

Evaluation of Foreign Aid from China on Sudan's Economic Development Process

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Abstract

Literature of economics and politics has recently realized the controversial role of China in Africa, however, in case of Sudan; the nature and characteristics of development assistance and aid from China is appreciated for being least interruptive in the domestic affairs of the country. Thus, China is regarded as a donor interested in commercial and economic mutual benefits rather than in political once, consequently; this paper determines the positive and negative effects of Foreign Aid from China to Sudan. Apart, a vast range of literature in discipline of politics, a comparison of effectiveness of Foreign Aid from China to Sudan in context of economic is lacking. Hence, current study assessed the positive and negative effect of Foreign Aid from China to Sudan qualitatively. Data is gathered from interviews of development projects managers and from reports and publications of Central Bank of Sudan, Ministry of Finance & National Economy and The World Bank. The projects incorporated are under the development assistance and Aid from China. In the analysis of effects of aid from China to Sudan, positive as well as negative effects were revealed; Significance of both types cannot be neglected given, their influences on the economy of Sudan. Where positive effects are related to economic development, their negative impacts are associated with sustainability of growth given, its influence on debt burden as most of the Chinese Aid in form of loan rather than debt. Thereafter, assessing the influence of aid is subject to comparison its positive effects on economic indicators and its negative impact on debt burden. Moreover, debt burden doesn't only deteriorate sustainability but also; it has influence on economic growth given the expenditure of debt servicing. Thus, Sudan is recommended to compare the increase in income due to aid with increase in indebtedness, for policy making in aid relationship with China.

Keywords: China, Foreign Aid, Development, investment, Oil, Sudan, debt burden

1. Introduction

China has been an integral player in the recent development policies and economic growth of Sudan and other Sub-Saharan Countries. Sudan in particular, has been an important focus for China as; it observed that the magnitude of economic aid for Sudan is comparatively higher; with respect to other Sub-Saharan Countries. With rapid economic growth and increasing scale of its foreign aid, China's role in international development has received increasing attention in the world, especially in Africa. Therefore, the study is aimed to assess the effectiveness of Chinese development assistance to Sudan; through, identifying its positive and negative effects. The development goals that are declared internationally require the mobilized financial resources, as reaffirmed in Doha Declaration on Financing for Development. Financial flows including private flows, foreign direct investment and mobilization of domestic resources are examples of the topics in regards of financial development in least developed countries. Then, these topics remained important in the context of national development strategies. (Zweig and Zhimin, 2007)

Sudan's geo-economic scenario, once dominated by European colonial powers, has been changing, with the emergence of new actors and, of course, with the race for the acquisition and exploitation of natural resources; that explain the presence of most OECD countries, but also China, India, Brazil, South Korea and other emerging markets (Tull, 2006). A growing external demand for natural resources and raw materials from emerging countries especially; China and India grew the economy of OECD countries and they remain strong buyers of African products (Robinson and Tarp, 2000). At this point, the role of China as a donor and supplier for the government in Khartoum arise (Abulagasim, 2007). Three percent of the total foreign direct investment in China was directed to Sudan between 2009 and 2010. The cumulative Chinese direct investment in Sudan to 2010 stock was 11,000 million dollars through, financial vehicles Export Import Bank of China (Eximbank) and China Development Bank. In 2010, 80% of Export Import Bank of China loans was directed to infrastructure projects in Sudan. China is the largest donor in the continent and almost, its first business partner, nobody in Sudan reject China's outstretched hand. In February 2007, Sudan signed a contract worth \$1.15 billion, to build a railway linking Khartoum with the largest port city - Port Sudan. All of these investments resulted in 11 hundred percent increase in economics of Sudan. However, the important issue has been the growing awareness of

Beijing as an important centre that could play a role on the end of the civil war in Darfur. Being an economic, political and military ally of Sudan; China had a huge impact on government policies in Khartoum. The case of Sudan shows the great influence of China on Sudan contingency. If based on Cooperation fair terms and respecting the international conventions, may prove to Africa a huge step forward in the direction of sustainable development (Cassen, 1986). As a responsible player, China in its own interest should introduce rules that assist the development of economic and social sectors, without compromising the environment and political balance. On the other hand, Sudan government should realize that selective matching investment projects contribute to strengthen their economies (Abulagasim, 2007). As largely argued, economic institutions and practices are deeply embedded in political, cultural and social systems; and it is impossible to analyze either without the other. While, economic and political analyses separately have much to offer, a combined analysis offers more contexts (Ajakaiye and Kaplinsky, 2009). One cannot understand the African state without recognizing its structural determinations particularly, the powerful residual effects of colonialism. This can be resolved through awareness of the context of Sudan as, an individual post-colonial state (Breslin et al., 2007)

1.1 Relationships and Engagement on Oil Industry

Chinese relations with Sudan have a long history- country to country contact may have been as early as AD 441. The modern state of the People's Republic of China; has had formal diplomatic ties with Sudan since 1959 and has maintained good relations with successive Sudanese parliamentary and military governments since then, however, oil has been central to the intensification of Chinese-Sudanese relations. The entry into the Sudanese oil sector came in the wake of a long history of efforts to develop an oil export industry in Sudan (Large, 2009, Large, 2008). By far the most significant and consequential area where; China impacts Sudan is its involvement in Sudan's oil industry and it is strategic imperatives revolving around oil interests that have chiefly; shaped China's policy towards Sudan, particularly; with regards to sovereignty and non-interference (Large, 2007). China's shift to a liberalized market economy has led to unparalleled and rapid economic growth over the last three decades (Zhang, 2004). This has created massive demand for energy resources to fuel growth (Power and Mohan, 2008, Jakobson and Daojiong, 2006, Saferworld, 2011). Driven by oil, China's position in Sudan developed from a comparatively minor role to becoming Sudan's most important external trade partner and rapidly developing; state-owned oil companies- mainly the China National Petroleum Company (CNPC) have played a central role in the development of Sudan's oil industries (Holslag, 2008). CNPC is the largest shareholder in the two biggest oil consortiums in Sudan, Petrodar and the Greater Nile Petroleum Operating Company (GNPOC) (Dagne, 2008). Chinese companies were also responsible for building most of Sudan's oil infrastructure, including cross-country pipelines, marine terminals, roads and rail. Concurrently, the political configuration of bilateral investment agreements and diplomatic links, directed by Chinese leaders and the Sudanese elite, has cemented economic investment, in which oil looks set to remain central.

2. Data Collection and Methodology

2.1 Data Collection

Data for this research paper is obtained from both the primary and secondary sources. The primary sources are observations from interview with the managers of selected case studies; the case studies covered seven projects in Sudan⁽¹⁾. The primary data relies on informal interviews followed up by semi-structured interviews. Furthermore, secondary data was gathered from documentary reviews of surveys and reports, as well as scholarly research publications. The research participants came from a cross-section of Sudan's government ministries and agencies⁽²⁾. The Sudanese embassy in Beijing was particularly, helpful in substantiating the divergence between Western and Chinese Aid approaches. However, due to the sensitive nature and positions occupied by the interviewees, most of these interviews were conducted under the condition that; the researcher would neither reveal nor quote the people who spoke directly to the researcher, so that they would feel free to speak candidly.

2.2 Design and Method

Key informants were chosen because they have special knowledge on a given topic; and can provide insight about a particular topic (Nour, 2011), their main goal is to get specific inputs from people who have direct knowledge about Chinese influence in Sudan. The importance of seeking out individuals directly linked to policy makers can better explain trends, opinions and understanding about this particular subject. The concept of chain interviews has been crucial to this methodology. Semi-structured and conversational interviews were employed for gathering data. As a rule, this methodology is employed since "questions emerge from the immediate context and when asked in the natural course of things, there is no predetermination of question topics or wording. Moreover, this methodological approach was chosen because it allowed the research participants the freedom to explore the given subject. It is important to note that while, this method is hard to organize into clear data and hard to interpret, it is crucial to understanding the nuanced issues involved with Sudan's increased reliance on

China's approach to development. As the research includes two types of data, the method of research is also segregated for the assessment of positives and negative effects. Results from interviewees are used for the assessment of positive effect of Chinese loans and grants to Sudan. The interviewee questions asked the managers to assess the effect of Chinese aid using following indicators: increase in technology and knowledge transfer, increase in skill level, increase in employment opportunities and growth or increase in production. Secondary data that is the increase in Sudan's indebtedness due to the increase in Chinese loans is used to assess the negative impact of Aid on Sudan. However, the negative impact of foreign aid include poverty, incomes, wages, waste disposal, displacement of people, environmental impacts, and unemployment; loan and debt are chosen here as; these are the most direct negative effects of foreign aid. As information on these negative effects is lacking, this study took debt burden as the indicator of negative effect of Chinese Aid to Sudan.

3. Review of the Literature

Much literature covering China's involvement in Africa explores the political economy of Sub-Saharan African states (Alden, 2007, Ajakaiye and Kaplinsky, 2009). And also covers China's oil diplomacy and its effect on governance in Africa, particularly the confluence of resource diplomacy with patronage politics often present in resource-rich African countries (Klare and Volman, 2006, Jakobson and Daojiong, 2006, Edoho, 2011, Carmody and Taylor, 2010). These overviews do not implicitly recognize and provide a full analysis of Sudan, although Sino-Sudanese relations are often referenced as a proxy for China's entire engagement in Africa (Power and Mohan, 2010). Sudan is, as large has argued, a defining case in China's changing relations with Africa, and a key illustration of transition and convergence in China's international politics. Sudan is seen as the geopolitical territory, where Beijing faces the challenge of accommodating its established ideological policy with the complexity of African politics.

Recently, Sudan has pivoted towards China to secure development assistance. Although, both countries have had a cordial diplomatic relationship since 1960s (Griffin, 1970), a major shift in how China granted development assistance came into effect in the 1990s (Hansen and Brown, 2001, Tarp and Hjertholm, 2000) this was the same period that China opened economically to the world. Indeed, by the early 1990s, Sudan too was obliged by International Financial Institutions (IFIs) into dismantling barriers to trade, resulting in trade with countries such as; China growing dramatically (Villanger and Chr. Michelsens, 2007). By 2006, the pre-existing relationship with China was reinforced, when the two countries signed a cooperation agreement with an emphasis on encouraging trade between the two countries (Mavrotas and McGillivray, 2009). This is also the time when China's current development approach started to fully emerge; firstly, China's development strategy in Sudan focuses on encouraging trade. In fact, between 2000 and 2010 trade has grown by a factor of more than ten times. Indeed by 2010, the amount Sudan imports from China has grown past \$1.5 billion, while, Sudan's export to China slightly increased to \$30 million (CBIK, 2011). The trade between the two countries has been growing at rapid rate, which is lauded by both the Sudanese and Chinese Governments as, a proof that trade will help Sudan's economic advancement. Secondly, China's approach to development heavily promotes Foreign Direct Investment (FDI) as part of the 'win-win' strategy. Sudan attracts a small but growing investment capital from China, moreover; this is promoted as a good way for Sudanese companies to work together with Chinese companies to help promote the industrialization of the country. Additionally, China advances the idea that; the element assists with the transfer of technology and industrial know-how to benefit Sudan (Alesina and Dollar, 1998). Finally, China's approach to development also includes development assistance. The main focus areas for Chinese assistance to Sudan have been geared towards 'turn-key' infrastructure projects, but also to build up capacities within the country through; building of schools, hospitals and education exchange programs. In the 2006 agreement, China pledged to increase this component of its development approach, within two years of this agreement being signed; China became one of Sudan's largest sources development aid.

Researchers normalized the European state as the benchmark for analysis in China Africa relations through, acknowledging the particular context of Sudan (Power and Mohan, 2010). This acknowledgement is predicated on Sudan's particular state configuration - a legacy of colonialism. The resultant framework, following Power and Mohan's begins by bringing together a broad-based political economy with certain insights from post-colonial theory - a post-colonial political economy analysis. In this case, Sudanese elites have embedded capital relations with China, into their own foreign and domestic policies effectively incorporating China as; both partner in resource extraction and as defensive shield against foreign criticism.

3.1 Conceptual Framework

Philosophy and nature of the international technical and financial cooperation for development is the main concept of Official Development Assistance (ODA). Controversies start in the topic when issues take place such as; south-south cooperation, effectiveness of regional and international development finance institutions; appropriate restructuring of ODA conditions in accordance with the domestic conditions of recipient country and donor country's commitment; in regards to agree upon percentages of ODA to GDP. Research covering this

topic taking into account the controversies in the topic need standardized concepts of the involved phenomenon. This section presents a conceptual framework of foreign assistance and foreign aid. Definition of assistance and aid, as defined by Organisation for Economic Co-operation and Development (OECD) (2004), stated that it is a broad concept of official flow of resources termed as Official Aid or Official Development Assistance. The flow includes contributions to non-governmental organizations, debt relief operations, research projects, training courses, deliveries of goods, cash transfer programs and projects. Official Development Assistance is often used to define the concept of foreign aid (United Nations Development, 2007).

3.2 Driving Forces behind Foreign Aid

Different political, commercial, economic and development perspectives that; drive the rationale and motivation of donor countries, to assist the recipient countries through financial aid. These motives and reasons are extensively focused in the literature as; the driving forces behind foreign aid.

1. The first motive is an altruistic motive, which is frequently found in literature as, a conventional motive of giving foreign aid. It follows that definition of foreign aid, in which the sole purpose of a donor country is to assist the recipient country in welfare and economic development. However, the issue with this concept of donor's purpose is the lack of a mutual benefit of both; the recipient and the donor countries.
2. In contrast, the second conventional motive of foreign aid is the enhanced relationship between the donor and recipient, which can result in mutual benefit of both countries. Thus, this motive is more realistic in depicting that; a donor country is ready to assist a recipient country to ensure the commercial and economic interest of its own, like international trade. The phenomenon of foreign aid is also likely to depend on mutual benefits of the involved nations. This concept of foreign aid has been observed in the recent increase in the aid from emerging economies such as, China and the traditional donors such as, the Arab nations, U.S. and other Western donors to the countries; where they export goods. However, the Western donors have stopped promoting their own economic interest in providing grants and aid as; they have reduced the costly condition for recipient countries to import from the donor countries. Meanwhile, US remained largely a donor of tied aid. However, untying the aid do not assure that the Western countries have started donating without considering their own benefit and interests as, evident from the pattern indicated by Neumayer (Neumayer, 2004).
3. The third conventional motive is to interfere in the domestic matter of recipient countries through; conditioning the aid terms upon meeting specific domestic policy requirements. For example, the conditions of Western donors had been diverted from the actual motive of donation and remained focused on such; policies of development aid that influence the domestic policies of recipient countries. US, for instance, ask the recipient country of democratic reform in return of US aid and also, promotes American goods in the recipient country as; US directly provide American grain as food aid. China and Arab donors are less interested to interfere in the domestic matters of recipient country and less restricted in conditions of donation, unlike Western donors and US. Thus, the emerging nations are more likely to allow the reaccept countries to follow their own choice of development path; they do not enforce interference policies as condition of donation.
4. Political motive is the fourth conventional motive of the donor nations. According to this motive, foreign aid is given with the purpose of creating and rewarding allies on strategic and economic considerations. This motive is also centred on the interest of donor nation with the difference that; the interest is political instead of economic. An example of such motive is to expect votes of the recipient country in the UN General Assembly. Germany, the US, Japan, Great Britain and France allocate more aid to the countries that vote in tandem in the UN (Alesina and Dollar, 1998)
5. The fifth motive is the most popular motive of foreign aid. According to this motive, foreign aid is disbursed to those nations, where the poor receive the benefits. Therefore, the fifth motive is actually an attempt towards the achievement of Millennium Development Goals (MDG), which is aimed at halving the share of people living in poverty by 2015. According to Villanger and Neumayer, this motive drives the donation from The World Bank and Western OECD donors courtiers specifically, as these donors are more concerned about alleviating poverty than the Arab donors (Villanger and Chr. Michelsens, 2007, Neumayer, 2004).

4. Results and Discussion

Despite the difficulty in distinguishing between the classification of Chinese investment and aid projects implemented in Sudan, the case studies discussed in this research are classified by The Central Bank of Sudan and Sudan's Ministry of Finance and National Economy as; projects implemented by grants and loans from China and; regarded as, projects implemented within Chinese development assistance to Sudan.

4.1 Positive Effects of Chinese Aid to Sudan

Managers of the projects were interviewed to assess the effectiveness of Chinese assistance. The responses revealed; significance of the effectiveness of Chinese Aid to implement the development projects in Sudan. The responses also implied the success of aid relationship between Sudan and China and emphasized the appropriateness of positive effects of aid. The interviewees were asked, to estimate the percentage of China's contribution in the development of certain indicators. They were presented with some statements that showed development or increase in some indicators for each project. Table (1) illustrates the share of Chinese contributions offered for implementation of the selected projects. It shows that the assistance offered to implement development projects, positively affected many indicators of development with given range of contribution. Increase in the external and internal training is an important implication of the improved capacity building. The training provision included most of the workforce in Sudan including; engineers, technicians and labor in a variety of disciplines and fields.

Table 1: Share of China's Aid in Development Projects and its Positive Impacts

Selected Indicators	Selected Projects						
	Dongla- Halfa	Al- Fula	White Nile Grid	Garri 4	Garri 2	Merowe- Karima	Merowe Dam
<i>The share of the Chinese in total (%)</i>							
Increase availability of raw materials	n.a	10%	n.a	n.a	5%	100%	60%
Increase availability of equipment	n.a	70%	n.a	75%	90%	100%	100%
Increase availability of machines	n.a	70%	n.a	n.a	95%	100%	100%
Improve capacity building in the project	n.a	50%	n.a	n.a	80%	100%	90%
Increase in technology transfer	n.a	50%	n.a	n.a	90%	50%	90%
Increase in knowledge transfer	n.a	50%	n.a	n.a	75%	50%	90%
Training	n.a	90%	50%	n.a	80%	100%	80%
Employment	n.a	90%	30%	100%	30%	26%	80%
Capital and finance	75%	90%	100%	85%	85%	71%	50%
<i>The positive impacts of the aid from China (%)</i>							
Increase availability of raw materials, equipment and machines	75%	20%	35%	80%	100%	100%	100%
Improve capacity building in the project	10%	50%	10%	n.a	80%	100%	100%
increase in technology transfer	60%	50%	n.a	n.a	95%	85%	100%
increase in knowledge	70%	50%	30%	n.a	75%	85%	100%
increase in skill level	70%	50%	55%	n.a	75%	100%	100%
increase in employment opportunities	20%	70%	40%	170%	30%	50%	na
Increase availability of the services	70%	70%	60%	80%	100%	100%	120%
increase in production	60%	70%	12%	80%	n.a	100%	120%

Source: Author's calculation from interview

A non-empirical comparison between the development outcomes of projects with aid from China and; that of the projects with aid from other donors is done. The response revealed several characteristics that are specific to the Chinese aided projects in comparison to the projects with aid from other donors. For instance, Merowe Dam project Manager said, "uniqueness of Chinese Aid as; compare to aid from other donors is that; it is unconditional, even if there are conditions, they have no political influence on the economy of Sudan." He further said, "The projects under Chinese Aid and development assistance were more committed to easy processes and more focused on development issues as; compare to the projects under development assistance from other donor. Moreover, Al Fula Power Plant project Manager, admired the flexibility of development projects under Chinese development assistance. He said, "The planned budget and deadline for the project were not possible to meet, because we were facing issues due to internal conflict in Sudan. Fortunately, the sources to finance the project were so flexible that we successfully adjusted the deadline and allocated budget." Regarding characteristics of the development projects under Chinese development assistance, Dongla –Wadi Halfa Electricity project Manager; presented the insights and said, "If I compare the development projects under Chinese development assistance with the development project under development assistance and aid from other donors, the former provides better and comparatively acceptable prices." Manager of Elgaili - Garri 2 project also emphasized that the machinery equipment and raw material used in projects is better. He said, "In projects we used raw materials, machines and other equipment that was cheap in price and ultimately the cost of these projects was lower than the projects under aid from other donors." The manager further said, "Chinese machines are simpler to operate and easier to maintain, also most of the times, the most suitable equipment to carry out a task from China." The interviewees were asked for the nature of finances provided and the extent of Chinese financial aid in the projects. Merowe Karima Friendship project Manager, highlighted the best characteristic of

Chinese Aid, he said, “I have worked in development projects under Chinese Aid and projects under aid from other donors. I noticed that what makes aid from China unique; that the project competently financed by the aid in form of grant and then, implementation in these projects is a smooth process.” White Nile Grid Project Manager, also highlighted this nature of Chinese Aid, but instead of aid in form of grant, the manager talked about aid in form of loans. He said, “The whole project was completely financed by the loan that China provided as; development assistance.” Regarding the nature of financing the development projects, Khartoum refinery project Manager said, “Finance for the development project was mainly in from of loans that were focused on partnership, the basis for the loan is commercial relation entirely and mutual benefits.” In the White Nile Grid Project, according to a Manager, all the inputs and raw materials were entirely financed by Chinese Aid.

Findings from the open-ended questions in the interview revealed the efficacy of Chinese Development Assistance. It is found that the development projects are completely or mostly financed from implantation to completion. Effectiveness of Chinese Aid is depicted from the cost cutting factor in the project, through use of cheap and better quality material, simple and suitable machinery and other inputs. Consequently, Chinese Aid assists in closing the investment-saving gap. However, there are obstacles that deteriorate the positive influences of Chinese Aid, most of them are internal. To assess this characteristic of aid, the relationship between Chinese Development Assistance and the satisfaction for the requirement of a specific condition were compared, through the responses of the managers for close ended questions. The close ended questions presented the interviewees with statements on Chinese Development Assistance on the satisfaction for the specific requirement of a specific condition. The responses were given in a 4-point Likert scale ranging. Table (2) presents the responses on these close ended questions.

Table 2: Comparison of importance of positive effects of China’s aid and conditions

	not important	a little important	important	very important	Important + very important
The importance of the Chinese Aid and development assistance in creating positive impact					
Increase availability of raw materials, equipment, and machines	12%	13%	12%	63%	75%
Improve capacity building in the project	13%	12%	25%	50%	75%
Increase in technology transfer	11%	26%	0%	63%	63%
Increase in knowledge	0%	12%	25%	63%	88%
Increase in skill level	0%	0%	25%	75%	100%
Increase in employment opportunities	0%	25%	37%	38%	75%
Increase availability of the services	0%	0%	0%	100%	100%
Increase or growth in production	0%	12%	13%	75%	88%
The importance of the conditionality tied to the Chinese Aid and development assistance					
Tied by utilizing Chinese inputs and labor	13%	25%	50%	13%	63%
Tied to the purchase of Chinese goods and services	25%	38%	38%	0%	38%
Tied to purchase of Chinese machines, equipment and raw materials	0%	13%	63%	25%	88%
Tied to Implementation of the project by Chinese companies	13%	13%	25%	50%	75%
Tied to investment in oil	38%	0%	25%	38%	63%
Tied to trade in oil and tied to export of Sudanese oil to China	25%	0%	0%	75%	75%

Source: Author’s calculation from interview

The Responses for the close ended questions showed that; Chinese Development Assistance has been a little importantly tied to purchase of other goods and services from China (38%), it is importantly tied to utilization of Chinese input and labor (63%), to investment in oil (63%), and very importantly tied to purchase of raw materials, equipment and machinery from China (88%), tied to the implementation of these projects by Chinese companies (75%) and tied to the trade in oil and export of oil from Sudan to China (75%). Thus, the facts about the foreign aid relationship between Sudan and China found in the review of literature are affirmed by the findings in the interview results.

4.2 Negative Effects of Chinese Aid to Sudan

The drawback and negative impact of Chinese Development Assistance on Sudanese Economy cannot be neglected. Generally, aid from China is tied to development project; assessment of its impact is difficult due to the lack of data. The contribution of Chinese Aid in reducing poverty and its impact on environment as well as social impacts lack assessment. There is no statistical information on the effect of Chinese Aid on employment

in Sudan, as the development projects increase job opportunities in the locality. Therefore, aid from China is likely to reduce poverty through effecting the distribution of income. Even if, in some particular cases, the Chinese Development Assistance has positive social effects, the benefits are not widespread. The development assistance is tied to utilizing labor and input from China and; trade of oil with China. All these conditions of tied aid undermine the effectiveness of Chinese Development Assistance to Sudan. The cases where aid from China is tied to the utilization of labor are examples of the negative effect of aid on Sudan's labor market. Thus, for policies regarding aid effectiveness in Sudan specifically, for aid from China, a cost-benefit analysis and a comprehensive assessment is essential. However, several practical issues arise in assessing the effectiveness of aid for the domestic attributes of Sudan; and the assessment is even more difficult if, it is focused on bilateral aid from one specific country. Reasons for these issues are lack of data and low accuracy in the available information. Hence, assessment of effectiveness of Chinese Aid, on different attributes of Sudanese economy is left for future research. In this section of results, the assessment of aid effectiveness remains limited to the influence of aid and development assistance on the debt.

The Negative effect of Chinese Development Assistance to Sudan is assessed through analyzing the grants and loans. Hence, the analysis here is for the year 1999 and then for the period 2002-2007. The purpose of this analysis is to understand the way in which increasing aid from China increased the external debt burden of Sudan. Hence, the analysis is based on secondary data for Sudan's position of external obligations, as showed in Table (3) and for the share and growth rate of debt of China in total debt in Sudan, Table (4). The statistics show that China has increased the external debt obligations of Sudan. Although, the aid inflow in form of financial assistance to the development projects is considered as positive effect of aid; its negative effect in form of increased debt obligation is considerable.

Table 3: Sudan's position of external obligations (US\$ millions)

Items	2007	2006	2005	2004	2003	2002	1999
Foreign Suppliers	0.9	0.8	0.845	0.75	859	859	700
Foreign Commercial Banks	3.9	3.6	3505	3.53	2918	2918	2614
Non-Paris Club Bilateral	10.3	9.2	8530	8.57	7261	7066	6750
Paris Club Bilateral	11.6	11	9664	8.92	8994	655	6121
Multilateral Creditors	5.1	4.8	4461	4.5	4159	4110	4361
Total	31.8	28.4	27005	26.27	24191	23605	20546

Source: Central Bank of Sudan (External Debt Unit) and Ministry of Finance and National Economy

Distribution of Sudan's debt obligations to other donors shows that year 2004, 2006, and 2007 recorded lowest debt since 1999. Sudan's debt burden to those donors reached the highest level in 2005; except for foreign suppliers. This shows that the year 2007, when China provided the highest aid to Sudan since 1999, Sudan reduced its debt to other donors. This scenario is satisfactory unless the share of China in total debt burden is realized. Thus, Table (4) presents the share of China in debt on Sudan (loans and grants).

Table 4: China's share in total grants and loans and in debt of Sudan (US\$ millions)

Items	2007	2006	2005	2004	2003	2002	1999
a. The Distribution, Trend and Share of China in total loans and grants offered to Sudan							
Items	2007	2006	2005	2004	2003	2002	1999
% of grant in total	1%	19%	0.3%	3%	13%	1%	2%
% of loan in total	99%	81%	99.7%	97%	87%	99%	98%
% of Chinese grant	0	11%	0.1%	20%	0	0	9%
% of Chinese loan	100%	89%	99.1%	80%	100%	100%	91%
% of China in total loans and grants	73%	24%	76%	7%	8%	7%	17%
% of China in total grants	0	14%	36%	54%	0	0	100%
% of China in total loans	74%	26%	76%	6%	9%	7%	16%
b. Share and growth rate of debt of China in total debt in Sudan							
China (%)	13.45%	13.88%	0.17%	9.20%	10.23%	0.11%	0.09%
Growth Rate	0.98948	0.012002	22028.45	-0.92608	-0.10201	100.0964	0

Source: Central Bank of Sudan (External Debt Unit) and Ministry of Finance and National Economy

Total loans and grants that Sudan received from China and other donors reached its highest level in 2007 since 1999. This huge amount of loans and grants comprised of only 1% of grants and 99% of loans. Similar pattern of total loans and grants was observed in 2002, when loans were 99% and grants were only 1% of the total loans and grants. During this period, pattern of aid in form of loans and grant from China to Sudan showed considerable but irregular fluctuations. For example, from 1999 to 2004, the share of China in total loans and grants represented a decreasing trend but after 2004, it increased rapidly and dramatically in 2005 and 2007. In between 2005 and 2007, the share of China in loans and grants to Sudan fluctuated as 76% then 24% and again 73% in 2005, 2006, and 2007 respectively. This change of trend can possibly be explained by the Chinese policy regarding involvement and cooperation in the African countries, by increasing trade, investment and aid

in Sudan and in other African countries. Another possible explanation of the increased grants and loans after 2004 is the peace agreement accord in 2005. This peace agreement encouraged China to increase its involvement in Sudan through, increasing development assistance and aid in form of grants and loans. Thus, 2005 witnessed an increase in the Chinese share in total loans and grants to Sudan, however, in the next year that is 2006; the share in total loans and grants to Sudan decreased to 14% from 36% in 2005. This decline in total loans and grants to Sudan was due to the Chinese policy to reduce the aid and development assistance in Africa. On the other hand, in the same year that is 2006, other donors increased the grants and loans making their share in total grants and loans to Sudan reach 19% in 2006 from 0.3% in 2005. If total Chinese share in total grants and loans to Sudan for the period 1999-2007 is observed, China has the significantly higher share than other donors. This role in aid relationship with Sudan is beneficial; as far as the positive outcomes it brought are concerned. However, the distribution of loans and grants reveals that most of Chinese aid and sometimes the entire aid (e.g., in 2002, 2003, and 2007) were in form of loans. Thus, the debt burden of Sudan increased with highest difference in these years.

5. Conclusion

Importance of Positive versus Negative Effects of Chinese Aid to Sudan; cannot be ignored, given their impact on the economy of Sudan. If the foreign aid increases income of Sudan through, increasing productivity, the increase in income should be compared with the increase in debt servicing. If increase in debt servicing caused by the development assistance received in form of loan is higher than increase in income, caused by increased productivity; gained from high skilled labor, then foreign aid from China has low effectiveness. Moreover, the possible justifications of these negative and positive effects are provided in the current study. A quantitative comparison between the negative and positive effects is beyond the scope of this qualitative investigation and it remains to be assessed in future research.

5.1 Findings

1. Chinese Aid to Sudan is based on mutual commercial benefits rather than political associations, unlike the aid from other donors, which cause interruption in domestic affairs of Sudan, and Most of it directed towards development projects.
2. Positive effects of Chinese Aid are more important than conditions tied to it as, revealed from the responses of development projects managers. It include increased availability of raw materials, equipment and machines, improved capacity building in the project, increased technology transfer, increased knowledge transfer, increased skill level, increased employment opportunities, increased availability of the services and increased growth in production.
3. Negative effect of aid from China to Sudan is the increase in Sudan's debt burden, because most of the development assistance from China to Sudan is in form of loan rather than grants. Apart the opportunities that Sudan has in aid relationship with China, the study found some significant challenges to Sudan. The major challenge in this regard is the increasing debt burden of the country. Sudan faces a crucial issue of increased debt burden which is deteriorating for sustainable growth and development of the country.

5.2 Recommendations

1. Sudan has opportunities in the aid relationship with China. One policy implication for Sudan is to utilize the opportunity of increased aid from China to limit aid relationship with those donors that ask for difficult condition.
2. The resources that are temporarily offered to Sudan as; Chinese Development Assistance, policy makers can direct these sources for the betterment of local people as, the raw material, machines and other equipment offered are low cost. Savings this cost cutting is also an opportunity for Sudan, the country can direct this saving in further development process of the economy.
3. Another opportunity for Sudan is that aid from China is based on mutual commercial and economic benefits rather than political associations. Sudan can use the terms of trade and investments for economic growth as, Chinese conditions on aid are tied with investment in oil and trade.
4. Although, Sudan has opportunity to reduce dependence on other donors, it should compare the increase in income due to aid from China with the increase in indebtedness.

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