698	355651	1842690	721828	1087050	2205940	4717340	6580680	10930900	11844400	
27454	182485	292929	227436	134062	71684	463216	527062	277752	535382	
1469	53295	731712	938127	1157360	1442060	1705880	2614710	1941420	4518590	
Oil importing countries										
8523	4815	14994	36601	30146	34238	80383	95553	79932	59453	
1493	4915	3886	5879	5797	8736	16969	17652	24407	27225	
690958	861181	1037300	1172800	1269060	1840780	2960120	3443640	4095300	6723070	

Source: IMF (2008)

Appendix 3. Chinese exports to Sub Saharan African countries (in USD million)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Oil exporting countries										
Angola	36546	16378	33736	45894	61302	145791	193533	372864	894370	1209980
Nigeria	357367	395943	549457	919352	1047090	1786830	1719510	2305270	2855670	3760470
Sudan	349598	229327	158380	226645	392298	478309	815895	1293770	1416870	1674950
Oil importing countries										
Ghana	111402	109517	105984	145953	182271	321786	510419	672788	802940	1202440
Kenya	118162	100613	133083	139052	183042	241712	348803	457037	621658	922629
South-Africa	866596	860593	1013730	1051420	1311600	2029760	2952320	3825880	5768790	7468780

Source: IMF (2008)

Appendix 4. Outward Chinese FDI stock by country/ region (in USD million)

	2003	2004	2005	2006
Total Chinese outward FDI	33222.22	44777.26	57205.62	75025.55
Oil Exporting Countries:				
Angola	0.30	0.47	8.79	37.23
Nigeria	31.98	75.61	94.11	215.94
Sudan	0.55	171.61	351.53	497.13
Oil Importing Countries:				
Ghana	6.60	6.31	7.33	8.09
Kenya	25.53	28.46	58.25	46.23
South Africa	44.77	58.87	112.28	167.62

Source: Statistical Bulletin of Chinese Outward Foreign Direct Investment 2006

Appendix 5. European imports from Sub Saharan African countries (in EUR million)

Year	2000	2001	2002	2003	2004	2005	2006	2007
Oil-exporting countries:								
Angola	1530	2010	2265	1137	974	2633	2147	4108
Nigeria	6419	6479	5028	6186	5235	8389	10809	9514
Sudan	264	312	270	236	255	177	113	143
Oil-importing countries:								
Ghana	1173	1080	1131	1058	1038	978	1115	1142
Kenya	845	939	865	810	875	957	1024	1058
South-Africa	14696	16354	15916	15057	15812	16836	18496	20870

Source: www.eurostat.com

Appendix 6. European exports to Sub Saharan African countries (in EUR million)

Year	2000	2001	2002	2003	2004	2005	2006	2007
Oil-exporting countries:								
Angola	1029,6	1374,8	1409,3	1910	1623	2016,7	3047,5	3986,2
Nigeria	4011,3	5217,3	5258	5108,8	5283	5972,4	7027,1	8445,9
Sudan	464,1	643,9	568,4	676,7	855,5	1359,8	1565,3	1097,2
Oil-importing countries:								
Ghana	1281,4	971,8	1050,1	1010,4	1194,9	1251,2	1459,2	1682,1
Kenya	942,4	1046,7	928,4	809,9	958,7	988,7	1205,4	1326,3
South-Africa	11810,4	12583,8	12621,8	13591,7	16050,7	18106,9	19878	20467,1

Source: www.eurostat.com

Appendix 7. European Outward Foreign Direct Investment flows per region/country (in EUR million)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Africa total	1532	2484	4256	3505	3901	8826	10161	7067	9660	13898	16345	11774
Oil exporting countries:												
Angola												
Nigeria	NA	NA	NA	NA	164	136	98	200	293	2624	3084	2441
Sudan												
Oil importing countries:												
Ghana												
Kenya												
South Africa	784	415	1814	1370	2726	2958	4700	3971	3197	6005	7391	4543

Source: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1073,46870091&_dad=portal&_schema=PORTAL&p_product_code=DCA19216

Appendix 8. European Commission Development Aid to Sub Saharan Africa (in USD million)

	2002	2003	2004	2005	2006
Total EU ODA to world:	6 608.6	8 024.2	9 098.8	11 355.2	12 310.8
Oil Exporting Countries:					
Angola	67.3	130.0	49.5	44.0	60.0
Nigeria	9.1	23.6	369.0	95.3	116.7
Sudan	30.9	44.1	143.0	233.7	172.8
Oil Importing Countries:					
Ghana	39.8	12.9	123.6	129.3	44.9
Kenya	9.0	61.2	190.0	117.5	59.8
South Africa	112.6	143.3	167.8	191.8	157.0

Source: <http://stats.oecd.org/WBOS/>

Appendix 9. Total of all EU bilateral ODA to Sub Saharan Africa (in USD million) ^{a)}

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Oil Exporting Countries:										
Angola	156.71	135.63	152.34	105.66	100.66	122.84	149.06	832.26	137.78	-128.9
Nigeria	37.61	40.05	41.58	46.58	68.12	98.36	77.57	164.78	5 704.22	8 330.68
Sudan	52.09	100.16	58.26	60.87	66.73	77.87	106.76	357.04	547.59	526.46
Oil Importing Countries:										
Ghana	161.98	172.52	198.38	189.35	286.34	291.92	328.66	659.23	426.28	413.4
Kenya	200.01	178.65	145.51	169.56	169.52	155.27	195.11	230.54	262.71	331.05
South-Africa	233.85	256.24	246.48	190.53	175.69	241.66	305.28	301.76	289.94	365.36

^{a)} The sum of grants, capital subscriptions and net loans (loans extended minus repayments of loan principal and offsetting entries for debt relief).

Source: <http://stats.oecd.org/WBOS/>

