Bachelor's Thesis

Sino-African Relations:

Does the Presence of China Contribute to Sustainable Development in Africa?

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Management Summary

China's involvement in Africa has steadily increased after its economic reform in 1978. However, since the year 2000, Sino-African trade volumes and Chinese loans to Africa began to rise rapidly. This was further bolstered by the establishment of the Belt and Road Initiative (BRI).

This thesis aimed to investigate the implications of the Sino-African relationship. Research was divided into five objectives in order answer the final question of whether the presence of China contributes to sustainable development in Africa. Secondary data was collected with key observations from the findings being discussed with relevant theories in order to examine China's contribution to the three development levels, namely, economic, human and environmental stewardship. The first section of the findings presented a performance review of Africa against the UN SDGs. This review revealed a dire situation of poverty and unemployment in Africa as well as the prevalence of deeply entrenched corruption. The second section of the findings displayed the performance of China's businesses against the UN Global Compact's principles for responsible businesses. The results from this were mixed. While Chinese companies performed well with workforce localization and skills training, they did not score well on corruption and pollution. The third and final findings section aimed to find out what the BRI brings for Africa. It was found that Africa gains from the relationship through the construction of much needed infrastructure. However, considering that the BRI is labeled as a development strategy, China's impact on job creation in Africa has not yet reached its potential. China on the other hand benefits handsomely from Africa's participation in the project, as it gains access to raw materials and markets to sustain domestic economic growth.

The key observations were then contextualized with relevant theories to gain a better understanding of the phenomenon's observed. Concerning economic development, findings showed that the case for Africa as the next flying geese was weak, with some notable exceptions in East Africa due to a stable political system. In the case for human development, the extractive institutions theory showed that China needs to assist in anti-corruption measures. In the context of the world systems theory, it was decided that there is a case for exploitation, however, Africa has overall benefitted from the relationship and therefore caution is taken with labeling the relationship as such. From an environmental perspective, the thesis found evidence of China relocating factories that do not meet their own environmental standards. China

has since, with pressure from foreign powers, implemented a more environmentally friendly approach to its BRI projects.

Limitations of this thesis revolve around the lack of readily and reliable information. China has in the past been accused of underreporting trade and loan data, whereas Africa lacked statistical capacity to gather information. Having said this, continuous workings from the China Africa Research Initiative as well as the largest field study on Chinese companies by McKinsey & Company allowed this thesis to carry out a holistic study. Recommendations for further research suggest focusing on an in-depth analysis on single countries or regions in Africa, as a contrast to analyzing Africa as a single entity.

Table of Contents

List of Tables

List of Figures

List of Abbreviations

BRI	Belt and Road Initiative
CCP	Chinese Communist Party
CARI	China Africa Research Initiative at Johns Hopkins School of Advanced International Studies
DOC	Democratic Republic of Congo
FOCAC	Forum on China-Africa Cooperation
IMF	International Monetary Fund
MFA	Ministry of Foreign Affairs of the People's Republic of China
PRC	People's Republic of China
SSA	Sub Saharan Africa
UN	United Nations
UN SDGs	United Nations Sustainable Development Goals
UNGC	United Nations Global Compact

1.1 Background Information

According to a publication by the Chinese embassy of South Africa (2004), relations between China and Africa date back to the 7th century, as the parties started trading via sea fleets. It is stated that Zheng He, China's emperor in the 15th century, visited the East Coast of Africa several times during his dynasty and made friends with Africa's inhabitants, known today as Kenyans and Somalians. Then in 1949, as the People's Republic of China (PRC) came into place and African countries started to become independent from their European colonizers, both Chinese and African country representatives officially established foreign affairs, referred to as Sino-African relations.

China, who similarly to Africa experienced a history of colonization, has since 1949 morally and materially supported African countries in their endeavors to become independent. In particular, the Tanzania-Zambia Railway, which Tanzanian, Zambian and Chinese engineers jointly built in 1975, became a symbol of the Sino-African friendship. The foundation of the Sino-African relationship has come to be known as one that is "seeking friendship, peace and knowledge" (Chinese embassy of South Africa, 2004). According to an article by Aiping and Zhan (2018, p. 89), the dimension of Sino-African relations steadily increased after China's economic reform in 1978. For the purposes of intensifying the relationship, as the authors put forward, Chinese companies received major subsidies for the establishment of enterprises in Africa.

With the beginning of the twenty first century, the Forum on China-Africa Cooperation (FOCAC) was established as a publicly available platform (Aiping & Zhan, 2018, p. 89). Along the growing involvement in Africa, it became indispensable for China to establish a platform for open cooperation on Sino-African relations, however, not only for regular follow ups on Sino-African agreements between Chinese and African ministers, but also for the sake of media purposes (Aiping & Zhan, 2018, p. 89; Wu, 2014, p. 1). Since the FOCAC establishment, Chinese and African country representatives held seven conferences, taking place alternately in Beijing or African capitals (Aiping & Zhan, 2018, p. 88; MFA, 2018). Outcomes of these conferences were action plans with underlying clauses for development assistance in Africa. Clauses, which all these action plans had in common, were debt alleviation for heavily indebted African countries, development of education and skills, advancing the agricultural and health care sector, decreasing trade barriers for African exports and lastly, increasing investments and loans to Africa (Aiping & Zhan, 2018, pp. 92-96).

The intensification of Sino-African relations was further amplified after the participation of Africa in the Chinese-led Belt and Road Initiative (BRI). Thus far, 39 African countries signed bilateral cooperation agreements with China within the initiative's framework. The BRI, coined in 2013 by President Xi Jinping, is a development agenda, which, similarly to the World Bank and the International Monetary Fund (IMF), seeks to alleviate global poverty.

Since the turn of the millennium, Chinese loans to Africa surged from initial US$ 130 million to US$ 19 billion in 2013. In 2016, Chinese loans to Africa market a recorded high of US$ 29 billion, before they plummeted again and in the following years continued with an average annual position of US$ 11 billion.

1.2 Problem Statement and Research Question

China's dramatically increased involvement with Africa over the past few decades is one of the most significant developments on the continent, and thus has not gone unnoticed by foreign powers. China's involvement in Africa appears to be well intentioned bringing with it much needed economic development. The Chinese government constantly emphasizes its win-win approach to investment (MFA, 2018) and has in the past decades become an attractive partner for African countries that do not want political values or ideologies imposed on them.

However, China's engagement in the region has garnered harsh criticism from Western powers. Critiques argue that China's loans to Africa, guaranteed without interfering in domestic political matters, have the potential to increase corruption in African governments (Marantidou & Glosserman, 2015; Tan-Mullins, Mohan & Power, 2010). Critiques also claim that China's presence in Africa is simply a strategic move for Africa's energy resources, with serious long-term consequences on economic, social and governance sustainability of the region. These critiques are made on the backdrop of a growing concern about the disparity between developed and underdeveloped societies and the implications that this has on the globalized economy. Africa suffers from a number of underlying economic problems, displayed by high numbers of unemployment and poverty, which are expected to further increase with a youth population estimated to grow from 265 to 334 million over the next 10 years.

Therefore, questions arise whether China's presence in Africa, in particular its business practices, contributes to the sustainable development in the region and what evidence is there to prove that this is the case. This leads to the establishment of the

research question: *Sino-African Relations: Does the Presence of China Contribute to Sustainable Development in Africa*? The thesis intends to answer this question with a discussion, which applies key themes observed in the literature to the theories of Extractive Institutions, World Systems and Flying Geese.

1.3 Research Objectives and Sub-questions

Three observations have this far been elaborated on in the previous part. Firstly, there is a growing concern amongst developed nations about the disparity between developed and underdeveloped countries. Of the 54 African countries, 40% of the population are unemployed and live below its nationally defined poverty line, and which this is only expected to worsen in the coming decade as a result of a boom in the working age population. Therefore, the need for Africa to escape poverty and unemployment is vital if a humanitarian crisis is to be avoided. Secondly, China's involvement in Africa has grown substantially over the past few decades. However, its approach, intentions, and business practices on the African continent have come under much scrutiny. Thirdly, China maintains through its own government sources that there is nothing ill-intentioned about their involvement in the region.

Based on these observations, five research objectives with underlying sub-questions were established and elaborated on in order to answer this thesis' main question.

1. The first research objective was to develop a clear idea of what sustainable development means in the modern world.
    - What components does sustainable development encompass?
2. The second research objective was to determine Africa's current state of development as a base point.
    - How far are African countries in their development path?
    - What are the major obstacles to development?
3. The third research objective dealt with criticism towards China's business practices in Africa.
    - What is found on China's business practices in Africa?
    - What are the major obstacles of doing business in Africa and how do Chinese businesses deal with them?
4. The fourth objective dealt directly with understanding China's state-run program, the Belt and Road Initiative (BRI), for Africa.
    - As stated by China, what are intentions for its involvement in Africa?

- Is China exploiting Africa for its raw materials and international support?
- Is China contributing to sustainable development in Africa by building necessary infrastructure, exporting jobs, fostering good governance and taking a precautionary approach to the natural environment?

5. The fifth and final research objective was to determine the key observations from the findings and how these affect sustainable development, the result of which was used to assist in answering the thesis' main question.

1.4 Overview of the Thesis

This thesis starts with the methodology, followed by a theoretical framework, findings, discussion of findings, and then finally the conclusion. The methodology outlines how the thesis aimed to attain the research objectives and answer the sub-questions as well as the thesis' final question. Following this, the theoretical framework describes concepts and theories relevant to this thesis. Next, the findings present secondary quantitative data and qualitative information obtained. The subsequent chapter discusses the findings with relevant theories and provides a preliminary conclusion. Lastly, the conclusion summarizes how findings and discussion answered the research objectives, sub-questions and the thesis' final question. Additionally, the conclusion suggests areas for further research.

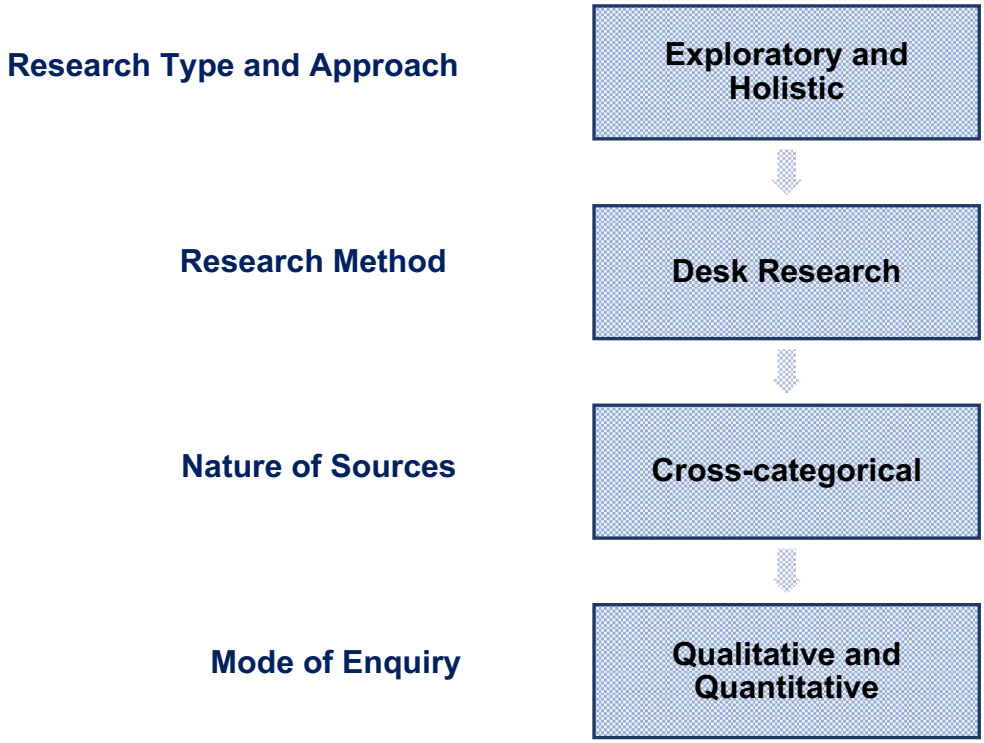
2 Methodology

This chapter describes the methodology that was used in this thesis. It includes the research design (see Figure 1**),** the subject scope, the data analysis as well as the limitations of the study.

2.1 Research Design

The research design of this thesis (see figure 1) was based on Kumar's (2011) inputs and compiled in a sequential manner in order to address the research objectives. After having opted for an exploratory research type, desk research was chosen for the research method. The nature of sources and the mode of enquiry followed, as figure 1 illustrates.

Figure 1: Research Design (own illustration based on Kumar, 2011, p. 11, p. 129, p. 163 & p. 399)



Note: The above figure depicts the characteristics and flow of information in the research design. It includes the research type and approach, the research method, the nature of sources as well as the mode of enquiry.

2.1.1 Research Type and Approach

The research type of this thesis was of an exploratory nature, whose aim it is to "explore an area where little is known" (Kumar, 2011, p. 11). Given the fact that the thesis' particular area of Sino-African relations is under-explored, this thesis required a research approach that takes various perspectives into consideration. Kumar (2011) refers to such a research approach as holistic and emphasizes that "based upon the philosophy that as a multiplicity of factors interacts in our lives, we cannot understand a phenomenon from just one or two perspectives" (p. 129). This particular research approach was therefore chosen in order to establish a comprehensive view of the research area, by taking the Africa, the Chinese and the Western perspective into consideration.

2.1.2 Research Method

The research method, in the form of desk research, was chosen for this thesis in order to collect data for subsequent review, analysis and interpretation of the information obtained. According to Kumar (2011, p. 399), data which the researcher extracts from existing literature is referred to as secondary data and accordingly, the source providing the data is referred to as secondary source. Using this type of data for this thesis was accompanied by many benefits. Owing to the university's electronic library, it was possible to access literature from a variety of databases and to carry out an in-depth literature review. Another benefit of secondary sources, which this thesis made use of, was to "generate new insights into existing primary data" (Formplus Blog, 2015).

2.1.1. Nature of sources

The secondary sources consulted were cross-categorical in nature and ranged from mass media, scholarly articles to private and government publications. Information of these sources was extracted using a mixed method of qualitative and quantitative enquiry. By definition "In qualitative research you usually extract descriptive (historical and current) and narrative information and in quantitative research the information extracted is categorical or numerical" (Kumar, 2011, p. 163). The literature itself was selected if it met a certain set of predetermined criteria, as table 1 depicts.

Table 1: Overview of Selected Literature (own illustration based on Kumar, 2011, p. 163)

Category	Sub-category	Criteria for selection	Purpose	Main sources
Mass media	Newspaper articles and websites	Reliable media	Gathering opinions and statements	Financial Times, The Diplomat
International publications	World bodies	Reliable and unbiased information	Availability of reliable data	International Labor Organization, United Nations, World Bank African Center for SDG
Reports of committees and commissions	Forums	Official site	Gathering first-hand, unanalyzed information	Belt and Road Forum, Forum on China-Africa Cooperation
Research institutes	University based	Availability of reliable data	Gathering data on various topics	China Africa Research Initiative at Johns Hopkins School of Advanced International Studies
Scholarly articles	Descriptive journals	Peer reviewed	Gathering ideas for discussions/ Theoretical explanations	Kojima (2000) Chase-Dunn & Grimes (1995) Huang (2016)
Books	Factual books	Author specific	Theoretical explanations/ Gaining insights	Acemoglu & Robinson (2012), Yuan Sun (2017), Sen (2000), Wallerstein (1971)
Private publications	Management consulting firms	Accreditation	Gathering on-site insights	McKinsey & Company: Yuan Sun, Jayaram & Kassiri (2017) Ernst & Young: Africa Attractiveness Reports (2018) / (2019)

Note: The table above is a summary of the most important and frequently used sources of each category. A detailed overview of all the sources is provided in the list of references.

2.2 Subject Scope

As this thesis used the generalized terms “China” and “Africa”, the scope of these terms needs to be defined. Hence, the following two sections explain what this thesis referred to if the two terms were addressed.

2.2.1 Africa

According to the official site of the Forum on China-Africa Cooperation (FOCAC, n.d.) China has bilateral relations with 53 African countries from a total of 54 countries, which vary in scope and dynamics. While it is not ideal to address Africa as one, most African countries share very similar development characteristics. Therefore, the idea to analyze Africa as a single entity for the purposes of this study was used. In countries where the effect of China differs greatly from the majority, this thesis viewed the implications of China separately.

2.2.2 People’s Republic of China

The People’s Republic of China (PRC) was established in 1949 in mainland China, after the victory of the Communist Chinese Party (CCP) in the Chinese Civil War (BBC, 2019). Before the CCP came to power, mainland China was known as Republic of China (ROC) and ruled by the Nationalist Party (BBC, 2019). Along with changes in government in mainland China, the country experienced an era of foreign invasion, starting in 1937 after Japan began to occupy several areas and only left the mainland after its defeat in the second world war (BBC, 2019). In 1949, after the CCP replaced the republican government, the Nationalist Party moved to Taiwan and hence, Taiwan is since then officially known as the Republic of China (ROC) (Gold, 2003, p. 12). In international matters, PRC (mainland China) and ROC (Taiwan) jointly pursue the One-China Policy according to which both sides constitute a single sovereign state “China” (Taiwan Affairs Office and Information Office of the State Council, n.d.). Although in correct terms “China” only refers to PRC and ROC together, this thesis used “China” as a synonym for the PRC regime in mainland China and was used interchangeably with “country” or “nation” for simplification reasons.

2.3 Data Analysis

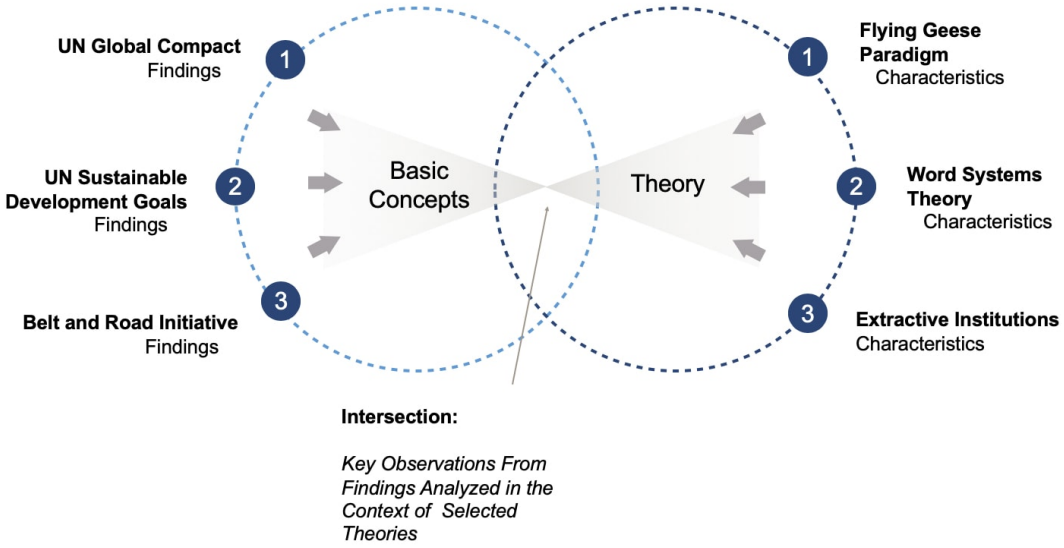
According to Kumar (2011, p. 277) data analysis is the way in which a study processes and communicates the data collected. After having established a research type and approach which was exploratory and holistic, this thesis aimed to analyze data in such a way as to "understand, explain, explore, discover and clarify situations, feelings, perceptions, attitudes, values, beliefs and experiences of a group of people" (Kumar, 2011, p. 104). Given the complexity of the of the research problem, data could not be analyzed within the confines of a single theory. Rather, in such a situation, Imenda (2004, pp. 187-189) suggests developing a conceptual framework, which provides a synthesized way of looking at a problem. According to the author a conceptual framework is to be established by extracting relevant variables (observations in the case of this thesis) from theory and empiricism found in literature and subsequently combining these variables in a model. A conceptual framework can therefore be defined as "an end result of bringing together a number of related concepts to explain or predict a given event or give a broader understanding of the phenomenon of interest – or simply, of a research problem" (Imenda, 2004, p. 189).

This thesis applied Imenda's approach and developed a conceptual framework in order to analyze the research problem. The next sections describe, how the conceptual framework was applied.

2.3.1 Conceptual Framework

Figure 2 displays the conceptual framework established for this thesis in order to analyze the research problem. The analysis of this thesis was divided between findings and discussion of findings. As depicted in the left circle in Figure 2, the findings section collected data within the frameworks of selected concepts and thereby addressed the fifth research objective, which was to extrapolate key observations from the findings. These key observations intersected with characteristics of the chosen theories. The right circle seeks to display how the intersection of key observations and theoretical characteristics were used for the discussion of the findings.

Figure 2: Conceptual Framework (own illustration)



Note: This figure illustrates the conceptual framework used for this thesis. The intersection highlights where the key observations of the findings and characteristics of the theories come together for the subsequent discussion of the findings.

2.3.2 Findings

The findings were divided into three sections. Each of these sections had the purpose of finding information pertaining to a specific research objective within the scope of a predetermined concept. This was subsequently used to identify key observations as stipulated by the fifth research objective.

The first part of the findings collected information within the framework of the concept "United Nations Sustainable Development Goals". This was used to address the second research objective, namely, *to determine the current state of development in Africa*. The main source of this section was the latest publicized written report as well as publicized quantitative raw data of the African Center for Sustainable Development Goals. For the second part of this chapter, it was decided to collect information within the scope of the concept *"United Nations Global Compact"*. The third research objective was applied and thus dealt with *criticism towards China's business practices in Africa*. This section consulted a variety of sources, most prominently though the 2017 McKinsey field study and working papers of the China Africa Research Initiative at Johns Hopkins School of Advanced International Studies. The last part of this chapter consulted the concept *"Belt and Road Initiative"* and collected in line with the scope of the frameworks theories. The fourth research objective was applied, with the aim of understanding China's state-run program and implications for Africa. The main source for this part was Huang's (2016) explanation to China's launch of the Belt and Road Initiative.

2.3.3 Theories

The theories for this thesis were chosen after the first research objective was addressed, namely, to *develop a clear idea of what sustainable development means in the modern world*. It was found that sustainable development is the overarching principle for economic and human development, including environmental stewardship. Based on this, it was decided to incorporate development theories, which fit into the context of Sino-African relations. These theories were the flying geese paradigm, the theory of extractive institutions, and lastly, the world systems theory.

The flying geese paradigm was relevant to this study, since China itself has followed the industrialization process according to the four stages, initiated by the "hollowing-out of the manufacturing sector" of the advanced East Asian economies of Japan, South Korea, Taiwan and Hong Kong (Biswas, 2016, p. 67). Having successfully

undergone an economic transformation, China presently aims to share the experiences it has gained along this process, by educating developing countries about the characteristics which have enabled China to grow (OECD, p. 4, 2018; MFA, 2018). This paradigm served to discuss, if China encourages a China-like transformation process in Africa, and thereby contributing to economic development in the region.

Acemoglu and Robinson's theory of extractive institutions explains why nations fail. This theory was relevant since it determined the current state of institutions on the African continent, given the fact that African countries have been stagnating over a long time. This theory was applied to discuss China's influence on African institutions and thereby assisted in determining China's contribution to human development.

Concerning the relevance of the world systems theory, it was found that China is semi-periphery country (Dunn, Kwana & Brewer, 2000, online appendix Table A2). This means that China incorporates both periphery and core characteristics. China managed to move from a periphery to a semi-periphery country through its industrialization process. Africa, except for industrialized South Africa, consists of periphery countries. Yet, given the vast economic and geographical coverage of the Belt and Road Initiative (BRI), a pivot in the global world system hierarchy is to be expected. Considering that the project is led by China, this thesis examined, if China's upward mobility to a core country will come at a cost of Africa. China, in order to secure a core position needs to secure its raw material supply and find new export markets in order to maintain its economic growth. Additionally, China needs to seek allies to increase its voice in the international political sphere. However, if China is securing its core position by exploiting Africa for raw materials and international support, Africa will remain in its periphery position. Essentially, Africa would remain a periphery continent and kept from industrializing if it would only export raw materials and import manufactured goods from China. The possible outcomes based on this theory were thus analyzed in the discussion of this thesis.

2.3.4 Discussion

After the key observations from the findings were defined, they were categorized and transferred to their subsequent section, namely the discussion of findings. The key observations served, together with relevant characteristics of the theories, to discuss if China contributes to sustainable development in Africa. The discussion first addressed China's contribution to the individual components of development and was then followed by an overall assessment of their contribution to sustainable development.

2.4 Limitations of Research

It was found that quantitative data on Sino-African relations and the United Nations Sustainable Development Goals is scarce. Governments of both parties, China and Africa, provide insufficient quantitative information. On the one hand African countries lack the capacity for data reporting, while on the other hand, publications from China were found to be underreported (Begashaw, 2019; Yuan Sun et al, 2017).

Due to the unreliability of Chinese and African government publications, attempts of data collection were made by independent bodies. Leading researchers on Sino-African relations is the China Africa Research Initiative at Johns Hopkins School of Advanced International Studies, who publicizes continuous working papers, as well as McKinsey & Company, who collected the largest data set on Chinese companies in Africa. Overall, data on Sino-African relations is timely, as this study focused on the latest data available. In cases where timely data was not available this thesis consulted research not older than 10 years.

3 Theoretical framework

This chapter introduces the theoretical framework of this thesis. It starts by defining the term "sustainable development" and is followed by an explanation to the basic concepts and theories pertaining to the study to present and discuss the findings.

3.1 Definition of Sustainable Development

This sub-chapter addresses the first research objective, being: *Develop a clear idea of what sustainable development means in the modern world,* with its sub question as: *What are the components of sustainable development?*

Research showed that sustainable development can be viewed as the overarching principle of development. The next paragraphs briefly explain each component and how these fit into the overall concept (see Figure 3).

Economic development is the basic component of development. According to traditional development economists, economic development refers to long-term economic growth, measured by sustained Gross National Income (GNI) or Gross National Product (GDP), which enables countries to eventually transform from low-income to high-income countries (as cited in Sen, 1983, p. 753; Sen, 2000, p. 3).

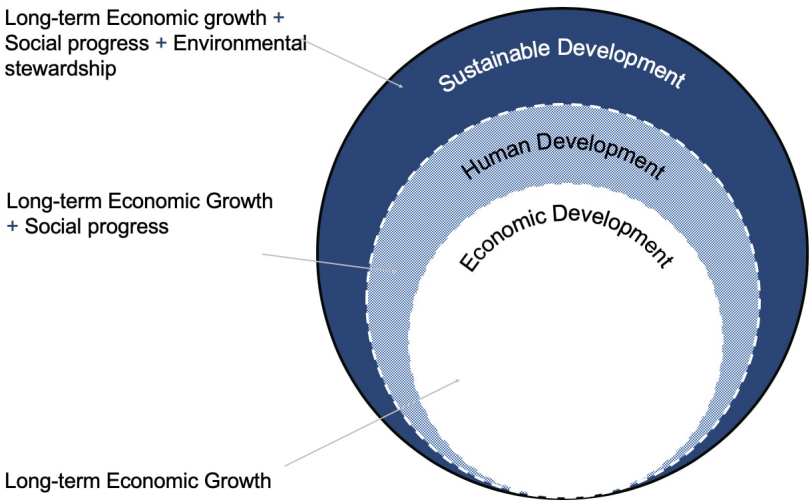
Sen (2000, p. 3) views development as an expansion of human freedom. According to the author, an expansion of human freedom depends not only on the increase in national incomes, but also other elements such as the establishment of health and education facilities or the enablement to have a say in political matters. He emphasizes that contributors to human freedom are industrialization, technological progress or social modernization. Nevertheless, as the author continues, human freedom can only be expanded once barriers to freedom are abolished. These barriers, or as the author puts it "sources to unfreedom" are "poverty as well as tyranny, poor economic opportunities as well as systematic social deprivation, neglect of public facilities as well as intolerance or overactivity of repressive states" (Sen, 2000, p. 3). Therefore, along measuring economic progress, human progress shall be taken into consideration (Sen, 1983, p. 753).

An approach to include social aspects in measuring development was made with the introduction of the Human Development Index (HDI). The HDI summarizes two indicators of social progress – life expectancy and education – and well as one indicator for economic progress – Gross National Income (GNI) – in a single figure (UN, n.d.).

Human development adds another layer onto economic development as it encompasses both sustained economic growth as well as social progress.

The term "sustainable" adds a further layer onto economic and human development. Development is considered sustainable if it meets today's needs of economy and society and that of future generations without compromising the quality of the natural environment. The ultimate aim is to treat the natural environment, which both society and economy are dependent on, in such a way that future generations can enjoy planet earth in the same condition as its inhabitants do today (UN, 1987, p. 15). This modern concept of sustainable development was coined by the World Commission on Environment and Development (WCED) and published in the 1987 Brundtland Report.

Figure 3: Sustainable Development (own illustration based on Sen, 2000, p. 3; UN, 1987, p. 15)



Note: This figure illustrates that sustainable development can be viewed as the overarching principle of development. It encompasses economic development (i.e. sustained economic growth), human development (i.e. sustained economic growth incl. social progress) and environmental stewardship.

3.2 Basic concepts

In this sub-chapter the basic concepts used in this thesis are described. This includes the *United Nations Sustainable Development Goals, the United Nations Global Compact and the Belt and Road Initiative*. These concepts are used as frameworks for data collection and presented in the findings section of this thesis.

3.2.1 United Nations Sustainable Development Goals

According to the United Nations (UN) official platform (n.d.), in 2015 the member states of the UN agreed to collectively work towards achieving the UN Sustainable Development Goals (SDGs) by 2030. The organization explains that the SDGs are a plan to advance sustainable development around the globe. It is proposed that the plan addresses the areas of economic and human development as well as environmental stewardship in 17 interconnected goals and sub-goals (see figure 4), the latter referred to as targets. These goals and targets are organized under people, prosperity, peace and justice as well as partnerships for the goals and are to be achieved by all countries on a national level.

In order to keep track of the countries' progress, the UN yearly publishes a report on the countries' performances, based on national reporting. National reporting encompasses the collection of relevant indicators pertaining the targets of the individual goals (De la Mothe, Espey & Schmidt-Traub, 2015, pp. 1-4). Individual countries however desire adequate statistical capacity to provide reliable data.

By analyzing a country's SDG performance, a solid picture of a national development situation can be made. For this purpose, this thesis reviews the SDG performance of Africa in section 4.1 of the findings.

Figure 4: United Nations Sustainable Development Goals (own illustration based on GRI & UNGC, 2017, pp. 1-7)

Note: The UN SDGs are a framework for sustainable development. The 17 goals revolve around people, prosperity, planet and partnerships for the goals.

3.2.2 United Nations Global Compact

Companies are requested to contribute to the achievement of the SDGs, on national as well as international level. The United Nations Global Compact (UN Global Compact), as the world's largest corporate sustainability initiative, outlines ten principles centering around human rights, labor, environment and anti-corruption, for conducting business in a responsible way (GRI & UNGC, 2017, p. 206). These principles can be subordinated to environment, social sustainability and governance (ESG) (see figure 5) (UNGC, n.d.). The next three paragraphs outline, how companies can contribute to environmental and social sustainability as well as governance by adhering to the respective principles. These principles are analyzed in section 4.2. of the findings in the context of Chinese companies in Africa.

3.2.2.1 Social Sustainability

The social sustainability dimension of the UN Global Compact focuses on human rights and labor. According to Cattaert and Karbassi (n.d.), companies can act socially responsible by following principles one to six. Principle one and two ask companies to carry out business operations in such a way that no human rights impairments occur. Principles three to six emphasize that employees must receive decent working conditions. These principles emphasize that people must receive a fair income, social protection, freedom to express their workforce concerns and prospects for personal development in a work environment which embraces diversity.

3.2.2.2 Environment

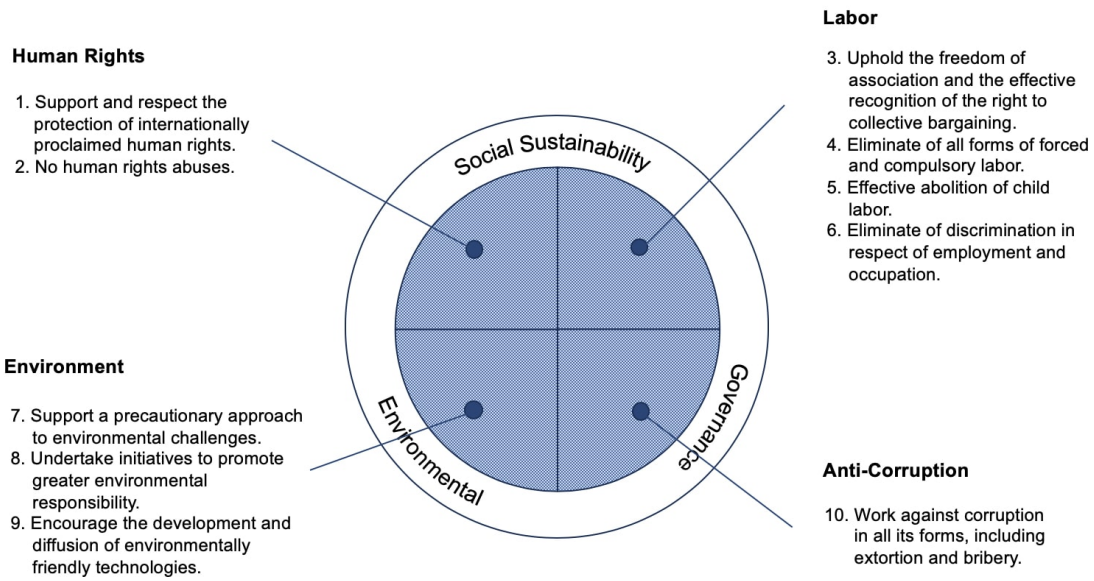
Principles seven, eight and nine of the UN Global Compact challenge companies to address environmental issues in their business practices. Principle seven stipulates to "support a precautionary approach to environmental challenges", which means that companies should first receive the approval of society before a perhaps harming product is placed on the market and therefore the public must be informed (Karbassi, n.d.) Principle eight outlines that companies should "undertake initiatives to promote greater environmental responsibility", which essentially asks companies to provide transparency about their environmentally responsible operations (Karbassi, n.d.). Thirdly, principle nine emphasizes that companies shall "encourage the development and diffusion of environmentally friendly technologies", meaning that companies shall apply more

environmentally friendly technologies which are less polluting and enable recyclability in order to minimize waste (Karbassi, n.d.).

3.2.2.3 Governance

Principle ten stipulates that companies remove corruption in all its forms. Corruption, such as extortion and bribery, are not only hindering national economic progress and diminishing inward foreign investments, but also impede businesses itself since it leads to higher costs and may lead negative reputation (Demming, n.d.). Due these repercussions, the UN Global Compact asks companies to integrate anti-corruption efforts in their code of conducts (Demming, n.d.).

Figure 5: Ten principles for responsible business practices (own illustration based on UNGC, n.d.).



Note: The UNGC's ten principles revolving around human rights, labor, environment and anti-corruption can be subordinated to social sustainability, environment and governance (ESG). Businesses are considered responsible if they follow these principles.

3.2.3 Belt and Road Initiative

The Belt and Road Initiative (BRI), launched in 2013 by the Chinese government, constitutes a major building block in China's international economic involvement (Huang, 2016, p. 314). The BRI builds upon the ancient Silk Road, which was a trade route connecting China to Europe during the time form the second until the 18th century (Belt and Road Forum, 2019). The modern version of the Silk Road seeks to build infrastructure in Asian, European and African regions, for the facilitation of trade across these continents (Huang, 2016, p. 314). The initiative emphasizes the reduction of major trade barriers, such as tariffs (Belt and Road Forum, 2019). In the hope of benefiting from the BRI in a way of better integration in the global economy, developing countries in in Eurasia and Africa are participating in the initiative by signing bilateral cooperation agreements with China (OECD, 2018, p. 3).

While the "belt" constituent asserts the establishment of six overland routes, consisting of roads, railway tracks, oil and gas pipelines, telecom and electricity networks as well as special economic zones for free trade, the "road" component refers to the establishment of sea routes (Huang, 2016, p. 319; Belt and Road Forum, 2019). However, the BRI does not revolve around trade facilitation alone. Specifically, the underlying aim of the BRI ought to advance development in underdeveloped countries, who together constitute 64% of the global population and 30% of the global GDP (Huang, 2016, p. 314). President Xi Jinping announced that "China will actively promote international co-operation through the Belt and Road Initiative. In doing so, we hope to achieve policy, infrastructure, trade, financial, and people-to-people connectivity and thus build a new platform for international co-operation to create new drivers of shared development" (Xi, 2017b, p. 61). However, it is unclear what President Xi refers to with "connectivity" and thus calls for an analysis of President Xi's statement.

An Article by Huang (2016, p. 319) explains that infrastructure connectivity refers to the establishment of regional infrastructure in Asian, European and African regions, such as roads and railroads, which link these regions to China. The article indicated that trade connectivity refers to the endeavors of removing barriers to trade and investment, which will be achieved by strengthening regional infrastructure for the establishment of industrial value chains and free trade zones. Financial connectivity, as the article continues, regards major financiers of the BRI which enable investments within the blueprint. Moreover, policy connectivity refers to political exchanges in form of regular meetings between government officials of China and BRI-cooperting countries. These

meetings aim to follow up on action plans, which set out details to cooperations. Lastly, people-to-people connectivity circumscribes China's aspirations to share and educate BRI-participants about China's development experience (OECD, 2018, p. 4).

The implications for Africa, as an important BRI-participant, of the so called "connectivity" components are analyzed in section 4.3. of the findings.

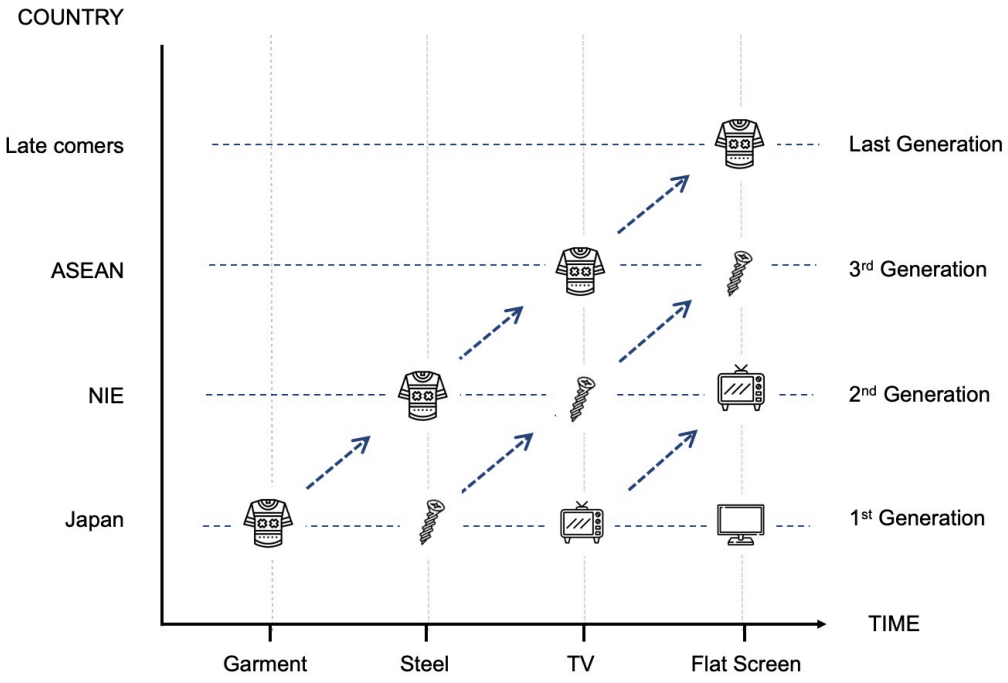
3.3 Theories

This sub-chapter introduces the *flying geese paradigm, the extractive institutions theory and the world systems theory*, by providing their theoretical explanation. These theories are later applied in this thesis in the discussion of the findings.

3.3.1 Flying Geese Paradigm

The flying geese paradigm is an economic development theory explaining the economic catching up process of East Asian nations with Western economies (Kasahara, 2004, p. 1). The theory was originally developed in 1930 by Kaname Akamatsu for demonstration purposes of Japan's industrialization phenomenon (Kasahara, 2004, p. 1). The publications of Akamatsu (1935 and 1937) were later translated into English in 1961 and 1962 (as cited in Kojima, p. 276).

Figure 6: Flying Geese Paradigm (adapted from Lin, 2011, p. 9)



Note: This figure depicts the structural transformation according to the four stages/ generations. NIE countries includes Hong Kong, Singapore, South Korea and Taiwan (Majaski, 2019). ASEAN members includes Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam (Albert & Maizland, 2019). By 2015, President Xi Jinping expects China to be at stage four, as depicted by the sector "flat screen" where labor become more expensive and skilled, and additionally seeking for a new country that has cheap labor and accordingly this country would start its industrialization process at stage 1, "garment".

According to the paradigm, East Asian nations followed the example of Japan in transforming from a low-value added industry and underdeveloped economy to a higher-value added industry and advanced economy (Kojima, 2000, p. 376). Akamatsu (1961, p. 208) referred to this development path as "wild-geese-flying pattern" (as cited in Kojima, 2000, p. 382), meaning that East Asian nations followed Japan's process of industrialization similar to a flock of wild flying geese following its leading goose (Kojima, 2000, p. 376).

The next sections explain the four stages of the industrialization process each "goose" undergoes with the intention to transform from a labor-intensive to a capital-intensive economy.

3.3.1.1 Stage 1

A country begins its industrialization process by focusing on low-cost manufacturing in an attempt to build a competitive advantage in the production of a certain product or product range (Biswas, 2016, p. 67). Low-cost manufacturing, however, is only possible at this stage due the prevailing labor force being unsophisticated and cheap (Biswas, 2016, p. 67). According to Akamatsu (1961, p. 206) the underdeveloped economy then starts to export these low-value products, in which it has successfully built a competitive advantage and in turn imports higher value (industrial) products from advanced economies (as cited in Kojima, 2000, p. 376).

3.3.1.2 Stage 2

Akamatsu (1961, pp. 206-207) claims, that the next stage is initiated by imports from abroad, which incentivize the yet underdeveloped economy to produce the higher value product itself (as cited in Kojima, pp. 378-379). Thus, the labor force gradually moves into the next industrial stage and produces products of higher value. Eventually, *labor costs rise while labor becomes more skilled* (Biswas, 2016, p. 67).

3.3.1.3 Stage 3

At this stage of the industrialization process, domestically produced low value products are not competitive anymore (Biswas, 2016, p. 67). Biswas (2016, p. 67) refers to this effect as "*hollowing-out of the manufacturing sector*". According to Akamatsu (1961, p. 282, as cited in Kojima, p. 382), exports of these low value products begin to decline as low-cost manufacturing naturally moves to another country (Biswas, 2016, p. 67).

3.3.1.4 Stage 4

Akamatsu argues that the country is no longer an underdeveloped economy at this stage, but rather an *advanced economy* (as cited in Kojima, p. 382). Following this, the economy, now start focusing on higher value production, imports low-value products

from overseas countries with lower labor costs (Biswas, 2016, p. 67). The same process is now replicated by another country, which has already begun its industrialization process by focusing on low-cost manufacturing and is then building a competitive advantage therein, before it moves to the next stage.

3.3.2 Extractive Institutions Theory

The extractive institutions theory emphasizes the role that governments institutions play in a country's development path. As government institutions can influence social progression in both a negative and positive way, the outcomes are reflected in a country's human development state.

3.3.2.1 Extractive and Inclusive Economic Institutions

Acemoglu and Robinson (2012) hold extractive government institutions, both economic and political institutions, accountable for preventing economies from prospering. The authors make a distinction between extractive and inclusive economic institutions and extractive and inclusive political institutions.

Acemoglu and Robinson (2012, pp. 73-78) begin their theoretical explanations with *inclusive economic institutions*, which are national institutions that guarantee private property, a law system that treats everyone equally and freedom of contract to all citizens. The authors emphasize that private property is crucial for productivity and innovation. Moreover, inclusive institutions are said to ensure that public services, such as infrastructure, are available to all citizens, so that the entire economy can prosper. Acemoglu and Robinson highlight, that with inclusive economic institutions, all citizens are encouraged to pursue their own professions as well as to start new companies. The state, as the authors continue, has the role to ensure that these rights and services are provided to every citizen. Acemoglu and Robinson emphasize that inclusive economic institutions are the enablers of sustained economic grow. Sustained economic growth, as the authors argue, is characterized by technological improvements which in turn enhance productivity. However, the authors continue that not only the development of technology itself is necessary to enhance productivity, but also people's acquisition of skills and knowledge in order to operate the technology. Therefore, inclusive economic institutions ensure on the one hand private property for technological innovation and on the other hand education and training for a skilled workforce.

Acemoglu and Robinson (2012, pp. 76-79) argue that *extractive economic institutions*, as a contrast to inclusive economic institutions, do not guarantee private property, which means that all property is owned by the state or a minority of society. The authors claim that citizens are neither allowed to make their own economic decisions nor to choose a profession and rather have to work in areas assigned by the elite minority. Acemoglu and Robinson name these institutions extractive, because a minority of society enriches themselves by exploiting the rest of society. According to Acemoglu and Robinson, extractive economic institutions, often found in poor countries, do not recognize the importance of education and thus political institutions do not channel funds to the construction of schools. On the contrary, these governments, rather than investing in the development of its citizens, force these to work in low-skilled professions.

3.3.2.2 Extractive and Inclusive Political Institutions

According to Acemoglu and Robinson (2012, p. 80) political institutions decide upon the distribution of power within a society. The authors argue that if power is only in the hands of a small elite group, this minority will set up an economic institution which is exploiting the majority of society for their own enrichment. Thus, as the authors continue, this elite group, constituting the *extractive political institution*, is enforcing an extractive economic institution where neither a rule of law nor contract enforcement or public services prevail.

Acemoglu and Robinson (2012, p. 80) claim that the political power in *inclusive political institutions*, as a contrast to extractive political institutions belongs to "a broad coalition or a plurality of groups" (Acemoglu & Robinson, 2012, p. 80). The authors however emphasize that these political coalitions must be supervised by a centralized and powerful state in order to ensure political stability, since a lack of political centralization will result in chaos. In inclusive political institutions, where power is distributed within a group of political parties and additionally centrally controlled by the state, it is difficult for extractive political institutions to establish extractive economic situations for their self-enrichment (Acemoglu & Robinson, 2012, p. 82). According to Acemoglu and Robinson (2012, pp. 81-82) worker exploitation is only found in political institutions ruled by elite groups where the working class lacks political representation. The authors claim that such an economic system, controlled by extractive political institutions, deplete the majority of the population while enrichening a small elite group.

Acemoglu and Robinson (2012, pp. 81-83) conclude that political and economic institutions work together to either create economic growth and job creation or economic stagnation and impoverishment. The authors continue that extractive political institutions cannot support inclusive economic institutions. Rather, in the long term, inclusive economic institutions will either change into extractive economic institutions or, if economic growth starts progressing, this will undercut the power of political elites and in turn pave the way for inclusive political institutions. Corruption, as Acemoglu and Robinson (2012, p. 368) point out, is only a "symptom" of institutional weakness and the actual answer to why nations fail today, lies in the presence of extractive institutions in both politics and economics.

Inclusiveness of both political and economic institutions determine whether a nation succeeds or fails. Pluralistic and centrally supervised political systems are necessary to encourage innovation and successful businesses which lead to economic growth and prosperity. On the other hand, extractive politics hamper innovation and economic growth. These institutions, through corruption and bribery, enrich a minority of society while impoverishing the majority.

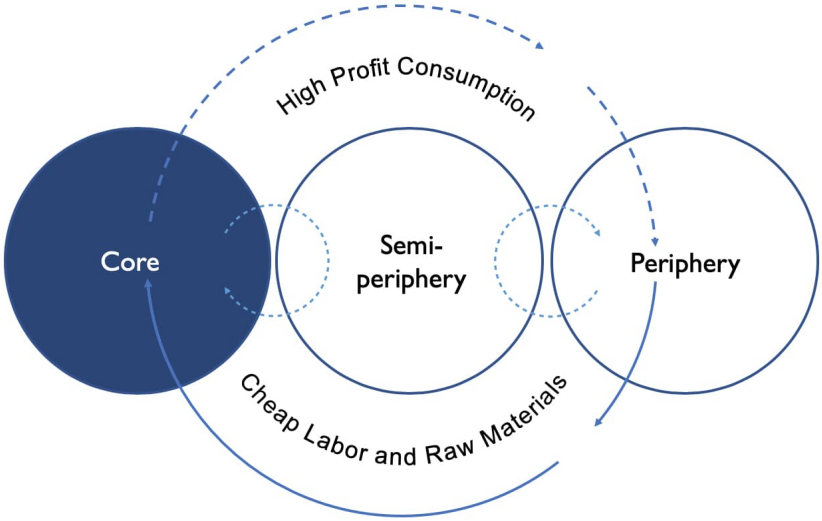
3.3.3 World Systems Theory

Chase-Dunn and Grimes (1995) review the essentials of the world systems theory, originated by sociologist Immanuel Wallerstein in 1970. The world systems theory is a historical approach to explain the existence of poverty and global inequality. The authors highlight, that since its origination, the theory has gained much attention from many social science disciplines and still applies today (Chase-Dunn & Grimes, 1995, p. 387). The following paragraph seeks to provide insights into Wallerstein's original theory.

According to the theoretical interpretation of Chase-Dunn and Grimes (1995, p. 398) Wallerstein's work is based on the idea of the world as a global hierarchy in which there are core, periphery and semi-periphery countries (see figure 7). *Core countries* are dominant developed countries which exploit the underdeveloped, or so-called periphery countries for cheap labor and raw materials (Chase-Dunn and Grimes, pp. 398-399). Wallenstein's theory is based on the capitalist system of accumulation through worker exploitation, which emerged in the Sixteenth Century with the rise of the European Empire (Chase-Dunn & Grimes, 1995, p. 399). Wallerstein (1974, p. 350) claims, that due to external circumstances, the position a country has in the world system – either core, semi-periphery or periphery – moves in cycles, and as technology progresses and

borders decline, social inequality does not decrease, but moves along with the cycles of changing powers in the world system.

Figure 7: World Systems Theory (adapted from Mlambo, 2018, p. 4)



Note: This illustration depicts the relationship between the three hierarchies of periphery, semi-periphery and core countries. It shows how core countries manage to remain in their dominant position in the world system and produce products of high value by exploiting cheap labor and raw materials from periphery countries.

While core countries focus on capital-intensive production, *periphery countries* focus on labor-intensive production (Goldfrank, 2000, p. 168). As Wallerstein (1974, p. 219) argues, periphery countries extract raw materials and export these to core countries from which they in turn import manufactured goods.

However, core countries, with assistance of a strong military power, manage to underpay workers by putting pressure on wages in periphery countries (Chase-Dunn & Grimes, 1995, p. 396). Chase-Dunn & Grimes (1995, p. 396) refer to this effect as "chronic impoverishment", which means periphery countries lack financial means to invest in infrastructure, which is crucial for economic development and poverty reduction. Therefore, as long as core countries only exploit periphery countries for self-enrichment, periphery countries are kept from progressing. Core countries seek to keep their position in the world system by supporting each other to keep their dominant

position in the world system and thus these countries ensure that periphery countries cannot develop (Trivette, 2019).

Between these two hierarchies lie the *semi-periphery* countries which include characteristics of both core and periphery countries (Chase-Dunn & Grimes, 1995, p. 399). According to Wallerstein (1974, p. 350) semi-periphery countries are those who have previously been periphery countries and yet managed to advance their economies, however due to external changes such as shifts in geopolitics and increasing international trade. Albeit their economies developing, in the political arena, semi-peripheral still lack a significant voice since world politics are yet dominated by core countries (Wallerstein, 1974, p. 349-350). According to Xing (2017) upward mobility from a semi-periphery to a core country occurs at the cost of both core countries and periphery countries, meaning that once semi-periphery countries manage to increase their power in the international economic system, the hegemony of core countries decreases and periphery countries continue to be exploited to serve the interests of the rising semi-periphery country.

4 Findings

This chapter presents the findings of this thesis. It is divided into three parts, which are each followed by a summary of key observations as the fifth research objective specifies. The first part presents the current state of Africa in reaching the Sustainable Development Goals (SDGs) and starts with a summary to the scoring of the 17 SDGs. This is followed by a comprehensive presentation of the individual goals. The second part presents information as to whether Chinese businesses are operating responsibly in Africa. According to the United Nations Global Compact (UNGC), responsible business practices stipulate human rights compliance, fair labor standards, anti-corruption efforts and environmental stewardship. The last part of the findings presents evidence to all the subcomponents of the Belt and Road Initiative (BRI) in order to highlight implications of Sino-African relations for both the Chinese and the African side. Each section is concluded with key observations, which are then used in the subsequent chapter to discuss whether China's involvement has a positive or negative causal effect on sustainable development in Africa.

4.1 Current State of Sustainable Development Goals

This chapter addresses the second research objective, namely, *to determine the current state of development in Africa*. Sub-questions of this research objective are: *how far are African countries in their development path, what are the major obstacles to development?*

In order to address this research objective and sub-questions, this sub-chapter begins by presenting an overall scoring of Africa in the 17 SDGs and is followed by a detailed explanation to the sub-goals of the SDGs, referred to as targets.

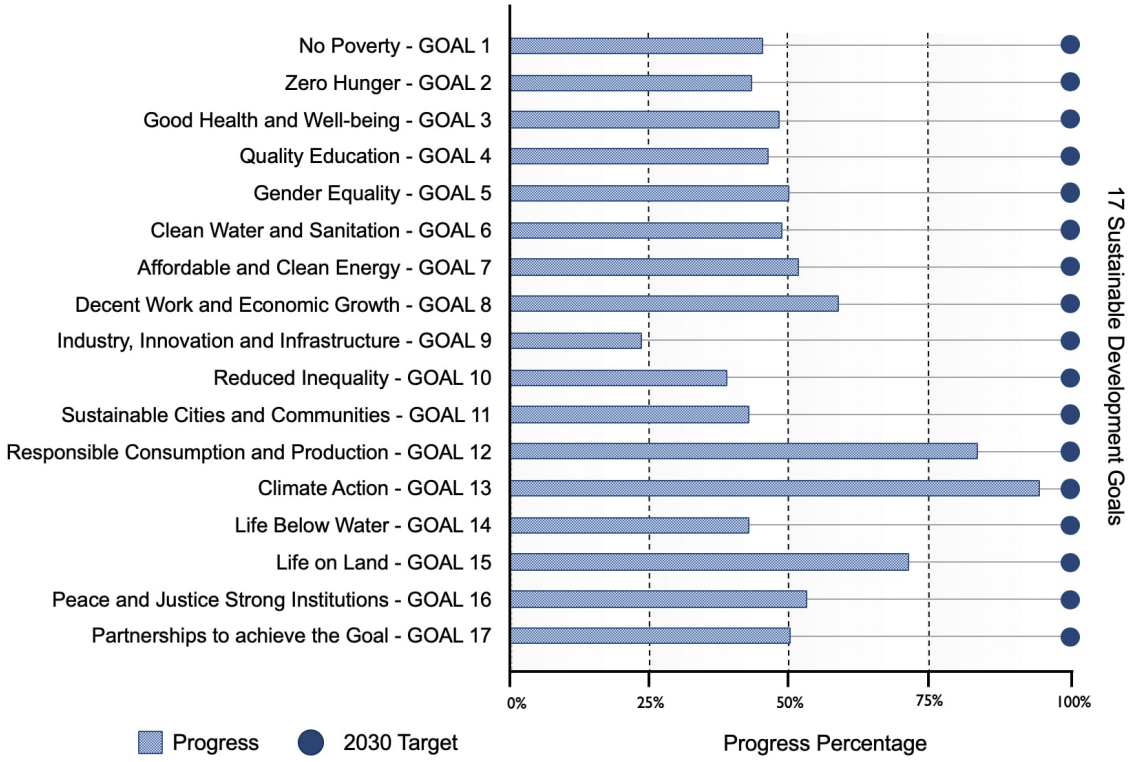
4.1.1 Performance Review of Sustainable Development Goals

In 2019 the African Center for SDGs, an international organization which aims to support African countries in their efforts to achieve the 17 goals, published a performance review of Africa. Data for the performance review was collected from the individual African countries. The report draws attention to the fact the data received from the individual countries is not updated it dates back to 2015 and constitutes to less than half of the reporting required by the United Nation. Nevertheless, the following sections apply the information retrieved from organization's report as well their publicized quantitative

data (the full data set is attached in Appendix 1), as it provides a picture of the development situation in Africa.

Figure 8 illustrates the overall scoring of Africa in the SDGs. Each goal score is a summary figure encompassing quantitative indicators to the respective targets. As can be seen in the figure, Africa as a whole is far from reaching most of the goals in the next 10 years. Noteworthy mentioning is that Africa is only halfway on track with meeting the goals of poverty, hunger reduction as well as clean water and sanitation. The performance of responsible production and consumption as well as climate action are significantly higher, however this is merely a reflection of the low score of industrialization.

Figure 8: Africa's score to the 17 SDGs (own illustration based on African Center for SDG, 2019)



Note: The scores to the individual goals are calculated as follows: Due to varying population sizes, a weighted average was used in order to determine the mean of the index value (index value = summary of the figures of relevant sub-goals/targets). Country populations were divided by the aggregate population value (sum value of countries) in order to come to their value of importance. This percentage was then used in the weighted average calculation to obtain the combined index value of the 52 countries per goal (data of Libya and Seychelles is not available).

4.1.2 Analysis of Performance Review

The following paragraphs elaborate on the performance of the individual goals by providing a detailed overview of relevant indicators to important targets. These paragraphs serve to provide an overview of how Africa stands with regards to developing their people, their prosperity, their relationship with our planet, how the countries are ruled and lastly, the continent's partnerships for the goals. Data is based on the 2019 Report of the African Center for SDG as well as publicized quantitative data.

4.1.2.1 People

SDG 1 – No poverty, Target 1.2 - By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions

The SDG Center for Africa (2019, pp. 22-23 & p. 51) emphasizes that the poverty situation in Africa is severe, considering that on average 39.1% of the African population live below its nationally defined poverty line. In global terms, a person is considered poor if they must live with less than US$ 1.90 a day (World Bank, 2015). The severity of this situation is further amplified by the fact that in 14 African countries half the population live in poverty. Solely in the two North African countries, Algeria and Mauritius, poverty rates lie under 10%. The report emphasizes that although poverty rates decreased in all countries, absolute poverty headcounts are still very high. The report therefore estimates that the universal target to reduce national poverty rates by 50% by 2030 will presumably not be met by most African countries, except for the two North African countries.

SDG 2 – Zero hunger, Target 2.1 - By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round

According to the SDG Center for Africa (2019, p. 23) on average 16.65% of people in Africa are undernourished. The highest numbers of undernourished people are recorded in East and Central Africa where more than 30% of the population suffer from hunger. North Africa accounts for 12.2% of undernourished people, however the report emphasizes that this figure is still roughly 2% behind the world average. It is thus highly improbable for Africa as a whole to address all forms of hunger and malnutrition by 2030.

SDG 3 – Good health and well-being, Target 3.2 - By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1'000 live births and under-five mortality to at least as low as 25 per 1'000 live births

The health and well-being situation in Africa raises many concerns. As reported by the SDG Center for Africa (2019, p. 24), the chance, that children die before the age of five is at 6.54%. Most African countries have an under-five mortality rate which is higher than the world average of 3.9%. In 36 African countries, the likelihood that a child dies before the age of five is at 5%, which corresponds to 50 deaths per 1000 births. For these countries and thus for the majority of African countries, the target to reduce the number to minimally 25 deaths per 1000 children, or 2.5%, is very unlikely to be achieved by 2030.

SDG 4 – Quality education, Target 4.1 - By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes

Concerning primary enrolment, the African continent has made progress, as the African Center for SDG (2019, p. 25) points out. On average 56.9% of children in Africa visit primary school. According to the report, in half the countries even 90% of children have the possibility to go to school and therefore these countries are likely to meet the target of having a 100% primary school enrolment rate by 2030. Nevertheless, in Eritrea, Djibouti and Niger on average only 51.6% of children visit school and hence, these countries are estimated to be unlikely to achieve primary education for all by 2030.

SDG 5 – Gender equality, Target 5.5 - Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life

Gender equality appears to be more prosperous than the previous goals. The African Center for SDG (2019, pp. 25-26) puts forward that world average of female seats in national parliaments lies at 23.6%. Africa is not far behind this figure with on average 21.49% of seats occupied by women. In Sub Saharan Africa, and particularly in Rwanda, the rate of female parliamentarians exceeds the global average, with respective female seats of 24.2% and 61.3%. Nonetheless, the report finds that in eight countries, the female rate amounts to less than 10%.

SDG 6 – Clean water and sanitation, Target 6.1 - By 2030, achieve universal and equitable access to safe and affordable drinking water for all

As found in the report of the African Center for SDG (2019, p. 27) on average only 62.94% of the African population have access to basic drinking water, which refers to a drinking water source within a 30 minutes walking distance. Thus far merely six African countries, namely Algeria, Tunisia, Seychelles, Libya, Egypt and Mauritius, lie above the world average of 89% of people receiving basic drinking water services. Nonetheless, the report highlights that in Eritrea, Uganda and Ethiopia less than 40% of the population have access to basic drinking water. At this point, it is emphasized, that that in order to achieve the target of safe drinking water for everyone, substantial investments in infrastructure are desired.

4.1.2.2 Prosperity

SDG 7 – Affordable and clean energy, Target 7.1 - By 2030, ensure universal access to affordable, reliable and modern energy services

According to the African Center for SDG (2019, pp. 27-28), 89% of the global population have access to electricity. Africa, however, is far away from this figure. Albeit in nine countries, mostly located in North Africa, more than 89% of people have access to electricity, whereas in most countries less than half the population lack the access to power. In summary, it was found that 38% of the African population have access to electricity. Thus, the target to provide access to affordable energy for everyone, will presumably not be met by Africa as a whole, except for North Africa.

SDG 8 – Decent work and economic growth, Target 8.5 - By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

The African Center for SDG (2019, p. 29 & p. 72) indicates, that in 2015, after the 2030 Agenda for Sustainable Development was passed, 52% of African countries, with a GDP per capita under US$ 1.025, were low-income countries. A large share of the population of these low-income countries were found to work in the agricultural and informal sector. The report highlights that exports of these countries are characterized by commodities and that manufactured goods only make up a narrow portion of total exports. The average employment to population ratio lies at 60%, meaning that 40% of the African population is unemployed. The target to achieve full and productive employment, will reasonably

not be reached by 2030, by most countries. The report emphasizes that the unemployment situation is even in North Africa above 10%.

SDG 9 – Industry, innovation and infrastructure, Target 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

The fact that most Africans work in the agricultural sector is reflected by the internet usage rate. The African Center for SDG (2019, p. 30 & p. 122) illustrates that only 26.05% of the African population use the internet. Even Morocco, which has the highest number of internet users with over 60%, is yet 10% below the global average. In almost half the countries, less than 20% have access to internet. Hence, the target to significantly increase access to internet, poses a great challenge for the continent. At this stage, the report denotes the urgency that Africa needs to industrialize by moving away from the agricultural to the manufacturing sector. The report additionally emphasizes, that for industrialization to be successful, an improvement in technology is of central importance.

The African Development Bank (2018, pp. 63 – 69) confirms the need for industrialization, since a structural transformation will counter poverty and increase employment rates, especially if one considers that annually 12 million adolescents join the working age population in Africa. It is accentuated that Africa therefore desires infrastructure investments of US$ 130 – 170 billion per year, however the continent faces a funding gap of US$ 68 – 108 billion annually. According to the IMF, desired infrastructure encompasses public facilities, water, power, sanitation, Information and Communication Technology (ICT) and transport such as roads and railways (as cited in African Development Bank, 2018, p. 69).

SDG 10 – Reduced inequalities within and among countries, Target 10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

According to Bossert, D'Ambrosio and Peragine (2007, p. 73) inequality manifests itself in social exclusion and social deprivation. The former refers to the situation, in which a group of individuals in a society does not have equal access to education, healthcare, work, political participation and security as does the rest of society. The latter refers to the situation, in which the group of individuals, as a result of social exclusion, does not

identify itself with the rest of society. Inequality can for instance be measured by the GINI-coefficient, which measures income distribution, according to which an outcome of 0% represents perfect equality and an outcome of 100% represents perfect inequality (Chappelow, 2020). The African Center for SDGs (2019, p. 76) found that the highest inequalities in Africa appear in countries with the highest incomes, such as South Africa, Botswana and Namibia. In these countries, as the report illustrates, the GINI-coefficient is 67%, 66% and 63%, respectively. The average GINI-coefficient in Africa is 46%. Moreover, the report predicts that inequality figures will worsen along rising social exclusion.

SDG 11 – Sustainable cities and communities, target 11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums

Inequality reflects the fact that half the population in Africa live in slums. According to a report by the UN-Habitant (2011, pp. 3-7 & p. 9), slums are crowded urban areas with poor infrastructure and insufficient access to water and sanitation. As mentioned by the UN-Habitant, the living conditions in slums increased for 24 million people from a total of 200 million slum inhabitants across Africa since the turn of the millennium. In relative terms, this figure however displays, that living conditions only increased for 12% of slum inhabitants. This figure poses a challenge to the sustainable development of cities, since slum dwellers do not take sufficient environmental precautions and is most prominently explained by the Brundtland Report. Namely, "Those who are poor and hungry will often destroy their immediate environment in order to survive" (UN, 1987, p. 26).

4.1.2.3 Planet

SDG 12 – Responsible consumption and production, Target 12.5 - By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

The African Center for SDG (2019, p. 20) indicates that its member states do not report on this important target. However, a reflection of waste handling in African can be made by regarding the fact, that on average only 60% of waste is collected in Africa (UNEP, 2018, p. 31). This means that the rest of generated waste is managed inadequately, in forms of uncontrolled dumping and burning, which in turn have severe health consequences for society (UNEP, 2018, p. 9 & p. 83).

SDG 13 – Climate action, Target 13.2 - Integrate climate change measures into national policies, strategies and planning

According to the African Center for SDG (2019, p. 31, p. 62 & p. 77), Africa accounts for the world's lowest CO_2 emissions, with three exceptions, namely South Africa, followed by Egypt and Algeria. However, the report indicates this is due to the fact that these three countries, in contrast to most African countries, have a working industrial sector. Concerning climate action, it is reported, that most African countries have signed agreements on emission reduction goals such as the Paris Agreement and are increasingly implementing these goals into national policies (Africa Center for SDG, 2019, p. 62).

SDG 14 – Life below water, target 14.1 - By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

On average, 56.46% of plastic is managed inadequately in Africa. Plastic disposed in open landfills or which is simply dumped has a high likelihood to land in oceans where it harms marine life (Jambeck et al., 2015, p. 768). Additionally, most African countries do not have protected areas for marine life conservation (Africa Center for SDG, 2019, p. 63).

SDG 15 – Life on land, Target 15.1 - By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

Africa will, with a high probability, meet the goal to protect life on land (Africa Center for SDG, 2019, p. 15). This is measured by the target "to ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems". Specifically, on average, 49.45% of biodiversity is protected in Africa, which corresponds to double the amount of protected biodiversity in Asia (Africa Center for SDG, 2019, p. 31).

4.1.2.4 Peace & Justice

SDG 16 – Peace, justice and strong institutions, Target 16.1 - Significantly reduce all forms of violence and related death rates everywhere & target 16.6 Develop effective, accountable and transparent institutions at all levels

The SDG Center for Africa measures goal 16 with the number of deaths due to conflict and terrorism. Violence is especially present in Somalia, Libya and Sudan, which record 30.3, 28.5 and 6.5 deaths per 100'000 people, respectively (Africa Center for SDG, 2019, p. 33). 90% of African countries are likely to achieve target 16.1, since all of these countries record less than 1.9 deaths per 100'000 people (SDG Center for Africa, 2019, p. 33). More severe is the institutional situation in Africa. The IMF classifies 31 African countries as fragile (as cited in Africa Center for SDG, 2019, p. 72). States are classified as fragile if they have weak and non-inclusive institutions, poor governance and difficulties to pursue a common national interest (IMF, 2015). Fragile states display political (i.e. civil conflicts) and economic instabilities (i.e. inadequate economic management) (IMF, 2015). Poor governance is manifested in the occurrence of corruption (Africa Center for SDG, 2019, p. 72). On average, 30% of African governments are considered corrupt.

4.1.2.5 Partnerships

SDG 17 – Partnerships for the goals, target 17.19 - By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries

Partnerships for the goals refers to the international assistance, which Africa receives. Target 17.19 stresses that developed countries should assist Africa in building up statistical capacity to keep track of the SDGs (UNGC & GRI, 2017, p. 204). According to the SDG Center for Africa (2019, p. 34) the national statistical capacity indicator measures the quality of the national statistics. Most countries' statistics systems are found to be below the world average. Worst performing countries are Libya, Somalia, Eritrea and Comoros, which score 30, from a maximal score of 100. The 2030 target for all countries lies at 100. Closest to this score are Mauritius and Egypt, with scores of over 80.

The people situation in Africa can be best summarized by the Inequality adjusted Human Development Index (IHDI), according to which most African countries rank "low

human development" (UNDP, n.d.). Regarding prosperity, a structural transformation from the agricultural to the manufacturing sector, in line with technological embracement and effective public spending is desired (Africa Center for SDG, 2019, p. 122). The environmental situation is so far stable, however, adequate waste management and thus investment in infrastructure must be tackled sooner or later, for the benefit of society as well as for life on land and life below water. Moreover, partnerships for the goals are desired not only to increase statistical capacity to report on SDGs but also for the advancement of all goals.

Table 2: Key observations chapter 5.1 (own illustration)

Key observations from this chapter
Severe poverty situation displayed by 39.1% of the African population living below nationally defined poverty line
Economic activity reflected by the fact that manufactured goods only make up a narrow portion of total exports
40% unemployment across Africa
30% of African governments are perceived corrupt

4.2 United Nations Global Compact for Responsible Businesses

This sub-chapter is devoted to the third research objective which deals with *criticism towards China's business practices in Africa*. Sub-questions of this research objective are: *What is found on China's business practices in Africa, what are the major obstacles of doing business in Africa and how do Chinese businesses deal with them?*

In order to answer these sub-questions, the United Nations Global Compact's (UNGC) principles for responsible businesses are applied to China's operations in Africa. The principles evolve around human rights compliance, labor, environmental stewardship and anti-corruption efforts.

4.2.1 Labor

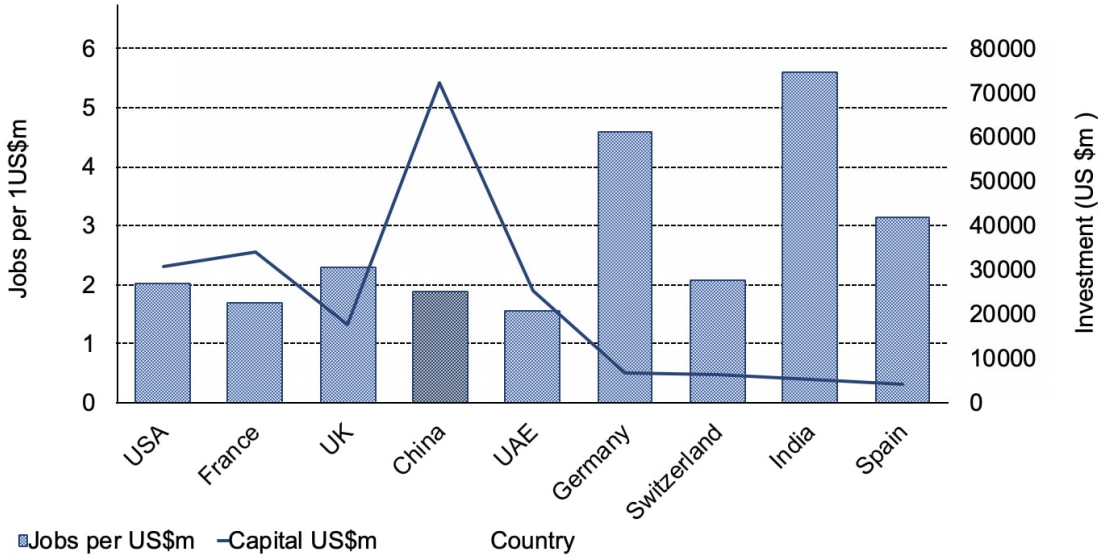
This section elaborates on labor-related aspects of Chinese companies in Africa. The sub-sections of this paragraph provide answers to questions concerning workforce localization and employment creation, working contracts, wage determination and knowledge transfer. Following this, job-losses due to Chinese companies effecting local businesses are presented.

4.2.1.1 Workforce Localization and Employment Creation

In the 2017 McKinsey field survey – the largest study on Chinese companies in Africa thus far – Yuan Sun, Jayaram and Kassiri (2017, p. 11, p. 40) found that from 1037 interviewed companies in eight African countries, 89% of the workforce is local, constituting to 300'000 jobs. Yuan Sun et al. (2017, p. 10, p. 29) estimated that a total of 10'000 Chinese businesses operate across Africa. Approximately 31% of these companies are found in manufacturing, followed by 25% in services, 22% in trade and 15% in construction and real estate combined. By projecting the study's localization rates to the estimated number of companies, roughly three million jobs are being created for local people in Africa. Further studies confirm efforts of Chinese businesses to integrate local labor. Specifically, across several Chinese-owned businesses in Kenya and Nigeria, average workforce localization rates of 75% and 84.9% respectively, were recorded (Rounds & Huang, 2017, p. 6; Yuan Sun et al., 2016).

On the one hand, these high workforce localization rates are the result that wages in China are significantly higher than in Africa (Yuan Sun et al. 2017, p. 40). This partly explains, why Chinese expat staff are mainly brought to Africa only if local people do not possess the necessary skills for a project (Oya & Schaefer, 2014, p. 17). However, the degrees of the localization rates were found to be even higher in countries, in which governments provide limited visas to Chinese expat staff or demand a localization quota (Kernen & Lam, 2014, p. 1061; Farrell, 2016, p. 13).

Figure 9: Aggregate Job Creation between 2014 – 2018 (own illustration based on EY, 2019, p. 18)



Note: As can be seen in the figure, between 2014-2018 China carried out the largest investments, however, it provides the third lowest amount of jobs per US$ 1 million invested.

4.2.1.2 Formal working contracts and wages

Among various Chinese-owned companies in Kenya it was recorded that on average only 45% of employees receive formal working contracts, whereas in comparison to American-owned companies, 90% of employees received formal working contracts (Rounds & Huang, 2017, p. 13). Wages, however, were found to be higher than local standards, yet lower than other international companies located in Africa (Human Rights Watch, 2011), nevertheless the major driver behind wage determination was found to not

be the origin of the company owners, but rather the skill level of local workers (Oya & Schaefer, 2014, p. 6; Wissenbach & Wang, 2017, p. 20).

4.2.1.3 Skills training

Yuan Sun et al. (2017, p. 41) found that 64% of companies provide skills training, either in form of professional training or, where skilled labor is demanded, such as in manufacturing and construction, half the companies are offering apprenticeships to locals. Local personnel are mostly found on the ground, if one considers that on average only 44% of management positions are held by Africans (in South Africa only 23% of managers are local) (Yuan Sun et al., 2017, p. 56).

4.2.1.4 Implications of Chinese companies for domestic industries

It was found that Chinese businesses significantly undermine local companies for component manufacturing, such as steel. This is because African components are not competitive compared to cheap Chinese imports, which is reflected by the fact, that on average only 47% of components are sourced from local producers (Yuan Sun et al., 2017, p. 47). In 2015, as a result of Chinese steel imports, the steel industry in South Africa lost 11'000 jobs, as the South African department of Trade and Industry records (as cited in Yuan Sun et al., 2017, p. 47).

4.2.2 Human rights situation

The following paragraphs highlight incidents of workforce discrimination and inhumane working conditions. Although these incidents raise concerns, findings should not, due to limited sample size, be projected across all sectors of Chinese businesses in Africa.

4.2.2.1 Workforce discrimination

In a 2017 published book by Yuan Sun (co-author of the McKinsey field survey in this thesis), the author integrated several quotes from interviews with Chinese business owners which indicate that workforce discrimination among them is quite common. Several Chinese factory owners mentioned that African workers are often lazy and unpunctual. One business owner mentioned: "The locals are lazy […], we fire a lot of people, especially in their first month on the job. They don't even show up on time, or

they don't come every day, yet they expect to be paid!" (as cited in Yuan Sun, 2017, p. 85). Despite workforce discrimination, by no means being justified, Yuan Sun (2017, pp. 86-88) draws the connection to the industrial revolution in Europe, where workers were yelled at while their mind wandered during working at the production line. The author puts forward that today's generation is not aware of the enormous amounts of discipline and stamina required for factory work and thus have no understanding for statements as illustrated above.

4.2.2.2 Working conditions

In 2011, the Human Rights Watch conducted a research study on working conditions in Chinese-owned copper mines in Zambia. Interviewees, amongst others, were mine workers, mining union officials and doctors. During 170 interviews across four different mines, it was reported that poor ventilation and unsafe conditions, under which African people had to work, lead to serious lung diseases and injuries. Moreover, it was found that workers had to complete 12 hours shifts, five days a week. In addition, several workers mentioned in interviews that they were threatened to lose their jobs if they refuse to work under these conditions.

Safety concerns were also found among Chinese companies in Tanzania and Nigeria, according to which Chinese companies disregarded local safety requirements for employees. According to a study by Bräutigam, Xiaoyang and Xia (2018, p. 22), a steel manufacturing company in Nigeria had to close due to non-compliance with local regulations, which was followed by labor protests, strikes and the shut-down of these companies. According to interviews by Wissenbach and Wang (2017, p. 20) with Chinese business owners in Kenya, they are not used to strikes in China. Moreover, they emphasized that labor strikes are very common in Africa and that these often take place for less-severe issues such as increase in wages, although sufficiently paid according to local laws and skill level.

4.2.3 Environmental situation

The next section revolves around the topic of environmental stewardship of Chinese businesses. The first paragraph presents findings to incidents of excessive natural resource extraction. This is followed by an investigation of the relocation of polluting industries to Africa and impacts of the current trade relations with China. The last section elaborates on the environmental repercussions of building the Belt and Road Initiative.

4.2.3.1 Excessive resource extraction

Several studies found evidence of excessive resource extraction of Chinese companies in Africa. An article by Jacobs (2017), based on interviews with fisheries experts, reveals incidents of illegal fishing in West Africa. These experts estimate that in Senegal alone, Chinese boats steal annually 40'000 tons of fish, which constitutes to an amount of US$ 28 million on which Senegalese fishers miss out as a result. These catches are found to often occur at night and are then immediately shipped from the coastal special economic zones to China. Often, as the article continues, these boats are subsidized by the Chinese government. A research article from Frontiers in Marine Science puts forward, that Chinese unreported fishing constitutes to a yearly income loss of US$ 2.3 billion for economies in West Africa (Doumbouya et al., 2017, p. 4). In addition to overfishing, log smuggling appears to be another issue. A study by the Environmental Investigation Agency (2014, p. 1) found, that half the logs, which Chinese-owned timber companies in Mozambique export to China, were smuggled, by hiding illegal logs behind legal ones.

4.2.3.2 Export of polluting industries and implications of trade with China

Bräutigam et al. (2018, pp. 22-23) found incidents where a lack of respect for the environment by Chinese companies lead to environmental degradation. The study reveals on several cases, in which Chinese companies exploited the lack of environmental regulations in Africa and simply exported environmentally hazardous productions to Africa, after environmental standards became stricter in China. For instance, after a company in Shanghai had to close their operations due to unconformity with new regulations, it exported the respective machinery to Nigeria and continued its operations from there. Similarly, several Chinese companies relocated their machinery for manufacturing unrecyclable plastic after these were banned in China, to Ghana, and then exported these bags to other African countries.

Moreover, while promoting renewable energies domestically, it was found that China also exported coal equipment and opened 11 new coal-fired plants in Africa (Ullman, 2019). Empirical evidence confirms that China is inclined to relocate dirty industries to BRI-countries which have less rigid environmental regulations in place and in turn constitute a so called “pollution haven” for China (Cai et al., 2018, p. 628).

A recently published article by Gamso (2018, pp. 400-402) found that on average air quality in Sub Saharan Africa (SSA) and Latin America dramatically worsened since the turn of the millennium, along increased trade with China. The impairment of air quality was a reflection of the nature of exports to China, which largely consisted of "pollution-intensive" raw materials (Gamso, 2018, p. 395). Raw materials become pollution-intensive, as mining and refining of these for export purposes emit enormous amounts of Green House Gases (GHG) into the atmosphere (Ray & Gallagher, 2016, p. 146). As for Latin America, which shares similar trade relations with China as Africa, Ray and Gallagher (2016, pp. 145-146) found that 66% of total GHG emissions in 2012 were the result of pollution-intensive exports to China. Similar numbers can be expected for SSA, considering that most exports to China consist of raw materials such as oil and copper (Zafar, 2007, p. 110).

As China fails to stipulate environmental clauses in trade agreements (Berger, Brandi, Bruhn, & Chi, 2017, p. 11), pressure on local governments to implement environmental standards becomes compelling to curb outcomes of "pollution-intensive" exports. Evidence suggests that air pollution accounted for a fifth of child mortality in SSA between the years 2001 and 2015, and in 2015 alone resulted in 400'000 child deaths (Horton, 2018). Moreover, air pollution was also the cause for worldwide nine million deaths in 2015, representing 16% of global deaths and surpassing combined figures of AIDS-, tuberculosis- and malaria related deaths (Landrigan et al., 2018, p. 462).

Gamso (2018, pp. 400-402) however found a significant correlation between weak governance and increased pollution as a result of trade with China. Specifically, pollution levels grew along trade with China in countries which had weak governance in place, such as the Democratic Republic of Congo (DRC) or Liberia. In countries with stronger governance such as Tanzania, which had respective environmental policies in place, pollution did not rise in the same amount as trade with China. Nevertheless, outcomes of weak governance outweighed efforts of stronger governments, as reflected in the number of air pollution-related deaths.

4.2.4 The environmental impact of the Belt and Road Initiative

An article by Ewing (2019) claims that Chinese investments under the BRI-umbrella further amplify environmental issues. In particular, building roads and railways have an adverse effect on biodiversity, while the promotion of hydro energy has, although lessening GHG emissions, negative repercussions for sea dwellers. A study by Farrel

(2016, p. 12), which analyzed World Bank funded infrastructure projects, found an incident where Chinese contractors building a railway in Ethiopia did not sufficiently protect the construction site and which, in turn, resulted in soil erosion. Moreover, along new consumer classes emerging in BRI-countries, yet more strain will be put on the natural environment (Ewing, 2019).

Ewing (2019) emphasizes, that although President Xi Jinping mentions "green development" and BRI-financiers signed the "Green Investment Principles", the success of environmental stewardship has achieved limited success thus far. The author mentions that in order to lessen environmental degradation it is on the one hand desired that financiers not only mention environmental principles but actively deploy these, and on the other hand African governments need respective policies and mechanisms in place. Namely, it is only "when financier standards converge with local government follow-through that performance improves" (Ewing, 2019). However, the author asserts that rather than waiting for African governments to stipulate environmental regulations, China shall take the lead and implement what has been said to the media with regards to a "green" BRI.

4.2.5 Anti-corruption efforts

The United Nations Global Compact (UNGC) outlines that responsible businesses are such that counter corruption in all its forms. The first paragraph reports on incidents of corruption. Thereafter, the second paragraph presents motives of corruption occurrence.

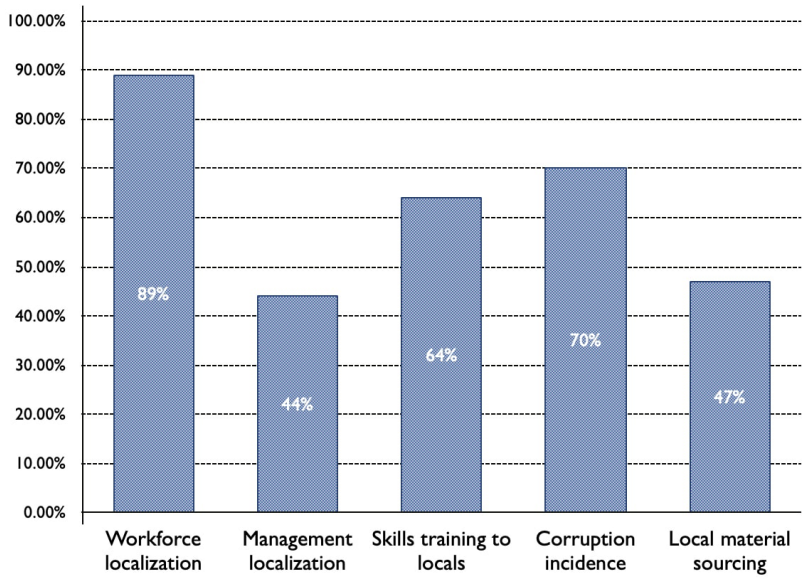
4.2.5.1 Incidents of Corruption

McKinsey's field survey interviews found that on average 73.5% of Chinese admitted that they paid a bribe to government officials in order to receive a business license (Yuan Sun et al., 2017, p. 64). This high number of corruption incidence clearly works against the UNGC's principles to promote good governance and is further exemplified by fishery expert Sumalia, mentioning that Chinese businesses occasionally pay bribes in order to get access to the sea for illegal fishing (as cited by Jacobs, 2017).

4.2.5.2 Motives for corruption

However, interestingly, a survey of the Sino-African Center of Excellence found, that in Kenya, the majority of Chinese businesses noted that they considered corruption as an impediment to do business (as cited in Wissenbach & Wang, 2017, p. 11). Yet, although considered as an obstacle to do business, Chinese business leaders, instead of promoting good governance, prefer to go along with the African way of doing business (Yuan Sun & Lin, 2017, p. 15). According Yuan Sun (2017), Chinese "are comfortable bootstrapping as they go along—pivoting toward various local partners and adjusting accordingly" (p. 117).

Figure 10: Performance review on labor and governance of Chinese companies (own illustration based on Yuan Sun et al., 2017, p. 29, p. 41, p. 47, p. 56 & p. 64)



Note: Workforce localization rate refers to the percentage of local people employed by Chinese companies in Africa. Management localization refers to the percentage of local managers in Chinese companies. Corruption incidence is the figure of Chinese managers that admitted paying a pay a bribe go African government officials in order to receive a business license. Local material sourcing refers to components which Chinese companies source from the African market (the rest is imported from China).

Table 3: Key observations chapter 5.2 (own illustration)

Key observations from this chapter
Workforce localization rate of 89%, constitutes to roughly 3 million jobs created across Africa
Dislocation of polluting industries from China to Africa, after domestic environmental standards became stricter
The nature of trade with China is pollution-intensive
Several studies found evidence of resource exploitation of Chinese companies in Africa
BRI-projects are accompanied by environmental challenges
Working environments in Zambian mines had poor ventilation and unsafe conditions, leading to health impairments
Evidence of resource exploitation by Chinese companies
73.5% of Chinese admitted to bribe government officials for a business license

4.3 The Belt and Road Initiative

This chapter deals with the fourth research objective, which seeks to *understand the implications of the Belt and Road Initiative (BRI) for Africa*. In saying so, this chapter aims to find answers to the following sub-questions: *as stated by China, what are intentions for its involvement in Africa, is China exploiting Africa for its raw materials and international support, is China contributing to sustainable development in Africa by building necessary infrastructure, exporting jobs, fostering good governance and taking a precautionary approach to the natural environment?*

This chapter follows a structured approach in-order to find answers to the sub-questions. The first sub-section provides context to the BRI, which is considered necessary in order to understand the motivations of China. The second sub-section outlines implications for Africa to relevant components of the BRI, which are infrastructure, trade, financing, employment and governance. The third and last-subsection reviews criticism towards the BRI. More specific, evidence is collected to ascertain, whether China uses the BRI as an instrument to exploit Africa for its raw materials and international support.

4.3.1 Understanding China's motivations in the context of Belt and Road Initiative

The motivations behind China's BRI are rather complex in nature and yet important to understand. In an attempt to understand China's incentives, Huang (2016) found three major arguments, which the following paragraphs elaborate on.

Firstly, Huang (2016, p. 315) claims that China main argument is to find new economic partners which enable the country to sustain its economic growth. Beginning in 2010 (World Bank, 2020), China's economy has faced a downturn as a result of declining exports to developed countries and consequently, China's plants are presently running at overcapacity (Biswas, 2016, p. 96). In order to address this challenge, President Xi Jinping announced the strategy "Made in China 2025", according to which China shall move away from low cost manufacturing, to higher value products and eventually into the service industry (Biswas, 2016, pp. 90-91). Xi Jinping expects that the shift into a more value-adding industry would increase household incomes and spending in the same way it was previously the case with Japan, South Korea and Hong Kong, as predicted by the flying geese paradigm (Biswas, 2016, pp. 91-92). Since Xi Jinping puts emphasis on

household spending, China must secure new sources of food, especially since water is in short supply (Biswas, 2016, p. 99). Furthermore, energy consumption will grow in line with domestic consumption, and thus China is compelled to explore additional sources of energy. One considers that energy prices in China have increased by 66% and natural gas by 138% since 2004 (Sirkin, Zinser & Rose, 2014). Additionally, although attempting to gradually shift into higher value-added activities, China needs to find new markets for manufactured goods, since the country's plants produce more than the nation demands. Thus, sustaining domestic economic growth is a crucial motivator for China's launch of the BRI in 2013. In particular, while China is in need of sustaining its energy supply, African countries are rich in terms of natural resources (Mlambo et al, p. 264). Africa, as an economic partner, provides China on the one hand with resources such as oil, petroleum and mineral resources and on the other hand, serves as a buyer of China's manufactured goods such as construction materials and clothing (Mlambo et al, p. 264).

Secondly, as Huang (2016, p. 318) continues, China seeks to gain influence on the global economic development agenda, the Washington Consensus, which consists of the international organizations World Bank and IMF, and in which China has an insignificant voice, albeit being the second largest economy in the world. The author argues that these organizations have achieved limited success in ending global poverty with their approach of aid programs. China on the other hand, in addition to aid, emphasizes the importance of infrastructure construction for development.

Thirdly, according to Huang (2016, p. 315), the BRI is accompanied by enormous national as well as international support. At national level, Chinese state-backed financiers such as the Silk Road Fund and the China Development Bank (CDB) finance projects, which in turn both state- and privately-owned companies realize. Moreover, international fund providers such as the Asian Infrastructure Investment Bank (AIIB), the BRICS New Development Bank, the World Bank as well as the Asian Development Bank (ADB) contribute financially towards infrastructure development in underdeveloped regions.

4.3.2 The Impact of the Belt and Road Initiative for Africa

The following paragraphs provide detailed information to the impact that the presence of China has on Africa in the fields of infrastructure, trade, financing, employment and governance. These particular fields are chosen since they are both

addressed in the Belt and Road Initiative (BRI) framework and in the wider spectrum of Sino-African relations. Hence, figures go beyond 2013 when the BRI was coined.

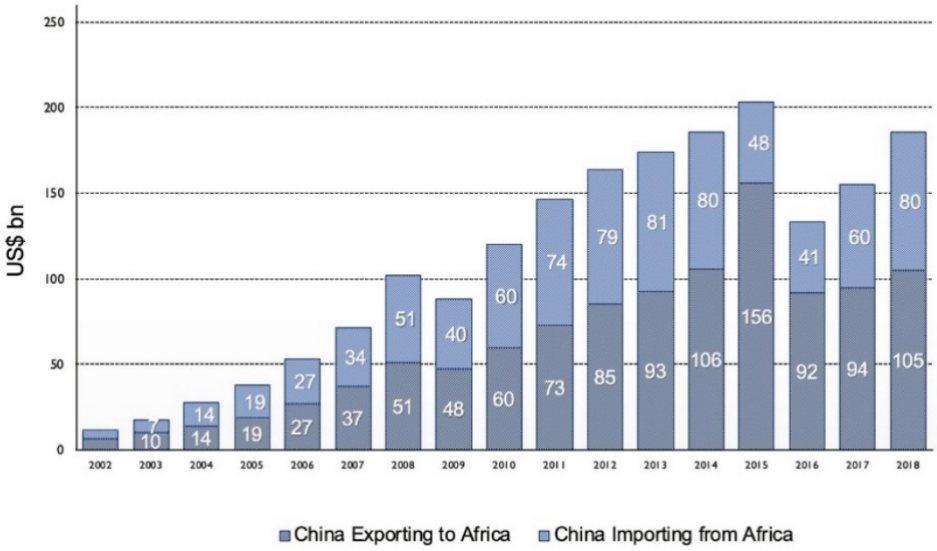
4.3.2.1 Infrastructure

Infrastructure connectivity, under der BRI-umbrella, encompasses the establishment of regional infrastructure, such as roads, railways, oil and gas pipelines, as well as telecommunication and electricity networks, which then link Africa to China (Huang, 2016, p. 315). As for Africa, until 2017 Chinese firms built a rough amount of 6'200 km railways, 6'500 km roads, 20 seaports, 20 bridges, 80 power plants, 200 schools and 80 stadiums across the continent (Aiping & Zhan, 2018, p. 97). Two prominent examples of Chinese railway projects are 2016 built Ethiopia-Djibouti railway and the 2017 built Mombasa-Nairobi Standard Gauge Railway in Kenya, each 750 km long and costing on average US$ 3.6 billion (Yuan Sun et al, 2017, p. 17). Examples of Chinese built power plants and gas pipelines are the Karuma Hydroelectric Power-station in Uganda, costing US$ 1.7 billion and the Tanzania Gas Field Development Project, built in 2015 and costing US$ 1.2 billion (Yuan Sun et al, 2017, p. 17). Moreover, the majority of Africa's telecommunication facilities were established by the two Chinese companies ZTE and Huawei (Yuan Sun et al, 2017, p. 24).

4.3.2.2 Trade

Data from the China Africa Research Initiative (see figure 11 and appendix 2 for full data set) reveals that the trade relationship between China and Africa massively increased from 2000 until 2018. In 2000, at the establishment of the FOCAC, the total trade volume between Africa and China was US$ 9.86 billion, whereby Africa's exports to China took a share of 49.19% and Africa's imports to China accounted for the other half, and thus representing a balanced trade relationship in absolute numbers. When looking at the 2018 trade statistics, trade volume increased to US$ 185.29 billion, representing an increase of 94.68% since the year 2000. Similar to 2000, African exports to China amounted to 43.36% and imports from China to 56.64%. The largest export shares to China were taken by Angola, South Africa and the DRC, respectively. Nevertheless, when looking at the nature of goods traded Yuan Sun et al. found that Africa's exports to China mainly consisted of commodities, and imports from China were manufactured goods (Yuan Sun et al, 2017, p. 21).

Figure 11: China-Africa Annual Trade Data (CARI, 2020)



Note: This figure was compiled by the China Africa Research Initiative based on data from the UN Comtrade. As can be seen, trade has steadily increased since 2002.

4.3.2.3 Financing

In general, Chinese loan structure to Africa is rather complex in nature. According to data from the China Africa Research Initiative, from 2000 to 2018, a total of US$ 152 billion loans was granted to African governments and African state-owned enterprises (SOE) by Chinese policy banks, Chinese commercial banks and Chinese contractors, together (Bräutigam, 2020; CARI, 2018) (see full data set in appendix 3). As per 2017, 80% of these loans were supplied by the two policy-development banks, i.e. state-owned banks, namely the China Export Import Bank (EXIM) and the China Development Bank (CDB). These loans came in form of concessional loans with an average interest of 2% (Bräutigam & Hwang, 2019, p. 7), which is below average market rates. From all these loans, since the turn of the millennium, only 4 billion were in aid form, which refers to loans that African governments do not have to repay. The FOCAC refers to these loans as inter-governmental interest free loans, which are only granted to heavily indebted African countries (Aiping & Zhan, 2018, p. 92). The remaining 20% were funded by Chinese commercial banks and Chinese contractors. Noteworthy mentioning is that these

loans must be repaid to China. However, China stipulates to restructure loans (meaning the due date can be extended or interest rates decreased), if needed (Aiping & Zhan, 2018, p. 92). So far, although many African countries are indeed being indebted, Bräutigam (2020) it clarifies that China only accounts for 17% of Africa's total debt. In addition to Chinese institutions, China also carries out most of World Bank funded infrastructure projects in Africa, since China offers the most competitive prices for conducting such projects (Gutman & Zhang, 2015).

In summary, it can be said that with policies of debt restructuring, aid and interest-free loans for heavily indebted countries, as well as the fact that most Chinese loans come in a concessional form, China's finance policy contributes towards the 2030 partnership target of "Assist developing countries in attaining long-term debt sustainability through coordinated policies aimed at fostering debt financing, debt relief and debt restructuring, as appropriate, and address the external debt of highly indebted poor countries to reduce debt distress."

4.3.2.4 Employment

African governments have acknowledged the fact that the establishment of a manufacturing sector in Africa is crucial for job creation and poverty reduction (Chen, 2016, p. 4). The establishment of a functioning industrial sector becomes urgent when looking at the outlook of Africa's demographic development. The International Labor Organization (2020, p. 43) forecasted, that by 2030, the 15-24-year-old population in SSA will constitute to 283 million, which corresponds to a threefold increase since 1990. Moreover, North Africa's youth, having been fairly stable in absolute numbers in comparison to SSA over the last three decades, complements this number with additional 50 million by 2030.

Considering that currently 40% unemployment prevails in Africa, a functioning industrial sector with job creation becomes even more desired. It needs to be mentioned, that while the figure of the 3 million workplaces created by Chinese companies in Africa appears to be high in absolute numbers, in relative terms this figure looks less promising. If this number remains the same by 2030, jobs form Chinese companies will only make up roughly 1% of the desired 283 million jobs across Africa. At this point it is noteworthy mentioning that from Chinese companies in Africa, on average only 1.78 people receive a job pro US$ 1 million investment, compared to 2.24 people from Chinese companies in other regions of the world (García-Herrero & Xu, 2019). Thus, if China's investment in

Africa prevails in its current figures, the 2030 target to receive full employment, is not going to be met and China only minorly contributes towards meeting this target. Essentially, for Chinese investments to contribute to sustainable development, companies should increasingly direct investments to the manufacturing sector, as this is the most labor-intensive area. So far, most investments are taking place in infrastructure (García-Herrero & Xu, 2019) and although infrastructure is necessary, these are not assisting Africa if no, or only few, jobs are being created.

The potential to export manufacturing jobs to Africa however exists. Due to China's economic transformation, an aging population and low birth rates, China will in the next years export 85 million manufacturing jobs (Lin, 2011). Thus, what is desired is that these jobs find its way to Africa where they are most needed, given the available workforce. It would be desired that Africa, in order to escape poverty and unemployment, follows a China-like industrial transformation accompanied by international export-led growth. Outcomes of such a transformation, similar to China three decades ago, where international exports of low-cost and labor-intensive manufactured goods (i.e. entry-level manufacturing), introduced by the dislocation of these industries by China's leading geese, managed to turn the country into the factory of the world.

Yuan Sun et al. (2018, p. 24) however found that from the existing Chinese-owned manufacturing companies, 93% of goods are exported to the regional African market. This fact was confirmed by further evidence from a study by Bräutigam et al. (2018, pp. 22-24) investigating exports of Chinese entry-level manufacturing companies in Africa. In particular, as the study argues, China benefits from regional exports, since these are accompanied by lesser transport costs and tariff exemptions.

Although most Chinese manufacturing companies in Africa are serving the African market, exceptions indeed prevail. Namely, in Ethiopia the potential for a China-similar transformation looks very promising. Accord, to an Ernest and Young report (2018, p. 17, p. 27), Ethiopia is well on track to become a major textile producer for international clients. The driving force behind turning Ethiopia into a textile manufacturing hub, however, is the government who believes in the development its country. Ethiopia, alongside major investments by China, wins contracts from major international brands such as Armani and Hugo Boss. The establishment of textile factories, in line with investments in real estate, hospitality and construction, were responsible for a 216% increase of foreign direct investment within a year. Moreover, the Ethiopian government launched in 2015 a plan to develop an own pharmaceutical

manufacturing sector, aiming to serve the domestic market as well as international export markets (WHO. 2015, p. 6).

Moreover, as mentioned by an article by Fabiani (2017), Morocco, Tunisia and Egypt seek to follow the flying geese path. The article puts forward that these countries expect, due to rising labor costs in Eastern Europe, international companies to increasingly relocate labor-intensive productions to North Africa. Initial signs of success were found in Morocco and Tunisia, where international automotive and aerospace companies outsourced component manufacturing. However, as the article continues, North African governments are inefficient and do not act in the interest of their societies, or as the author puts it, politicians are rather "captured by business interests" (2017). In other words, for industrialization to gain on momentum in North Africa. governments must become more inclusive.

4.3.2.5 Governance

In 2018, stated by President Xi Jinping and recorded in the Beijing Action plan, China's investments in Africa come with "no political strings attached", meaning that China provides loans to Africa without interference in domestic political matters, which stands in contrast with Western institutions such as the World Bank that demand good governance in return for their loans (Marantidou & Glosserman, 2015, p. 1). The World Bank (1998, p. 13) states that "There is no value in providing large amounts of money in a country with poor policies" (as cited by Alesina & Weder, 2002, p. 1126), since that leads to inefficient spending (Alesina & Weder, 2002, p. 1127). Marantidou and Glosserman (2015, pp. 1-2) find that what becomes dubious about China's "no strings attached" politics is that China is undertaking anti-corruption efforts in its mainland, however disregarding corruption in Africa. Namely, President Xi Jinping launched a first anti-corruption campaign in 2012 and from then on steadily increased efforts in combatting corruption (Manion, 2016, p. 7). Yet in Africa, China believes in a "bootstrapping" approach to development as previously seen, which refers to the belief that growth can happen without needing to prohibit market distortions (Sabel, 2004, p. 3). This approach to development is reassuringly defended by President Xi Jinping, while emphasizing his belief that each country would "find its own development path" (Liang, 2018).

Lombard (2006) reported about a case in Angola, in which the IMF asked the Angolese government to have a look at their accounting before providing a loan and

which the Angolese government then refused as the Chinese Export-Import Bank offered a more attractive loan, namely an interest free loan without asking for transparency. Marantidou and Glosserman (2015, p. 1) then found, that most of China's interest free loans are found in fragile states, such as Angola and the Democratic Republic of Congo (DRC). Angola and the DRC, however, are among the most corrupt states and thus legitimizes the worry about misspending of foreign loans especially when 85% of DRC's citizens perceive that corruption has increased within the last year (Transparency International & African Barometer, 2019, p. 4).

Over a period of 17 years (2000-2017), Angola received most of Chinese loans, namely a total sum of US$ 43.1 billion. Yuan Sun et al. (2017, p. 12) report that the Angolese government supplied oil to China in return for their loans and infrastructure projects.

Trade data from the China Africa Research Institute shows that Angola is number one exporter to China, taking a share of 31.93% of total African exports to China. Regarding Angola's trade statistics alone, it is found, that China is the destination for more than half of Angola's exports (Romei, 2015). Cisse (2012, p. 3) reports that most of Angola's exports consist of crude oil, diamonds, refined petroleum and refined natural gas. The DRC has thus far only received loans of US$ 5.01 billion from China, however similar to Angola's export share, more than 50% of the republic's exports, mainly cobalt and copper, went to China (Romei, 2015; OEC, n.d.).

In short, China's no strings attached policy in fragile and resource rich countries is a win-win for China's resource shortage and corrupt governments, however African citizens come away empty handed.

In the international sphere, China receives political support from Africa (Mlambo et al., 2016, p. 259 & 269; Chinese Embassy to South Africa, 2004). In 1971, African votes enabled China to secure a seat in the United Nations. In 1990, African countries defended China's position after the nation was accused of human rights abuses by the United Nations. Following this, in 2004, owing to Africa's support, China entered the World Trade Organization. In 2008 then, African votes enabled China to host the Olympic Games. Moreover, as Huang (2016, p. 318) disclosed, China further aims to receive a greater say in international organizations, given its economic power, by receiving assistance of BRI-participants, such as African countries.

4.3.3 Criticism towards the Belt and Road Initiative

Several questions regarding China's loans to Africa arise. Specifically, why China provides loans to fragile states such as Angola and the Democratic Republic of Congo (DRC) in the first place when international organizations refuse to do and why these loans come with no strings attached, in contrast to international organizations. Moreover, it is often questioned, why China still supplies loans to African countries, even when the possibility of debt-repayment looks impossible. The answer to these questions could however be found in the fact, that Africa has what China urgently needs: raw materials.

It is estimated that half the world's natural resources are found on the African continent. Carmody (2016, p. 5) highlights that Africa contains the lion's share of global diamonds and platinum, with figures of 88% and 73% respectively. Moreover, the continent has also 40% of global bauxite, uranium and gold. Additionally, a tenth of world's oil is found in Angola, Nigeria, North Africa and Equatorial Guinea (Carmody, 2016, chapter 5). Yet Africa's soil and waters are also blessed with iron ore, copper, forestry and fish. However, although rich in terms of raw materials, Africa has the world's largest poverty figures. Carmody (2016, p. 5) refers to this controversy as "paradox of plenty". This controversy is also referred to as "resource curse". The National Resource Charter (2015, pp. 1) calls attention to the fact, that resource-rich countries are ruled by governments, which instead of addressing public needs, are focused on maintaining control over their nation's resources in order to gain financially from "renting" out these resources. This behavior, in turn, is said to cause a paradox which results in resource-rich countries being politically instable and their economies growing at a slow pace.

Trade relationships as found between Angola and China, whereby Angola exports oil and imports manufactured goods from China, are accompanied by many challenges. A first challenge is posed by the fact that roughly 75% of African raw materials are exported to world markets without processing (Carmody, 2016, Introduction). This is worrying because jobs created from exports of mining and extracting of raw materials (without refining) provides only a sixth of jobs created by manufacturing (Ray & Gallagher, 2016, p. 150). The next challenge, along mining and raw material extracting being labor-scarce, is that the proceeds of these exports end up in the wrong hands. Firstly, in the case of Angola, oil revenues will most likely be taken by governments (given the governmental fragility) and subsequently used for private interests. Moreover, considering that raw material extracting companies are foreign owned, such as China's state- owned oil companies China National Petroleum Corporation (CNPC), the China

Petroleum and Chemical Corporation (Sinopec) and the China National Offshore Oil Corporation (CNOOC), which are the most present in Sub Saharan Africa (Pegg, pp. 160-161), profits flow back to China. The third challenge is the fact that commodity prices are very volatile (Carmody, 2016, Introduction). For undiversified economies such as Angola or Nigeria economic activity directly depends on global dynamics of oil prices, which means that these countries experience GDP fluctuations based on global oil price dynamics (Carmody, 2016, chapter 1). Another challenge pose concerns regarding the inability of BRI-participants to repay debt to China (Hurley et al., 2018, p. 2). These concerns are often accompanied by the Sri Lankan example, whereby its government faced balance of payment difficulties and was in turn unable to pay for the Chinese construction of a harbor and instead, gave China the right to manage the port for a 99-year lease (Hurley et al., 2018, p. 20). Bräutigam (2020), however, against harsh critique against Chinese debt-diplomacy, emphasizes that there is no evidence that in Africa, Chinese companies had captured on assets in return for debt alleviation.

Table 4: Key observations chapter 5.3 (own illustration)

Key observations from this chapter
Chinese companies built a total of 6'200 km railways, 6'500 km roads, 20 seaports, 20 bridges, 80 power plants, 200 schools and 80 stadiums in Africa
China accounts for 17% of Africa's total debt
China provides loans to Africa without interference in domestic political matters
Africa's exports to China consist of commodities, and imports from China of manufactured goods and manufacturing components
African votes enabled China to secure a seat in the United Nations, to enter the World Trade Organization and to host the Olympic Games
While China is in need of sustaining its energy supply, African countries are rich in terms of natural resources
China seeks to gain influence on the global economic development agenda, currently led by the Washington Consensus

5 Discussion on findings

The growth of the Chinese economy in recent years has led it to becoming an important player in the global economy. With the relations between China and Africa gaining prominence and momentum over the past two decades many questions have arisen. The overarching question, as posed by this thesis, being whether China is contributing to sustainable development in Africa.

Export trade between Africa and China has grown from only US$ 0.5B in 1992 to US$ 80B in 2018. While trade has grown at a significant pace, it appears that there is a still a lack of reliable SDG data to compliment this growth, as this study documents. This makes it difficult to provide a comprehensive assessment of the causal relationship of China's involvement in Africa and its effects on sustainable development.

However, despite this, the next chapter provides a discussion based on the key observations from the findings, categorized into the following 3 main headings for discussion: *China's contribution to economic development, China's contribution to human development and China's contribution to environmental stewardship in Africa.* (Refer to table below for a list of the key findings categorized under their appropriate headings for discussion)

The discussion takes places within the theories of Extractive Institutions, World Systems, Flying Geese, and is concluded with an overall assessment of the China's contribution to sustainable development in Africa.

The Flying Geese paradigm, as a traditional economic development theory, does not include the importance of human development nor the importance of environmental stewardship. Nevertheless, it is used in the context of this discussion to assess to what extent China is contributing to economic development in Africa.

Table 5: Discussion Topics (own illustration)

China's Contribution to Economic Development
40% of the African population is unemployed
Manufactured goods only make up a narrow portion of total exports (mention regional)
73.5% of Chinese admitted that they paid a bribe for business license
The International Monetary Fund (IMF) classifies 31 African countries as fragile
89% of workforce is local, which constitutes to a creation of 3'000'000 jobs for Africans
China only accounts for 17% of Africa's total debt
China provides loans to Africa without interference in domestic political matters

China's Contribution to Human Development
On average 39 % of the African population live below its national poverty line
Poor ventilation and unsafe conditions, under which African people had to work, lead to serious lung diseases and injuries
6'200 km railways, 6'500 km roads, 20 seaports, 20 bridges, 80 power plants, 200 schools and 80 stadiums

China's Contribution to Environmental Stewardship
The nature of trade with China is pollution-intensive
Several studies found evidence of resource exploitation of Chinese companies in Africa
BRI-projects are accompanied by environmental challenges

5.1 China's Contribution to Economic Development

Unemployment is expected to increase substantially in the coming 10 years. In Sub Saharan Africa 283 million people will join the 15-24-year age group, and another 50 million people in North Africa, which corresponds to a threefold increase since 1990. With an imminent unemployment crisis on horizon, economic development will need to be addressed as a matter of urgency.

Sino-Africa trade has grown at an astonishing rate, from US$ 0.5 billion in 1992 to US$ 80 billion in 2018, with Africa's export trade balance floating between 40%-50% in the past decade. China is expected to move to the next stage of the flying geese paradigm shedding 85 million low-cost manufacturing jobs in the process. If Africa, in alliance with China, can emulate countries such as Hong Kong, South Korea, Taiwan and later on Malaysia and Thailand, they stand a chance of rolling back years of economic stagnation.

This seems to be a watershed moment for Africa, as research showed that China has already exported roughly 3 million jobs across Africa in the past two decades. However, the situation looks less optimistic when considering that manufacturing accounts for only 31% share of these jobs. In the context of the flying geese paradigm, this is a problem as manufacturing is the basis of scalable job creation. When looking at the share of jobs created in manufacturing thus far, along with some of the other elements required to join the flying geese, such as a stable political system, export orientated markets and economic policies favoring industrialization, it suggests that the case for Africa as the next Flying Geese is weak.

Having said this, the above statement does not imply that China does not contribute to economic development on the continent. With the assistance of China, on a standalone basis there are several examples of countries in Africa where the potential for a China-like transformation looks promising. One such example is that of Ethiopia with the support of China which has been able to win contracts from major international brands such as Armani and Hugo Boss. Other notable examples include Kenya, along with neighboring Tanzania, Uganda, Rwanda which are all growing at a rate of above 5% (EY, 2019, p. 7). This is thanks largely to Chinese investment but also to the return of political stability and policy reform that has enabled a favorable investment environment.

Africa's economic problems, supported by the lack of meeting its SDG's, shows that there are deeper issues at play that cannot simply be solved by an external economic program. As the findings in the research point out, weak institutions and a lack of

governance pose a real threat. The question is then whether China is doing enough in order to assist in these matters. The simple answer would be no. The BRI states that China does not meddle in local politics and supports Africa to find its own development path. However, the situation is naturally more complex than that, and from China's perspective there could be a case for taking a long-term approach while believing that African governments would know what is best for their economies.

There is, however, still a strong possibility that China could simply be taking advantage of weak governance and loose environmental regulations in order to sustain its growing demand for fossil fuels. Export trade between Africa and China, by and large, remains skewed towards commodities. The "resource curse" is a label commonly associated with Africa and unfortunately it is still applicable to the majority of Africa's countries today. These countries all share traits of weak economic growth and low government functioning but plenty resources. This results in a number of issues for the host country. A study by (Carmody, 2016, Introduction) indicates that resource rich countries export 75% of their minerals without processing. This comes at a major loss to local employment marketplace. Furthermore, commodities are by their nature volatile and global dynamics in mineral prices mean countries that rely on them are open to huge fluctuations in GDP. The case for China, as a rich semi-periphery country, in attempts to move to a core country, comes to mind. However, the author of this paper would be careful to fully attach this theory to the relationship as Africa has in many ways benefited from the Sino-African relationship.

5.2 China's Contribution to Human Development

Sen's approach of removing "sources to unfreedom" depends on the inclusiveness of government institutions, which ensure public services and take decisions based on the interests of their people. By these measures, Africa, in the majority of the cases, is performing at an unsatisfactory level. The extractive institutions theory even suggests that economic stagnation and impoverishment of societies is directly linked to Africa's weak governance.

As already stated in the previous section, President Xi Jinping, through the Belt and Road Initiative (BRI), does not intend to intervene in domestic governance, which means that current governmental institutions remain unchallenged and thus prevail in their current form. This approach seems to suit African governments, confounded by Africa's preference to China's "no string attached" policy.

Although not impossible, under such conditions it is hard to imagine how Africa could engineer a phase of rapid industrialization at a sustainable level in order to address the socio-economic problems experienced by Africans.

China's approach of non-interference has the potential to foster corruption, even if in a direct manner. This is represented in the case where Angola, in exchange for access to raw materials, were given aid, that ended up in the hands of government officials for private use. The negative repercussions of using foreign aid to fund private interests are obvious. Furthermore, support of this behavior, even in the indirect sense, can potentially lead to solidifying the place of African elites, where the abuse of power will result in a greater disparity between the rich and the poor.

On the other hand, China has in several instances established major infrastructure projects to the benefit of society as a whole, including schools and hospitals in support of inclusive social development. Considering the completed infrastructure projects, China has already significantly contributed to closing Africa's infrastructure gap and given the 2030 target to meet a 100% primary enrolment rate for African children, the establishment of 200 schools across Africa is enabling the continent to come closer to this figure. Furthermore, China has undertaken the construction of 6,200 km railways and 6,500 km roads that will assists commuters to move between rural and urbanized areas, thus directly contributing to the target of developing reliable and resilient infrastructure by 2030.

However, it needs to be kept in mind that the development of these roads also come at a cost. While it allows for the freer movement of people, it is at the same time paving the way for cheap Chinese imports. This was illustrated by the example of Chinese steel-dumping resulting in 300,000 job losses in South Africa.

5.3 China's Contribution to Environmental Stewardship

China's Belt and Road Initiative has been labeled as one of the most ambitious infrastructure programs since the end of World War II (Ewing, 2019). Impacts on biodiversity and ecology are obvious, considering that road and railway construction relies heavily on the extraction of fossil fuels, not to mention the direct impact on the environment. However, with China's recent involvement in Africa, it is difficult to not expect that they have a responsibility to ensure that the execution of their projects need to take into consideration the sustainability of the environment.

Observations from the findings of this thesis depict a complex situation where China's desire for expansion co-exists with Africa's need for rapid economic

development and that of an international movement towards environmentally conscious development. The research found incidents of excessive natural resource extraction and irresponsible business practices that do damage to the environment. Such incidents involve illegal fishing and logging, while others involve the relocation of polluting industries to Africa, where unrecyclable plastic bag manufacturing factories are set up in Africa as a means to continue the manufacturing of these plastics.

A major obstacle, it would appear, is that of accountability on both parts. Evidence suggests that when financiers have strong standards but poor enforcement relationships with local governments, environmental performance suffers. This follows a similar narrative to that observed in the other two categories of this discussion, and points to the necessity for strong, accountable governance in order to address these concerns. In the case of a fragile or weakened state, this is not always possible, putting further emphasis on the responsibility of financiers, to set environmental standards across their project portfolios and to enforce them.

Up until 2019, China has failed to stipulate environmental clauses in their trade agreements which resulted in pressure on local governments to implement environmental standards. Furthermore, while promoting renewable energies domestically, it was found that China also exported coal equipment and opened new coal-fired plants in Africa. This thesis also found evidence that there is a significant correlation between weak governance and increased pollution as a result of trade with China. The negative repercussions due to increased pollution is exemplified with the findings that a fifth of the child mortality rates in Sub Saharan Africa between 2001 and 2015 can be attributed to pollution of some kind.

Furthermore, China's relocation of dirty industries was found to be significantly higher in BRI-countries with weak governance and the lack of respective environmental regulations in place. Having said this, China does seem to be making attempts to address these issues, illustrated by the fact that 27 BRI-financiers agreed to the Green Investment Principles for infrastructure funding (Ewing, 2019). The real question, however, then becomes whether these principles will be enforced and how it would impact BRI investment. For example, what would the repercussions, for a host country be, should they not enforce these principles.

5.4 Overall Assessment of China's Contribution to Sustainable Development

China's investment and support for Africa, in an economic sense, seems to be mainly driven by its need for energy resources to sustain its growing middle class. However, the presence of the Asian powerhouse has led to the construction of much needed infrastructure and investment which has resulted in Africa's trade figures dramatically increasing in the past 20 years. Employment, however, still remains an issue and while China should not have to shoulder the blame for this alone, China's enticing "no strings attached" loan policy will result in it taking on a larger than normal responsibility to ensure sustainable development on the continent. Having said that it appears that China does have long term sustainability in mind, although a deeper awareness on their part will be needed to ensure the realization of Africa's sustainable development goals.

From a human perspective, China's investment does coincide with the increase in living standards of African people but only to a small degree. Therefore, it is debatable whether China's efforts of superficially addressing social issues on the continent will result in long term social benefits, especially when considering President Xi Jinping's reluctance to get involved in domestic governance.

From an environmental perspective, even though the situation is so far stable, there is a very real concern in the pollution associated with China's presence in the region and the risks associated with it. Thus, infrastructure investments must be pursued in an environmentally friendly manner, to the benefit of society as well as for life on land and life below water. China has made a commitment to address these issues through the signing of the Green Investment Principles although the implementation of this is yet to be seen.

Africa may not be the next flying geese, however, its resources have the potential to contribute to wealth generation, job creation and overall industrialization of the continent if managed to correctly. While it is difficult to come to a consensus of whether Africa's presence is contributing to sustainable development, what is clear is that the more China becomes involved with Africa the more pressure it will receive from the international community to ensure sustainable development. African leaders will also have to play their part and will need to keep in mind the need to diversify their economies and to steer away from the "resources curse" it is so commonly associated with if society is to benefit from these endeavors.

As a semi-periphery country China is moving towards the label of a core country, which according to the theory, should be at the cost of periphery and semi-periphery countries. In practice this would involve poor countries, in this instance Africa, exporting primary commodities or raw materials to the rich countries, in this instance, China. In turn the core country would sell back manufactured goods from these commodities to Africa. This seems to be the case, and the World Systems Theory does perhaps hold some merit when trying to explain this phenomenon, however, Chinese investment has had a considerable positive impact on the lives of Africans. With increased aid, debt cancellation, the Sino-African relationship has proven to be mutually favorable to both countries.

6 Conclusion

This chapter is divided in two sub-chapters. The first sub-chapter begins by providing a summary of the thesis by explaining how the objectives were accomplished, followed by an outlook on the area under investigation. The second sub-chapter presents the recommendations for further research.

6.1 Summary of the thesis and outlook

China's engagement in Africa has steadily increased after its economic reform in the late 1970's. Since the turn of the millennium, particularly after Chinese state- and privately owned companies became omnipresent in Africa after the announcement of expanding the ancient Silk Road, the Belt and Road Initiative, China's involvement on the foreign continent did not go unnoticed by foreign powers. To date, Sino-African relations encompass a social, economic, trade, infrastructure, financial and political sphere. Over the years, China increasingly became subject to criticism by Western powers. The nature of Sino-African relations is considered asymmetrical; China is said to pursue its interests at the expense of African societies. Especially under scrutiny are Chinese business practices and China's strategic intentions in Africa. Considering that Africa is in dire need of development in order to escape misery, it has become compelling for China, given its increased involvement in Africa, to help African countries in their development endeavors.

This thesis thus wanted to discover, whether China's involvement in Africa is contributing to development in African countries. In the modern world, however, development is desired to be sustainable, which led to the establishment of the research question "Does the presence of China contribute to sustainable development in Africa?"

In order to answer the final research question, five research objectives and sub-questions were established.

The first research objective was to develop a clear idea of the term sustainable development before further research was conducted. It was found that sustainable development can be viewed as an overarching principle for both economic and human development, accompanied by environmental stewardship.

The second research objective was to determine Africa's current state of development. For this purpose, data from the 17 United National Sustainable Development Goals was collected. Research showed that Africa is not on track with

meeting the goals by 2030. The unsatisfactory performance of these goals was reflected by major obstacles to development, such as poverty, unemployment, and deeply entrenched corruption.

The third research objective was devoted to criticism towards Chinese business practices in Africa. By collecting evidence to the United Nations Global Compact's principles for responsible business practices, it was found that China's business practices partly comply with this framework. Research found that Chinese companies employ at least 75% African labor, provide training to more than half of them and pay wages above local standards. On the other hand, several incidents of unsafe working conditions in Chinese companies, which violated local safety regulations, were found in the fields of mining and factory work. Irresponsible business practices were further recorded towards the natural environment, exemplified by illegal resource extraction and the relocation of polluting industries to Africa.

The fourth research objective aimed to understand China's Belt and Road Initiative. It was found that with Africa, China found a partner which enables China to sustain economic growth by providing raw materials and serving as export market for Chinese goods. Moreover, Africa provides lucrative production sites with cheap labor and enables lower transaction costs for exports to other African countries. In the political sphere, China receives international support from African governments. As for the African society, they mainly gained from the relationship with China from its infrastructure development, allowing Africa to slowly close its infrastructure gap.

The fifth research objective was to determine key observations from the findings, which were then applied in the discussion. The discussion aimed to ascertain China's contribution to the three developmental spheres.

China's contribution to economic development was expected to be found in China shedding low-cost manufacturing jobs to Africa. Given the observations on Sino-African relations, the chance that Africa as a whole can undergo a China-like transformation is however weak. Nevertheless, initial signs of success for such a transformation were found in countries with above-average governmental strength in the region, such as Ethiopia, Kenya and Rwanda. Other countries seem to suffer from the paradox of plenty which refers to countries being economically poor, yet rich in terms of natural resources. Resource rich countries such as Angola and the Democratic Republic of Congo were found to partly fit the World Systems Theory, which predicts that China would exploit

these countries for raw materials and international support in order to secure a dominant core position in the world at the expense of these two periphery countries.

Social progression and thus human development were found to be dependent on strong governments. The Extractive Institutions Theory could be applied one to one to explain the failure of African governments in addressing the needs of their societies, mirrored by the fact of Africa's economies are stagnating. What is desired is that China's contemporary policy approach changes in such a way as to challenge corruption in Africa. The fact that President Xi Jinping China believes in a non-interference policy which would ultimately enable Africa to find its own development path, while fighting corruption in its mainland, is therefore highly doubtable.

China has to date not contributed to environmental stewardship in Africa. Furthermore, Chinese businesses were found to relocate polluting industries to Africa, resulting in health impairments for the local society. However, this seems to be changing as BRI-financiers began stipulating environmental policies, so called "Green Investment Principles", in their contracts.

As the BRI is still in its initial phase, increasing contribution to sustainable development in BRI countries can be assumed as China's practices will continue to be monitored by foreign powers. Moreover, as China has recognized the importance of corruption and environmental awareness domestically, it is expected that these insights will translate into its international business practices sooner or later.

This thesis made an approach in analyzing China's contribution to sustainable development in Africa. Despite the fact that the Chinese and the African side both lack adequate statistical reporting, the consultancy of first-hand data from private institutions allowed this thesis to have an informed debate on the topic in question.

6.2 Recommendations for Further Research

By undertaking research for this thesis, a particular area for further investigation could be identified. This research area is desired to be carried out as a field study, as data on Sino-African relations is scarce as a matter of inadequate national reporting. This thesis specifically recommends focusing on the effects of China's presence on a single country or region, as research has shown that country dynamics vary from region to region. This thesis thus calls to diverge from the common perception to view Africa as a single entity. East African economies such as Ethiopia, Kenya, Rwanda and Tanzania are growing at a remarkable pace, in contrast to other countries in Sub Saharan Africa and

North Africa and so presents itself as opportunity for further investigation. A desirable outcome, in the form of a field study, would be the identification of critical success factors for a functioning Sino-African friendship, which could then serve as an example for other countries.

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Appendix 1

Table: Africa's score to the 17 SDGs Dataset with weighting calculation applied (African Center for SDG database, 2019)

Country	Population	Weighting	SDG 1	SDG 2	SDG 3	SDG 4	SDG 5	SDG 6	SDG 7	SDG 8	SDG 9	SDG 10	SDG 11	SDG 12	SDG 13	SDG 14	SDG 15	SDG 16	SDG 17
Angola	31787566	0.02	1.41	0.96	0.86	1.02	1.53	1.11	1.40	1.36	0.20	0.95	0.83	2.01	2.19	1.05	1.76	0.98	0.58
Burundi	11575964	0.01	0.07	0.32	0.47	0.43	0.59	0.48	0.33	0.39	0.09	0.51	0.39	0.84	0.87	0.34	0.70	0.41	0.29
Benin	11801595	0.01	0.28	0.43	0.42	0.35	0.43	0.42	0.38	0.62	0.14	0.16	0.35	0.86	0.87	0.31	0.76	0.55	0.52
Burkina Faso	20321560	0.02	0.60	0.70	0.73	0.33	0.44	0.68	0.72	1.03	0.28	1.09	0.67	1.37	1.40	0.68	1.36	0.97	0.95
Botswana	2374636	0.00	0.15	0.08	0.10	0.15	0.12	0.11	0.09	0.11	0.08	0.00	0.15	0.11	0.13	0.10	0.14	0.13	0.13
Central African Republic	4825711	0.00	0.04	0.10	0.06	0.05	0.12	0.18	0.09	0.09	0.02	0.04	0.08	0.35	0.36	0.17	0.32	0.10	0.12
Cote d'Ivoire	25531083	0.02	1.00	1.04	0.79	0.72	0.75	1.00	1.19	1.34	0.80	0.75	0.86	1.70	1.93	0.74	1.42	1.06	1.21
Cameroon	25312993	0.02	0.83	0.92	0.82	1.11	1.06	1.01	1.25	1.29	0.47	0.41	0.57	1.65	1.88	0.68	1.34	0.87	0.66
Congo, Dem. Rep.	86727573	0.07	0.58	2.14	2.69	3.42	2.55	2.81	2.66	3.64	0.40	2.84	2.38	5.36	6.53	0.53	4.79	1.74	1.49
Congo, Rep.	5542197	0.00	0.11	0.15	0.20	0.24	0.21	0.16	0.19	0.19	0.07	0.06	0.18	0.34	0.40	0.19	0.37	0.20	0.22
Comoros	850910	0.00	0.03	0.03	0.03	0.03	0.02	0.04	0.03	0.02	0.01	0.02	0.04	0.05	0.06	0.01	0.03	0.04	0.04
Cabo Verde	560349	0.00	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.01	0.03	0.04	0.04	0.02	0.02	0.03	0.03
Djibouti	985690	0.00	0.05	0.03	0.04	0.02	0.03	0.03	0.02	0.04	0.03	0.02	0.04	0.07	0.07	0.01	0.04	0.05	0.05
Algeria	42679018	0.03	3.23	1.63	2.51	2.51	1.92	2.06	1.55	1.69	1.28	2.96	2.16	2.32	3.05	1.40	2.16	2.14	1.62
Egypt, Arab Rep.	101168745	0.08	5.94	4.83	5.32	5.63	3.39	4.78	3.87	3.97	3.19	4.38	5.35	5.62	7.51	3.98	6.02	5.18	4.24
Eritrea	5309659	0.00	0.17	0.08	0.21	0.11	0.15	0.16	0.15	0.15	0.00	0.16	0.23	0.31	0.40	0.14	0.25	0.13	0.15
Ethiopia	110135635	0.08	4.92	3.46	4.10	2.30	4.55	3.29	4.90	5.93	1.58	4.69	3.79	7.16	8.00	3.23	5.58	4.15	3.95
Gabon	2109099	0.00	0.12	0.09	0.08	0.11	0.09	0.10	0.14	0.09	0.06	0.06	0.06	0.11	0.15	0.11	0.13	0.09	0.03
Ghana	30096970	0.02	1.76	1.27	1.22	1.45	1.38	1.21	1.18	1.55	0.89	0.96	0.86	2.04	2.20	0.91	1.72	1.66	1.48
Guinea	13398180	0.01	0.31	0.40	0.36	0.21	0.26	0.44	0.45	0.62	0.10	0.79	0.43	0.86	1.01	0.58	0.74	0.49	0.49
Gambia, The	2228075	0.00	0.05	0.07	0.08	0.06	0.05	0.10	0.06	0.09	0.03	0.09	0.08	0.16	0.16	0.08	0.13	0.10	0.10
Guinea-Bissau	1953723	0.00	0.02	0.07	0.06	0.03	0.07	0.06	0.05	0.10	0.01	0.02	0.05	0.15	0.15	0.08	0.10	0.05	0.08

Equatorial Guinea	1360104	0.00	0.00	0.07	0.04	0.04	0.05	0.06	0.04	0.04	0.01	0.03	0.03	0.07	0.08	0.08	0.08	0.04	0.02
Kenya	52214791	0.04	2.07	2.02	2.24	2.49	2.58	1.74	2.06	2.80	1.16	0.72	1.85	3.85	3.75	1.87	2.55	2.17	2.16
Liberia	4977720	0.00	0.12	0.15	0.17	0.05	0.17	0.18	0.12	0.21	0.04	0.30	0.08	0.31	0.37	0.23	0.21	0.20	0.16
Lesotho	2292682	0.00	0.04	0.09	0.06	0.09	0.12	0.10	0.06	0.10	0.04	0.00	0.09	0.17	0.12	0.10	0.11	0.09	0.15
Morocco	36635156	0.03	2.33	1.64	2.06	1.84	1.38	1.84	1.44	1.58	1.21	1.33	2.02	2.10	2.57	1.26	2.07	2.02	1.72
Madagascar	26969642	0.02	0.06	0.51	0.78	0.82	1.33	0.79	0.63	1.33	0.19	0.56	0.96	1.65	1.98	0.95	1.00	1.06	1.23
Mali	19689140	0.01	0.57	0.71	0.51	0.16	0.52	0.84	0.59	0.97	0.31	1.12	0.66	1.25	1.48	0.66	1.14	0.80	0.82
Mozambique	31408823	0.02	0.49	0.80	0.90	0.85	1.43	0.98	1.09	1.56	0.47	0.59	1.22	2.17	2.20	1.42	1.54	1.24	1.89
Mauritania	4661149	0.00	0.24	0.15	0.16	0.10	0.13	0.19	0.16	0.13	0.08	0.29	0.10	0.29	0.26	0.18	0.23	0.16	0.24
Mauritius	1271368	0.00	0.08	0.07	0.07	0.08	0.05	0.06	0.07	0.08	0.04	0.05	0.09	0.06	0.07	0.05	0.02	0.08	0.07
Malawi	19718743	0.01	0.44	0.68	0.75	0.40	0.87	0.84	0.56	0.91	0.22	0.33	0.72	1.45	1.34	0.83	1.12	0.85	0.99
Namibia	2641996	0.00	0.12	0.08	0.10	0.14	0.16	0.12	0.08	0.12	0.08	0.00	0.12	0.16	0.12	0.11	0.17	0.14	0.13
Niger	23176691	0.02	0.63	0.63	0.74	0.14	0.69	0.71	0.68	1.16	0.17	1.33	0.74	1.52	1.67	0.78	1.42	1.04	0.99
Nigeria	200962417	0.15	4.62	5.62	4.64	5.67	5.80	8.16	9.34	7.67	3.19	2.26	3.73	12.82	14.66	6.15	12.51	7.64	7.47
Rwanda	12794412	0.01	0.43	0.39	0.63	0.49	0.85	0.55	0.43	0.73	0.26	0.13	0.43	0.93	0.96	0.37	0.69	0.68	0.60
Sudan	42514094	0.03	1.43	0.50	1.57	0.85	0.99	1.06	1.89	1.26	0.72	2.13	1.00	2.49	3.18	1.77	2.44	1.34	1.35
Senegal	16743859	0.01	0.48	0.65	0.67	0.39	0.69	0.73	0.64	0.77	0.35	0.58	0.56	1.21	1.20	0.54	0.95	0.86	1.02
Sierra Leone	7883123	0.01	0.23	0.25	0.19	0.26	0.22	0.23	0.25	0.34	0.05	0.42	0.21	0.53	0.59	0.29	0.38	0.32	0.30
Somalia	15636171	0.01	0.33	0.43	0.32	0.44	0.28	0.33	0.37	0.26	0.00	0.47	0.58	1.17	1.08	0.49	0.69	0.29	0.58
South Sudan	13263184	0.01	0.01	0.18	0.25	0.08	0.44	0.40	0.26	0.44	0.03	0.22	0.15	0.32	0.73	0.39	0.72	0.25	0.14
Sao Tome and Principe	213379	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01
eSwatini	1415414	0.00	0.05	0.06	0.05	0.06	0.07	0.06	0.06	0.05	0.02	0.00	0.07	0.10	0.06	0.06	0.07	0.06	0.07
Chad	15814345	0.01	0.34	0.35	0.32	0.02	0.37	0.49	0.42	0.48	0.16	0.42	0.35	0.99	0.92	0.57	1.00	0.39	0.32
Togo	8186384	0.01	0.15	0.28	0.28	0.33	0.31	0.29	0.28	0.45	0.14	0.18	0.18	0.59	0.61	0.18	0.54	0.32	0.46
Tunisia	11783168	0.01	0.63	0.52	0.66	0.67	0.53	0.55	0.47	0.49	0.38	0.56	0.64	0.67	0.81	0.51	0.64	0.70	0.62
Tanzania	60913557	0.05	2.04	1.84	2.39	2.07	3.06	2.15	2.50	3.32	1.00	2.57	2.30	4.10	4.54	2.43	2.89	2.61	2.14
Uganda	45711874	0.03	2.49	1.37	1.79	1.74	2.20	1.42	1.72	2.20	0.65	1.66	1.21	2.93	3.42	1.34	2.38	1.87	1.95
South Africa	58065097	0.04	2.69	2.48	2.25	3.37	3.73	2.95	2.84	2.56	2.19	0.00	2.57	2.48	3.83	2.48	2.81	2.64	3.37

Zambia	18137369	0.01	0.28	0.64	0.73	0.82	0.83	0.72	0.76	0.91	0.33	0.11	0.65	1.09	1.35	0.77	1.02	0.65	0.74
Zimbabwe	17297495	0.01	0.28	0.47	0.65	0.86	0.86	0.69	0.68	0.84	0.18	0.49	0.79	1.05	1.26	0.73	1.01	0.57	0.81
Total	1318295844	1.00	45.36	42.48	47.13	45.63	50.46	49.50	51.19	58.12	23.41	39.86	43.66	82.05	94.57	42.96	72.30	52.21	50.97

Appendix 2

Table: Chinese loans to Africa since 2000 (CARI, 2018)

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Sum
Regional							92		50	100		78		41	2185	122	92	250	3010
Algeria			9																9
Angola			151	11	435	1043	705	2186	274	337	2500	3559	1873	3166	2266	1367	19445	3827	43145
Benin		16					4				32			793		66		999	1910
Botswana	2	15		27	28	22	8		3	825									930
Burkina Faso																			
Burundi					8				10			16			39			13	86
Cameroon					4		5	67	23	244	10	598	1522	402	401	920	1025	340	5561
Cape Verde							3		16		17							13	49
CAR				5	2	60		4		6		27							104
Chad								456					130					4	590
Comoros					8					31									39
ROC	24	4		238			664	34	242	779			1706	137	919			323	5070
Cote d'Ivoire		1				2	3	30		4	55	7	211	516	883	812	52	205	2781
Djibouti		12		18							36	8	64	814		150	365		1467
DRC	10					1	1	1	1920	4	26	396	60	35		890			3344
Egypt			24		30	16	61						200			100	1800	1190	3421
Equatorial Guinea		11	6	6			257	680		132			346			261			1699
Eritrea	10						21	48			66	100	163		100	96			604
Ethiopia		1					1500	207		619	365	1258	79	6804	773	613	843	735	13797
Fmr. Sudan																			
Gabon	6	7			11	3	6		9	7	35	157			120	375			736

The Gambia																			
Ghana	26			44			81	666	208	36		542	448	1274			173		3498
Guinea				6	4	18	15					338			264				645
Guinea-Bissau																			
Kenya		6	6				46	65	57	365	263	225	1271	32	3730	1670	1095	68	8899
Lesotho									9			17					2	9	37
Liberia																	50		50
Libya																			
Madagascar						20		50								214	46	105	435
Malawi										90		79	70				23		262
Mali	18								73		346	52	34	257	209				989
Mauritania							7			293	98			17	17				432
Mauritius	21	5	14	34	2	5	15			270		95		8	8	7	7		491
Morocco	3	13	7	5					515			184			305				1032
Mozambique		11						50	70	117	2	140	1056	255	432			156	2289
Namibia					5	31	9	104	4	26			357						536
Niger							4		352			103	50	179		15			703
Nigeria			390				200				900		500	1584				1728	5302
Rwanda				4		2				32	6	20	147		8		71		290
Sao Tome & Principe																			
Senegal							50	51		61	78		48	447		1102	182		2019
Seychelles						2		21	11										34
Sierra Leone					3		17					16	15		12		161		224
Somalia																			
South Africa		36	73	52	42	24											1182	2410	3819
South Sudan															158				158
Sudan		128	42	1260	246	355	230	1098	187	1428	634	109	48		700			31	6496
Swaziland																			
Tanzania			4						77		179	80	1192	893	15	200			2640

Togo					42		40			202	30	5	155	163	55		163		855
Tunisia	3				33	14	13	3		80									146
Uganda		40					31		15		15	645	10			2128	85	212	3181
Western Sahara																			
Zambia			8				68	40	316	169	620	577	67	851	508	953	2341	2117	8635
Zimbabwe	7				110	12	376		21		269	335	398	345	219	127		1069	3288
Yearly Sum	130	306	734	1710	1013	1630	4532	5861	4462	6257	6582	9766	12220	19013	14326	12188	29203	15804	
Billions US$	0.1	0.3	0.7	1.7	1.0	1.6	4.5	5.9	4.5	6.3	6.6	9.8	12.2	19.0	14.3	12.2	29.2	15.8	145.74

Appendix 3

Table: Trade between China and Africa 1992-2005 (CARI, 2020)

US$ mn unadjusted	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Algeria	27	34	60	57	54	113	117	160	173	222	352	646	981	1404
Angola	8	11	12	21	29	29	37	16	34	46	61	146	194	373
Benin	22	54	30	67	70	110	154	163	370	520	421	471	577	953
Botswana	0	0	0	0	0	0	0	0	11	14	19	23	50	59
Burkina Faso	2	9	1	2	1	2	5	1	3	4	6	12	12	16
Burundi	4	4	3	2	1	0	2	1	4	1	2	3	5	12
Cote d'Ivoire	28	52	20	51	52	92	152	198	223	258	220	228	123	137
Cabo Verde	0	1	0	0	0	0	2	3	5	2	2	3	3	5
Cameroon	10	6	5	10	11	13	19	20	23	29	44	65	100	130
Central African Rep.	0	3	0	1	2	1	1	1	0	1	1	2	3	7
Chad	1	0	1	2	1	1	0	0	1	0	2	2	6	15
Comoros	3	0	0	1	0	0	0	1	0	0	1	1	1	2
Congo	6	8	8	6	8	12	47	11	18	38	40	60	93	145
Dem. Rep. of the Congo	8	22	24	41	43	29	61	19	18	13	19	25	37	50
Djibouti	16	11	10	10	10	13	31	38	54	47	50	66	72	111
Egypt	175	200	280	440	404	465	575	716	805	873	853	937	1388	1934
Equatorial Guinea	0	1	1	2	6	3	3	2	4	3	3	5	10	19
Eritrea	0	0	1	2	1	3	3	1	1	3	6	5	8	8
Ethiopia	0	22	17	31	41	55	68	53	56	79	96	153	194	284
Fmr Sudan	44	30	39	42	48	111	350	229	158	220	392	478	816	1294
Gabon	2	2	2	3	4	6	10	7	4	6	5	9	14	41
Gambia	52	70	69	58	46	42	51	57	62	73	82	116	124	124
Ghana	24	39	37	71	83	86	112	110	106	146	182	322	510	672

Guinea	31	32	26	27	30	35	37	46	34	44	43	73	93	144
Guinea-Bissau	2	3	4	1	0	1	1	3	5	8	5	12	6	6
Kenya	29	47	64	104	92	132	118	101	133	139	181	242	349	457
Lesotho	0	0	0	0	0	0	0	0	10	17	25	25	47	56
Liberia	116	5	32	36	114	73	28	12	126	113	30	26	182	150
Libya	87	45	30	33	57	80	68	65	52	41	112	175	255	360
Madagascar	4	6	9	12	14	27	33	41	71	73	40	112	152	183
Malawi	0	2	1	1	1	2	3	5	7	4	7	11	19	16
Mali	5	12	11	25	15	14	24	18	35	23	22	35	59	66
Mauritania	15	5	32	32	13	11	10	18	25	30	52	56	64	74
Mauritius	23	26	27	23	44	48	66	71	84	87	90	107	151	177
Morocco	104	94	90	112	75	119	165	254	278	300	451	696	943	1206
Mozambique	21	17	7	12	11	16	13	19	25	22	26	45	75	91
Namibia	0	0	0	0	0	0	0	0	8	21	20	38	53	60
Niger	3	15	18	8	1	2	7	15	7	6	15	19	25	34
Nigeria	91	121	90	153	171	316	358	396	549	917	1047	1786	1719	2303
Rwanda	4	3	2	1	4	2	2	2	3	3	4	4	5	12
Senegal	26	26	22	36	37	34	43	39	51	53	58	73	108	133
Seychelles	1	1	0	1	0	1	1	2	2	1	1	2	2	3
Sierra Leone	7	13	9	4	6	4	4	4	9	12	14	17	28	31
Somalia	5	1	2	0	0	0	0	0	1	1	2	4	10	17
South Africa	0	0	0	0	0	0	0	0	1014	1049	1311	2029	2952	3826
South Sudan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sudan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eswatini	0	0	0	0	0	0	0	0	3	3	5	7	11	11
Togo	75	109	97	120	79	69	59	70	80	109	138	263	399	538
Tunisia	28	28	50	36	61	75	84	97	97	106	144	184	245	296
Uganda	7	6	9	13	8	10	11	11	14	16	28	51	76	79
United Rep. of Tanzania	108	40	66	74	64	85	70	64	86	90	121	191	216	304

Zambia	5	7	10	20	10	11	22	8	33	39	37	35	51	48
Zimbabwe	27	9	22	15	19	28	105	27	32	33	32	30	113	125
Total, US$ mn	1258	1250	1348	1821	1843	2383	3131	3199	5007	5960	6918	10125	13730	18603
Total, US$ bn	1	1	1	2	2	2	3	3	5	6	7	10	14	19

Appendix 3 (Continued)

Table: Trade between China and Africa 1996-2008 (CARI, 2020)

US$ mn unadjusted	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Algeria	1948	2742	3752	4180	4000	4472	5417	6024	7395	7583	7648	6785	7923
Angola	894	1235	2942	2386	2004	2784	4039	3964	5975	3717	1680	2257	2235
Benin	1452	1976	2314	1953	2274	2875	2414	2992	3486	2989	2039	1927	2151
Botswana	62	120	169	165	370	616	182	148	176	225	210	233	281
Burkina Faso	19	44	46	43	48	56	73	103	118	124	141	183	223
Burundi	10	13	18	34	33	43	46	51	52	40	45	45	37
Cote d'Ivoire	227	415	532	505	549	541	804	956	1220	1554	1585	1693	1890
Cabo Verde	10	17	15	35	34	50	57	62	51	43	49	69	78
Cameroon	191	299	379	416	541	874	1064	1515	1877	1833	1557	1389	1707
Central African Rep.	2	9	11	13	23	14	18	9	7	14	15	13	19
Chad	14	70	80	149	308	95	173	372	318	124	94	115	186
Comoros	6	8	25	11	13	8	15	30	41	46	48	68	79
Congo	241	436	614	367	354	489	521	779	985	1035	741	498	445
Dem. Rep. of the Congo	69	94	235	321	473	827	837	949	1362	1409	992	970	1773
Djibouti	155	167	252	295	444	509	903	1019	1112	1981	2148	2175	1872
Egypt	2976	4468	5874	5107	6041	7283	8224	8363	10461	47834	10436	9486	12021
Equatorial Guinea	41	93	277	358	456	266	361	358	353	1046	148	166	145
Eritrea	38	27	29	39	39	148	54	138	88	537	69	43	43

Ethiopia	431	778	1231	1252	1210	885	1530	1868	2922	13763	3214	2665	2538
Fmr Sudan	1410	1554	1874	1705	1951	1995	0	0	0	0	0	0	0
Gabon	64	104	140	155	206	270	427	433	430	665	377	446	386
Gambia	162	186	176	168	187	291	258	309	351	330	315	399	427
Ghana	803	1228	1748	1534	1933	3110	4791	3946	4135	5309	4667	4825	4822
Guinea	175	265	334	281	421	630	754	907	1101	1277	1144	1240	1353
Guinea-Bissau	6	7	6	23	9	15	16	12	17	17	21	34	30
Kenya	621	948	1249	1277	1786	2369	2789	3217	4931	5914	5588	5035	5205
Lesotho	64	57	80	50	59	73	94	90	89	83	55	61	64
Liberia	530	803	1137	1881	4397	4967	3446	2336	1711	1357	1593	2104	1942
Libya	704	871	1640	2003	2061	720	2384	2835	2158	1892	1185	1028	1433
Madagascar	223	330	603	395	397	503	542	643	753	865	943	1007	1016
Malawi	31	42	81	65	80	112	249	214	157	246	228	262	222
Mali	75	125	168	168	230	298	290	275	297	270	367	337	346
Mauritania	109	139	189	242	285	386	455	598	757	801	870	859	1040
Mauritius	198	286	320	292	393	497	620	649	745	841	758	762	808
Morocco	1570	2183	2349	2129	2484	3043	3131	3272	2963	2897	3079	3176	3690
Mozambique	128	164	296	339	496	700	941	1199	1969	1938	1309	1307	1869
Namibia	133	247	243	264	230	282	439	482	546	490	268	272	319
Niger	72	31	167	284	272	142	158	184	244	173	101	98	115
Nigeria	2852	3799	6767	5476	6697	9206	9296	12043	15394	13701	9714	12153	13500
Rwanda	12	35	59	58	50	67	90	134	115	122	109	129	165
Senegal	187	335	402	399	498	680	794	997	1650	2191	2194	2041	2145
Seychelles	5	8	14	15	15	35	33	39	46	58	56	49	61
Sierra Leone	39	59	79	55	98	225	249	153	163	277	242	242	253
Somalia	28	27	40	67	72	91	101	134	206	298	392	474	637
South Africa	5768	7445	8618	7366	10800	13362	15323	16831	15699	15858	12850	14809	16337
South Sudan	0	0	0	0	0	0	34	75	66	155	46	52	77
Sudan	0	0	0	0	0	0	2179	2398	1929	2395	2130	2222	1885

Eswatini	7	13	21	18	29	31	29	25	27	31	42	34	36
Togo	704	1377	1218	1130	1333	1831	3383	2443	2492	2180	1919	1886	1991
Tunisia	358	492	697	711	995	1113	1392	1263	1236	1237	1296	1328	1416
Uganda	138	203	230	231	258	359	495	452	487	553	824	777	706
United Rep. of Tanzania	383	603	950	914	1253	1654	2090	3141	3844	4279	3567	3120	3591
Zambia	103	198	264	152	302	617	697	730	726	552	490	709	969
Zimbabwe	136	203	133	156	316	410	430	414	404	543	387	444	446
Total, US$ mn	26584	37373	51089	47635	59807	72919	85134	92571	105833	155696	91985	94499	104949
Total, US$ bn	27	37	51	48	60	73	85	93	106	156	92	94	105