

Rough Aid?

*An econometric analysis of Chinese development aid`s
effect on good governance in Sub-Saharan Africa*

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Abstract

This thesis attempts to estimate the effect of Chinese development aid on good governance in Sub-Saharan Africa over time. The motivation of this thesis is the growing importance of China as a donor, and the many assumptions about China's negative effect on Governance. China follows the principles of non-interference and South-South cooperation their development aid allocations, and as a consequence, they are criticized for being motivated by their own economic and diplomatic interest, rather than the needs of recipients. Chinese aid is therefore characterized as “rough aid”.

However, China discloses very little information of their aid allocations. As such, few quantitative empirical studies confront the various claims about Chinese rough aid. The research lab AidData has recently introduced a new open-source methodology for collecting data on Chinese aid, and created a database on Chinese development finance to Africa between 2000 and 2013. Now that data is available, it is both possible and needed to fill the gap in the literature.

The analysis compares the effect of Chinese aid on good governance to the effect of Western aid. The thesis analyzes the effect within 29 Sub-Saharan African countries between 2000 and 2013, using panel data regression models. I find that China does not have a positive effect on good governance, but it is not possible to say with certainty that the general effect is negative either. I do not find any effect of Western aid on good governance over time. Additionally, I find no evidence that China harms the effectiveness of Western aid. The results are robust to several changes in the model specifications.

The sharpest critique of Chinese aid is that it will diminish the effectiveness of Western aid, which in turn will lead to worse governance in recipient countries. The finding that China does not harm the effectiveness of Western aid can therefore have important implication on policy and the debate on Chinese “rough aid”. The findings suggest that the intentions of donors may not have any general impact on good governance, and that it might be other factors that determine the success of development aid.

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Abbreviations

- AIC – Akaike Information Criterion
- BIC – Bayes Information Criterion
- BP – Breusch-Pagan
- DAC – Development Assistance Committee
- DV – Dependent variable
- DWH – Durbin-Wu-Hausman
- EU - European Union
- FDI – Foreign Direct Investment
- GDP – Gross Domestic Product
- GG – Good Governance
- GNP – Gross National Product
- HDI – Human Development Index
- ICRG – International Country Risk Guide
- IMF – International Monetary Fund
- IV – Independent Variable
- NGP – Non-Government Organizations
- OA – Official Assistance
- ODA – Official Development Assistance
- OECD – Organization for Economic Cooperation and Development
- PVA – Private Voluntary Assistance
- OOF – Ordinary Official Flows
- QOG – Quality of Government
- UN – United Nations
- UNDP – United Nations Development Programme
- USAID – The United States Agency for International Development
- VOF – Vague Official Flows
- WB – World Bank

Chapter 1: Introduction

1.1. Research Question and Background

Development aid plays an important role as an economic reward and punishment mechanism between nations. Since the 1990s, the allocations of development aid from traditional Western donors has increasingly come with political conditions attached, specifically with regards to good governance. Consequently, development aid is frequently given for political reasons rather than for economic needs or poverty alleviation alone (Stokke, 1995 (2006), p. 1; Smith, 2007, p. 1). With the ongoing redistribution of world power, development aid from emerging donors operating outside the OECD's Development Assistance Committee (DAC) has increased rapidly (Dreher & Fuchs, 2015, p. 989). Countries that traditionally have been categorized as developing countries are now providing alternative sources of development finance to developing countries, and are challenging the existing international development regime. The most important emerging donors include India, Brazil, Venezuela, Mexico, Russia, United Arab Emirates, Saudi Arabia, Kuwait, Thailand, and in the lead of this group; China (Woods, 2008, p. 1205). These donors reject, at least partial, the DAC-related principles and practices when they provide development assistance. Hence, they do not involve themselves in the internal politics of the recipient country (KilamaFIKS, 2016, pp. 77-78; Woods, 2008, p. 1207).

The growing importance of China as a donor has raised concerns that it is destabilizing the international aid architecture. Moisés Naím (2007, pp. 95-96), former editor and chief of the journal *Foreign Policy*, characterized China's development aid as "rough aid", claiming that it is unrelated to the needs in developing countries, but rather motivated by China's own national interest. Moreover, emerging donors are said to undermine the development efforts of Western donors to promote good governance in the developing world, by allowing the governments of developing countries to "shop around" for the development assistance that best suits their interest. In other words, to shop around for donors that are soft on bad governance and that are prepared to tolerate or even participate in corruption. However, this hypothesis is primarily based on informed assumptions and selective case studies. Few quantitative empirical studies confront the various claims about Chinese rough aid. As such, it is not clear whether or not the average effect Chinese aid differs from the average effect DAC aid (Dreher & Fuchs, 2015, p. 989; Strange, et al., 2015, p. 3; Naím, 2007, pp. 95,96).

Subsequently, the research question I will attempt to answer is the following:

«Does Chinese development aid have an effect on good governance in Sub-Saharan Africa? ».

1.2. The Aim of the Study

This thesis will focus on three key factors, the dependent variable good governance, and the independent variables Chinese development aid and development aid from DAC donors. The focus of this thesis is how Chinese development aid affects good governance. The study attempts to go one step further than the traditional focus on Western aid in Sub-Saharan Africa by including Chinese aid. The study is motivated by two factors, one theoretical and one empirical. The relationship between development aid and governance has been studied carefully, and today there is a large literature on the subject. Despite considerable amount of studies on the theme, academic research has not been able to reach consensus on the effect of development aid on governance (Quazi & Alam, 2015, pp. 16-17; Knack, 2001, pp. 311-314; Bräutigam & Knack, 2004, pp. 260-265). On the one hand, several studies argue that development aid can affect the quality of governance positively by improving the quality of administration, boosting policy and planning capacity, and strengthening central institutions (Quazi & Alam, 2015, pp. 16-17; Knack, 2001, pp. 311-314; Bräutigam & Knack, 2004, pp. 260-265).

On the other hand, a number of studies argue that development aid diminishes good governance by encouraging corruption and other rent seeking activities, fuels conflicts between interest groups over access to aid funds, and seize human resources from the public sector to aid-funded projects. A third part of the literature does not find any significant relationship between development aid and good governance (Quazi & Alam, 2015, pp. 16-17; Knack, 2001, pp. 311-314; Bräutigam & Knack, 2004, pp. 260-265). The lack of theoretical consensus on the effect of traditional aid challenges the hypothesis that Chinese aid will lead to worse governance. If there is no clear evidence that Western aid with political conditions attached has a positive effect on good governance, why should Chinese development without political conditions lead to worse governance? Moreover, are the consequences of Chinese development aid any different from the consequences of DAC aid?

The second motivation for this thesis is empirical. Literature on aid effectiveness is largely dependent on data on development finance from Western donors and international

institutions, and published research ignores the possible impact of Chinese aid. Given the scale of Chinese aid, not including it in empirical research will lower research validity. In addition, to the extent that China gives aid where traditional donors are absent or where they increase aid when traditional donors retreat, ignoring Chinese aid could severely bias empirical results. Including China and other emerging donors is an essential step towards developing more accurate theories on aid effectiveness in developing countries (Strange, et al., 2015, pp. 3, 13-14). Data on the allocations of Chinese development aid is difficult to obtain because Beijing discloses very little information about its financial activities. Without comprehensive data, scholars have not been able to confront the various claims about Chinese rough aid empirically (Dreher & Fuchs, 2015, p. 989). However, the internationally recognized development research lab AidData has recently introduced a new open-source methodology for collecting information on project-level development finance, and created a database on Chinese development finance to Africa between 2000 and 2013 (Strange, et al., 2015, p. 1). Now that empirical data is available, it is both possible and needed to fill the gap in the literature.

1.3. Relevance of the Theme

Since the mid-1990s, the theory of good governance has made strong impact on research as well as in policy circles, especially those dealing with developing countries (Gisselquist, 2012; Dellicour & Sacaze, 2012, p. 551; Holmberg & Rothstein, 2012). Good governance is today an important feature of both bilateral and multilateral development aid, and there is broad consensus in the literature that good governance is important for development. While it is recognized that outside support is unlikely to deliver results unless there is political will within the country, donors are said to have an important role in promoting good governance in recipient countries (Gisselquist, 2012; Dellicour & Sacaze, 2012, p. 551). In 1998, former UN Secretary-General Kofi Annan stated that “Good governance is perhaps the single most important factor in eradicating poverty and promoting development” (UN-University, 2017), and USAID proclaims that: “Without good governance, it is impossible to foster development, and no amount of resources can compensate for bad governance” (USAID , 2002).

However, there is little consensus in the literature of how good governance can be achieved. The question of how to improve good governance is critical from a policy perspective as well as from a theoretical perspective. Many aid agencies and international organizations focus on democracy and democratic governance when they refer to good governance. However, I will

argue that good governance should not be equated with democracy or democratic governance. This is primarily because good governance and democracy are two different regime characteristics, countries might have varying degree of good governance independent of their democratic status (Holmberg & Rothstein, 2012, pp. 21-22). Secondly, in Sub-Saharan Africa, most countries are not democracies (Puddington & Roylance, 2017; Marshall, 2014).

Development aid has been an important part of Western countries' foreign policy since the Second World War. As aforementioned, the global development landscape is currently in a period of change, as emerging donors are representing a growing proportion of the total amount of development aid. China is by far the largest emerging donor, and as China's influence in the World expands, it is necessary and important to study the possible effects of Chinese power. The unique way China designs and delivers development aid is said to challenge traditional policies and practices of Western powers (Parks, 2015). Various scholars and policy makers have warned against the consequences of Chinese aid. It is said that the possible risk of Chinese loans to low-income countries may prejudice their debt situation because of inappropriate terms, postpone necessary adjustment because of the lack of conditions, and waste resources on unproductive investments (Woods, 2008, p. 1207).

These concerns are all important to study. China will continue to expand its development aid abroad, and its power and influence in the World. Therefore, I see this study as highly relevant in relation to development aid and political science in general. The findings on the effect of Chinese aid in Sub-Saharan Africa could have implications for how the DAC donors and international development community should relate to the Chinese expansion. In addition, the results can contribute to better understand how different types of development aid affects good governance. The inclusion of DAC donors in the analysis will have important comparative advantages.

The analysis uses a panel data regression model of 29 Sub-Saharan African countries between 2000 and 2013, to study the general effect of Chinese aid on good governance. I find that China does have a general effect on good governance over time, and that the effect is negative. I find no general effect of DAC aid on good governance, which could be explained by the complexity of bilateral DAC aid. The contrasting effects of Chinese aid and DAC aid, confirms that the two types of aid are very different and therefore have different effects within countries over time. The most critical finding in the analysis is the rejection of the interacting effect of Chinese aid on the effectiveness of DAC aid. This suggest that the presence of Chinese aid does not prevent good governance initiatives from traditional donors, which is one of the

sharpest critiques of China from traditional donors. The results are robust to different modifications of the main models.

1.4. The Structural Outline of the Thesis

Following this introduction, *Chapter 2* consists of a presentation of the conceptualization and theory of my dependent variable, good governance. Moreover, I will present the theoretical arguments of how development aid from China and DAC donors can affect good governance. In the second chapter, the hypotheses used to answer the research question are presented.

Chapter 3 presents and elaborates on the quantitative method selected for the thesis. The method that will be used is panel data regression analysis.

Chapter 4 presents the dataset and variables that will be used in the regression models. The dataset consists of variables from the Quality of Government project and AidData's research release on Chinese development finance.

Chapter 5 consists of the results of the regression analysis as well as an analysis of the results.

Chapter 6 summarizes and discusses the main findings of the regression analysis in relation to the theoretical framework presented in chapter 2, and attempts to answer the research question. This chapter also discusses the limitations of the results of the study. Lastly, the chapter provides suggestions for future research on the topic.

Chapter 2: Theoretical Framework

In this chapter, I will introduce the theoretical framework used to understand the relationship between development aid and good governance. The relationship between development aid and good governance is widely researched. However, academic research has not been able to reach consensus on development aid's effect on good governance. First, I will present and discuss my dependent variable, good governance. I will here explain why good governance will be operationalized as "quality of government". Secondly, I will present the three main theoretical directions on how development aid affects good governance, namely that development aid has a positive effect on the quality of governance, that development aid has a negative effect on governance. Thirdly, I will present the theoretical and empirical framework on how Chinese development aid affects governance. In this section I will present the theories explaining why Chinese development aid can have a negative effect on good governance, the theories of why Chinese aid might have a positive effect on good governance, and how Chinese development aid can have indirect influence on how Western development aid affect good governance. After each theoretical explanation, I will present the hypotheses that will be tested in this thesis.

2.1. Theories of Good Governance

This section examines the dependent variable of my thesis, namely the concept and theory of good governance. Accordingly, this section is divided into two subsections. In the first subsection, I will present and discuss the conceptualization of the term. In the second subsection, I will present the theory of good governance, and discuss why good governance is important for development.

2.1.1. Conceptualization of Good Governance

According to Wilkin (2011, p. 7) definitions of good governance are often broad and encompasses many agendas. Today, most organizations and institutions working on governance-related subjects have their own definition of the concept (see examples in Table 2.1.). The numerous definitions of good governance have made conceptualization of the term itself debated, and not just how good governance might affect a political outcome. The problem of definition happens when moving from defining governance, to defining good governance. The concept of good governance is a normative term, and will include normative views on what

“ought to be”. Different definitions vary in the degree in which they imply particular policies or political outcomes, or particular institutional designs or processes. Good governance is often very broadly defined, and can therefore be hard to distinguish from other similar concepts, such as development itself or democracy (Grindle, 2007, p. 555).

An important distinction to make is the difference between government and governance, which is crucial to the language of political conditionality and development objectives. Governance means government plus some additional components such as public policies, institutions, a system of economic relationships, or the role of non-governmental sector in the business of the state. As opposed to the term governance, good governance express approval not only for a certain type of government (usually democratic) and its related political values (as respect for human rights), but also for certain kinds of additional components (Smith, 2007, p. 3). Leftwich (1993, p. 606) separate between two parallel meanings of good governance that often overlap in the literature. The first meaning of the concept refers to the World Banks definition of primarily the administrative and managerial terms. The second meaning of the concept is associated with Western governments, which in addition to focus on the administrative and managerial terms include an insistence on competitive democratic politics.

Some of the definitions of good governance presented in table 2.1., might overlap with democracy. So why do we need concepts such as good governance if we could just talk about democracy? Holmberg and Rothstein (2012, pp. 21-22) argue that good governance is different from and should not conceptually be equated with democracy. The theoretical reason for this is that there is no guarantee that a majority will respect the impartiality principle when government power is to be exercised. For example, in an ethnically divided society, the ethnic majority, after have being elected, may decide that all citizens from the minority working in the civil service should be removed from their positions (Rothstein & Teorell, 2008, p. 178).

The empirical reason is that there is no straightforward relationship between establishing electoral representative democracy and many features of good government (Marshall, 2014). On the contrary, empirical research indicates that good governance is often worse in newly established democracies, such as in Peru under former president Fujimori. At the same time, some of the countries that have made some of the greatest progress in curbing corruption the last decades, such as Singapore and Hong Kong, have not been democracies. Despite the widely held belief that democracy foster development, this approach does not encompass democratic countries with bad governance and vice versa (Holmberg & Rothstein, 2012, pp. 21-22; Rothstein & Teorell, 2008, pp. 178-179).

Rothstein and Teorell (Rothstein & Teorell, 2008, pp. 167-168) argue that although much research on good governance exists, it has failed to address how quality of government should be conceptualized. Existing definitions are either extremely broad, they suffer from functionalist slant, or they only deal with corruption. Holmberg and Rothstein (2012, pp. 23-27) highlight the importance of universalism when defining the concept. They argue that due to the great variations in institutional design and practices between countries, it is not fruitful to define the concept using specific institutional designs. Moreover, they argue that the best way to define the concept is to look for some *basic norm* that characterizes countries' institutional systems. They argue that the preferred way to conceptualize good governance, or quality of government (QOG), which is the term they use, is by *impartiality* in the exercise of public power. By impartiality, they mean that when a policy has been decided upon in the political system, the policy should be implemented according with the principle of impartiality, which lines with the principle of the rule of law or that all cases ought to be treated equally (Holmberg & Rothstein, 2012, pp. 23-27).

Alternatively, as Cupit states (Rothstein, 2009, p. 314); "To act impartially, is to be unmoved from certain sorts of considerations – such as special relationships and personal preferences. It is to treat people alike irrespective of personal relationships and personal likes and dislikes". Despite impartiality resembling the principle of rule of law, Rothstein (2009, p. 314) argue that the norm of impartiality is broader than rule of law, because it applies to other spheres of the state that are not directly governed by law. When public policy is to be enacted in so-called "human processing" areas, such as in education, health care, welfare benefits, discretionary powers usually need to be transferred to lower-level government officials responsible for implementing policy. These spheres are not directly under the rule of law, but the norm of impartiality has to apply in such spheres as well, in a country with high quality of government or good governance (Rothstein & Teorell, 2008, p. 182). Holmberg and Rothstein (2012, pp. 23-27) prefer the term impartiality to the term objectivity, because objectivity imply that humans have full knowledge of a case and can reach a decision as if some natural law process decided the outcome. The term impartiality, they argue, suggest a more human and realistic demand.

Table 2.1. Definitions of Governance and Good Governance

Source	What is governance?	What is good governance?
World Bank (n.d.)	“The process and institutions which decisions are made and authority in a country is exercised”	“Inclusiveness and accountability established in three areas: “Selection, accountability and replacement of authorities (voice and accountability; stability and lack of violence); efficiency of institutions, regulations, recourse management (regulatory framework; government efficiency); respect for institutions, law and interactions among players in civil society, business, and politics (control of corruption; rule of law) (pp. 3,7)”
The International Monetary Fund (IMF) (2005)	For IMF purposes, “limited to economic aspects of governance ... in two spheres: improving management of public recourses ...; supporting the development and maintenance of a transparent and stable economic and regulatory environment conducive to efficient private sector activities ...” (p. 4)	“Ensuring the rule of law, improving efficiency and accountability of the public sector, and tracking corruption” (p. 1)
United Nations Development Programme (UNDP) (1997)	“The exercise of economic, political and administrative authority to manage a country’s official affairs at all levels. It comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences” (p. 12)	Characterized as “participatory, transparent...accountable ... effective and equitable ... promotes the rule of law ... ensures that political, social and economic priorities are based on broad consensus in society and that the voices of the poorest and the most vulnerable are heard in decision-making over the allocation of development recourses” (p. 12)
The United States Agency for International	<i>Does not provide a clear definition of Governance that is not directly related to good governance</i>	“...a broad concept, encompassing the capacity of the state, the commitment to the public good, the rule of law, the degree of transparency and

Development USAID (2002, p. 6)		accountability, the level of popular participation, and the stock of social capital”. (USAID , 2002)
Quality of Government Institute (QOG), University of Gothenburg (Rothstein & Teorell, 2008; Holmberg & Rothstein, 2012)	<i>Does not provide a clear definition of Governance that is not directly related to good governance</i>	“Impartiality in the exercise of public authority”

(Grindle, 2007; Johnsen, 2016; USAID , 2002; Holmberg & Rothstein, 2012; Rothstein & Teorell, 2008)

Definitions of good governance often suffer from endogeneity. The Economist noted in 2005 that:

“... defining good governance as “good for economic development” may generate redundant explanations and meaningless policy implications: ‘What is required for growth? Good governance. And what counts as good governance? Whatever promote growth. And what is required for growth?’” (Sundaram & Chowdhury, 2012, p. 7).

Such functionalist definitions of good governance often generate endogenous definitions. Endogeneity can here be understood as reverse or simultaneous causality, as such, good governance can be endogenous to development as well as to development aid¹. The quality of government definition solves the problem of internal endogeneity, to some degree, because the definition is not functionalist, and is not defined using other concepts. Based on the conceptual discussion above, I will strongly argue in favor of defining good governance according to Holberg, Rothsten and Teorell’s concept of quality of government. If we define good governance as democratic governance, then why not just talk about democracy? The QOG definition created a middle-way between the administrative definition and the democratic definition, and it is better at dealing with the endogeneity problem².

¹ Development aid can lead to better governance, but donors can chose to give aid to countries because they have improved their quality of government or have better quality of government than another country. Hence, the causal relationship between good governance and development aid can go both ways. This is why it is crucial that econometric analyses are theory based. Even if the relationship is statistically significant in a regression model, it does not indicate causality per say, but a correlation between the variables. Causality can only be detected through theory and qualitative research (Gerring, 2012, pp. 321-322)

² Note that the literature that is referred to throughout the thesis, defines good governance in different ways. It is important to keep the conceptualization of good governance in mind when looking at the

2.1.2. Good Governance and Development

“Without good governance, it is impossible to foster development, and no amount of recourses can compensate for bad governance” (USAID , 2002, pp. 6-7).

Around 1990, several major works within political science were published on governance (North, 1990; Ostrom, 1990; March & Olsen, 1989; Evans, et al., 1985; Steinmo, et al., 1992). The publications challenged the then dominating societal views, which argues that variables such as economic power configurations or the structure of class divisions are central in explaining political outcomes, and thereby social and economic outcomes. Contrary to the then traditional view, these scholars argued that political institutions were essential in explaining social and economic outcomes. In political science, this became known as “bringing the state back in”. The institutional approach turned the causal logic around by arguing that the type of political system in a society largely determines its economic and social development (Holmberg & Rothstein, 2012, p. 16). This assumption caused the donor community to increase their aid and loans that specifically target “good governance” in developing countries³ (Knight, 2008, p. 5). Today the institutional approach is widely accepted and institutionalized within the field political science.

Within development economics, the new approach leads to the recognition that the state plays a critical role even within a market-oriented society. The specific claim of good governance theory is that while markets failures in developing countries can be serious, the best way to address them is by improving the efficiency of the market through good government reforms. Instead of trying to improve the governance capabilities that would enable developing countries to directly correct market failure, the good governance agenda argues that if the government could create the conditions for markets to work efficiently, the market failure would be indirectly reduced and, with it, would the need for specific interventions to address these market failures. The argument is that market failure happens primarily because developing countries do not have well-defined property rights, a rule of law to handle conflicts, and a state that is restrained from expropriation and rent creation. These features of developing country markets raise the transaction costs of trying to agree on and enforce contracts in the

results of theoretical arguments of the effect of good governance, as well as results from empirical analysis.

³ Despite the terms developing countries and developed countries has been criticized (I will not elaborate on this discussion here), I will use the term developing and developed countries for classificational reasons (UN, 2014, pp. 143-144) Additionally, these classifications are widely used in the literature I refer to throughout the thesis.

market. Which, according to an economic good governance theory, is the reason why markets fail in developing countries. Therefore, the good governance reform agenda can be described as an agenda for market enhancing governance (Springborg, 2009, pp. 195-197).

Good governance is not just important for economic development in a country, it is also crucial for social or human development (Smith, 2007, p. 12). The United Nations (UN) argues that economic development is not a sufficient measurement of development in a country. They claim that development should include social dimensions, and have introduced the much-used Human Development Index (HDI) to measure development in the World. HDI defines development as a long life, political freedom, personal security, community participation, and guaranteed human rights, in addition to economic development (Haq, 1990, p. iii; Radelet, 2006, p. 7). Economic and political scientists alike, argue that bad governance plays a central part in many of the World's most pressing economic and social problems today. Because good governance is so important for economic and human development, I will argue that focusing on good governance in development research is crucial.

Grindle (2007) criticize the concept and effect of good governance. She argues that achieving good governance calls for improvements in almost all aspects of the public sector, and how to get good governance raises dozens of questions about “what needs to be done, when it needs to be done, and how it needs to be done”. She introduces the concept of “good enough governance”. Good enough governance suggests that not all sides of good governance needs or can be tackled at once, and that building better governance takes time. Therefore, he suggests that attentions should be at the minimal conditions of governance necessary for political and economic development. In addition, she argues that methodological choices of how to study good governance can have decisive impact on empirical findings. While large-N⁴ studies tend to find consistent correlations between development and good governance, small-N studies tend to demonstrate that development is not fully dependent on “getting governance right” (Grindle, 2007, pp. 553-555). Grindle (2007, p. 572) concludes, “the task of research and practice is to find opportunities, short of magic bullets, for moving in a positive direction [towards better governance], yet recognizing that this is not always possible”. As such, my methodological choice of studying good governance on a general basis by using a quantitative research design, are likely to affect the results I get.

⁴ Large-N studies are quantitative studies involving many cases. Small-N studies are qualitative studies involving one of few cases (Gerring, 2012, p. 429)

Some scholars take the opposite point of view in the good governance debate; they argue that good governance does not necessarily lead to development (Wilkin, 2011; Cuervo-Cazurra, 2008, p. 13). The president of the World Bank, argued back in 2010 that development practitioners “should embrace `different policy approaches`, noting that `what might safeguard development in one context may strangle it in another`”. One cause of this debate is the rise of China (Wilkin, 2011, p. 61). Wilkin (2011, p. 62) argue that “While poor governance is correlated with extremes of development failure ..., the converse is not true: good governance is not correlated with extremes of development failure”. To explain these cases in the good governance paradigm is difficult. He claims that under certain conditions, poor governance enables development-oriented oligarchs to thrive, which in turn trickles down on the society in general (Wilkin, 2011, p. 62). However, as I have discussed above, the objective of good governance and development is not just economic growth, but also includes social dimensions. Therefore, I will argue that good governance possible positive effects on development makes the concept important to study.

2.2. Development Aid and Good governance

In the second section of chapter two, I will present the general theory of development aid its possible effects on good governance. The general theory of the effect of development aid is associated with development aid from DAC donors. The reason is that DAC donors have provided the majority of development aid for decades. Emerging donors did not provide substantial amounts of development aid until around year 2000 (Eggen & Roland, 2014, p. 87). In this section, I will first present the standard definition of development aid. Secondly, I will present the theory of why development aid can lead to better governance in developing countries. Thirdly, I will present the theory of why development aid could lead to worsen governance in developing countries. Lastly, I will present the theory of why development aid might not have any effect on good governance in developing countries.

2.2.1. Definition of Development Aid

Development aid or foreign assistance describes flow of funds from one country to another (Ear, 2007, p. 260), and the standard definition of foreign aid comes from the Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD). DAC defines foreign aid or development aid as:

“Financial flows, technical assistance, and commodities that are (1) designed to promote economic development and welfare as their main objective (thus excluding aid for military and or other non-development purposes); and (2) are provided as either grants or subsidized loans”. (Ear, 2007, p. 260)

The DAC classifies aid flows into three broad categories. Official Development Assistance (ODA) is the largest, consisting of aid provided by donor governments to low- and middle-income countries. Official Assistance (OA) is aid provided by governments to richer countries with per capita income above the World Bank’s “high income” threshold, and to countries that were formally parts of the Soviet Union or its satellites. Private voluntary assistance (PVA) includes grants from non-government organizations (NGOs), religious groups, charities, foundations, and private companies. ODA is thus the type of aid that most people have in mind when discussing foreign aid (Radelet, 2006, p. 4), therefore, it is this type of Western development aid that will be analyzed in this thesis.

It is difficult to estimate the scale of development aid that goes directly to good governance. This is partly because of the different definitions of good governance employed by donors, but also because aid to social sectors such as education and health may contain governance-related projects and requirements. Much of development aid that is not directly or indirectly aimed at good governance reform can have conditions attached on improving good governance (Smith, 2007, pp. 9-10). Hence, development aid that is not directly aimed at promoting good governance might have an indirect effect on good governance. Since there are so many determinations of good governance, it is beneficial to define aid more broadly, than focusing on development aid aimed at good governance alone (Kotsadam, et al., 2017, p. 5). I will argue that Western development aid should be broadly defined as DAC aid, because I wish to study the effect of development aid in general, and not just the aid that specifically aims at building better governance. However, as the DAC-definition implies, I will focus on bilateral development aid, and not on development aid from international organizations and the alike, despite the fact that large sums of development aid from DAC countries are distributed through international organizations. Because Western aid will be compared to bilateral Chinese aid, it is natural to focus on bilateral aid from Western donors.

2.2.2. How Development Aid from DAC Donors Can Lead to Better Governance

Good governance, as a development policy objective, has been strengthened the last decades and is an important feature of DAC donors’ development policy. While recognizing that outside support is unlikely to deliver results unless there is political will inside the recipient

country, it is believed that donors have an important role to play (Dellicour & Sacaze, 2012, p. 551). Good governance is crucial for the sustained and rapid growth in per capita income in poor countries. The question though, is how and if development aid can contribute to better quality of governance (Knack, 2001, p. 311). According to Bräutigam and Knack (2004, p. 256) improving governance means “building better bureaucracy, increasing adherence to the rule of law, reducing corruption, and managing expenditure and revenue generation in a sustainable manner”. Hence, good governance is in this sense the channel in which turns aid into development and growth (Rajan & Subramaniam, 2007, pp. 322-323).

From a theoretical point of view, development aid can release governments from binding revenue constraints, enabling governments to pay higher salaries to employees in the bureaucracy, and public employees generally, and strengthen domestic institutions. High levels of aid, channeled through governments with clear development agendas, can use aid funding to improve the quality of the civil service, strengthen policy and planning capacity, and establish strong institutions. Often, aid programs aim specifically at better training and technical assistance to strengthen legal systems, management of public finances, and accounting public offices. This type of aid programs has particularly been used by international institutions, such as the World Bank (WB) and the International Monetary Fund (IMF), but also by an increased number of bilateral donors. In many countries, aid personnel manage specific areas of government, and the mixture between technical assistance and recourses can improve the efficiency and effectiveness of governance (Knack, 2001, p. 331; Bräutigam & Knack, 2004, pp. 255-260).

This is what happened when South Korea and Taiwan started receiving aid after WW2. Both countries had established strong post-colonial state institutions, where aid from the United States of America (US) played an important role in the successful development of the economy, the level of governance, and the society of the countries in general (Gray, 2013; Bräutigam & Knack, 2004, p. 260). In addition to the technical assistance to governments, development aid has the potential to release the binding constraint of low revenues for government committed to development. Some studies show that high levels of aid (above 30 % of GDP) promote growth when a country has good macroeconomic policies. Which in turn can generate new revenues for improvements in the quality of government (Bräutigam & Knack, 2004, p. 260)

Development aid can have a positive effect on good governance through conditionality, by increasing the price of bad governance compared to good governance (Ear, 2007, p. 260). DAC donors and international organizations, such as the World Bank and IMF, put conditions

on their aid, often through the requirement to implement specific policies, to guarantee the release of funds or to improve the concessional terms of credit (Hernandez, 2015, p. 3). They believe that certain policies and actions are important for development and growth, and if government policies have failed in the past, providing aid will not bring about positive changes without fundamental governance change. The essence of conditionality has changed over time as the most important concerns have changed, as donors are trying to find the best way to apply conditions. Burnside and Dollar`s (2000, p. 864) findings suggest that “making aid more systematically conditional on the quality of policies would likely increase the aspects on developing country growth”. The argument is that conditions on aid allocations will increase the incentives of recipient governments to reform the public sector, which will lead to better governance in the recipient country (Knack, 2001, p. 313).

The supply of conditions is traditionally viewed as a product of the negotiation between the donor and the recipient country. Conditions can therefore be viewed as the result of the bidding competition amongst the actors, between what the donor believes will lead to success of the project and on the bargaining power of the recipient country (Hernandez, 2015, p. 6). The conditions can be either direct or indirect. Regime theorist view donors and international organizations in general as sources of norms and legitimacy that can have a considerable impact on state behavior. They can enhance behavior, provide a venue for policy formulation, and transfer models of governance internationally. This can be done either by trying to convince the recipient countries of the rightfulness and appropriateness of particular international norms, here good governance, which is the value-driven approach, or by convincing recipient countries of adapting norms due to the rational calculation of good governance (Holmberg & Rothstein, 2012, pp. 175-176). This approach is thus not what is usually implied when discussing conditionality on aid.

Conditions are generally carried out with significant political leverage and/or economical recourses to ensure that states carry out reforms. Holmberg and Rothstein (2012, pp. 176-177) discuss the effect of conditions from international organizations on member states, but the principles are the same as conditions from aid donors on recipient countries. To receive aid, recipient countries must fulfill certain demands or conditions. The donors then can threaten to withdraw aid if the conditions are not met. The theoretical justification for conditions on aid is then that conditions, and the possibility of withdrawal of aid revenue or holding back aid revenue, will force recipient countries to create better governance, which in turn will lead to better development.

Collier, P. Guillaumont, S. Guillaumont and Gunning (1997, pp. 1400-1401) argue that there are various rationales for aid conditionality, and present five such objectives. Firstly, the donor may offer aid as an incentive for the recipient government to change its policies. This is the objective of inducement, namely the aim is to induce the government to do something it would have chosen not to do without the offer of aid. This is the dominant objective among Western donors. Secondly, donors can treat policies as exogenous but wish to concentrate aid in good policy environments. The rationales for selectivity between countries is that aid is more productive in a good policy environment. Donors will therefore choose to channel aid to countries that already have a satisfactory policy environment. Such donor behavior might encourage recipient countries to better their governance to receive (more) aid.

Thirdly, the donors may want to ensure that aid funds are spent on particular goods or services, such as machines of a favored design or the use of enterprises from the donor country. This rationale may be called paternalism, and signals a disagreement between the donor and the government in the use of aid. As will be discussed later in the thesis, China often demands that recipient countries use Chinese goods and services to receive aid. Most often, donors try to improve aid effectiveness in raising the recipients' welfare, by restricting the way aid is spent. Fourthly, aid can be used as a mechanism of commitment ("lock-in") for government policies. In that case, the objective of conditionality is to provide a credible threat. In the case that aid is given because of a certain policy-reform, the reversal of that policy reform must lead to the withdrawal of aid, for this type of aid to be successful. The objective of this type of aid is restraint where the donor provides the recipient government with an incentive not to change a policy. Fifthly, the objective of aid might be signaling. For private agents, information on government performance might be costly, but they might find it preferable to free ride on the decisions of donors who are known to invest considerable resources in monitoring government performance. This in turn, can reduce the private sectors decision cost, which can stimulate investment (Collier, et al., 1997, pp. 1400-1401). Based on the theoretical discussion above, the first hypothesis is the following:

H₁: *The more development aid from DAC donors, the better the governance within developing countries.*

2.2.2. How Development Aid from DAC Donors Can Lead to Worse Governance

Many scholars have argued that, despite the good intentions of donors, development aid can lead to diminished governance in recipient countries (Ear, 2007; Knack, 2001; Abrahamsen, 2000; Bräutigam & Knack, 2004; Quazi & Alam, 2015; Asongu, 2014; Tavares, 2003). These scholars argue that foreign aid diminishes governance in recipient countries by encouraging corruption and other rent seeking activities, fuels conflict between competing interest groups over access to aid funds, and diverts human resources from the public sector to aid-funded projects (Quazi & Alam, 2015, p. 17). Knack (2001, pp. 311-312) demonstrates that despite the theoretical reasons to expect that development aid leads to better governance, empirical analysis generally concludes that development aid has a negative or non-significant effect on governance. The negative effect of development aid is often explained as a problem of aid dependence. According to Bräutigam and Knack (2004, p. 257) aid dependence is a condition created by, but not synonymous with, large transfers of development aid. Bräutigam and Knack define aid dependence as:

“... a situation in which a government is unable to perform many of the core functions of a government, such as the maintenance of existing infrastructure or the delivery of basic public services, without foreign aid funding and expertise (provided in the form of technical assistance or projects).” (Bräutigam & Knack, 2004, p. 257)

In Europe, the development of democracy and the rule of law, was to a large extent related to monarchs' needs for tax revenues, particularly to pay for expensive wars. The elites that provided the monarchs with most of this revenue, demanded accountability from government in return, as was the case with the Magna Carta and the Glorious Revolution in England. Development aid can short-circuit these processes in developing countries by reducing governments' dependence on its citizens for tax revenues. When countries receive high levels of aid, they are first and foremost accountable to the donors rather than the taxpayers. Thereby reducing domestic pressure for accountability. This could lead to bad institutions; if governments that receive large amounts of aid build institutions according to donor's specifications, instead of according to domestic advance, the new institutions could break down if external funding ends (Knack, 2001, pp. 312-313; Ear, 2007, p. 260).

A good and well-functioning bureaucracy is crucial for good governance. Foreign aid can weaken the state bureaucracy of recipient governments. Donor organizations could draw scarce talent away from the civil service, by hiring the most skilled public officials at salaries much higher than those offered by the recipient's government. In addition, foreign aid

can hinder local bureaucracies from developing administrative capacity. Particularly when donors implement projects that local governments would have undertaken anyway (Knack, 2001, p. 313). Dollar and Pritchett (1998, p. 98) argues that donors sometimes have hindered the creation of effective public sectors because by implementing such projects, because it was the easiest way to achieve project success. Wakened state bureaucracy as a consequence of development aid is discussed by Braütigam and Knack (2004, p. 261), they argue that senior government official often spends so much time monitoring donor projects, that they do not have time to prioritize their own ministries.

Perhaps most important, foreign aid represents a potential source of rents, with unfortunate negative effects on the quality of the public sector and corruption. Rent-seeking often takes the form of increased employment in the public sector. Aid is frequently used for patronage activities, such as employing more people into the public sector or state-led enterprises. As such, foreign aid provides funds for governments to undertake investments that would otherwise be made by private investors. A larger public sector, creates more opportunities for corruption. If state-owned firms displace private investment, a weakened private sector produce less pressure on the government to establish accountable and transparent procedures and institutions (Knack, 2001, p. 313). The World Bank acknowledges that large increases in development aid contribute to the “opportunity of malfeasance”. In other words, foreign aid can strengthen the predatory power of governments, and create opportunities for governments to proliferate (Quazi & Alam, 2015, p. 17).

Development aid could also reallocate talent from productive to redistributive activities. As rents available for those controlling government increases, recourses devoted to obtaining political influence increase. Hence, the consequence of aid could be to politicize life in the recipient country. When aid revenues increase, workers face incentives to reallocate their time and knowledge towards knowledge and skills useful for obtaining a share of aid revenues, instead of acquiring knowledge and skills specific to manufacturing. In the private sector, this will lead to increased recourses allocated towards political connections and lobbying skills (Knack, 2001, p. 314). Increased consumption by rent-seeking groups could exceed the windfall revenues, so that the government recourses available for productive public spending fall. Greater competition between social groups could increase rent dissipation. This effect is especially relevant in Sub-Saharan Africa, where the majority of the countries are ethnically diverse (Gershman & Rivera, 2016, p. 1). Aid in very diverse societies often worsen corruption

(Knack, 2001, p. 314). In sum, development aid can lead to aid dependence, which in turn can have a negative effect on governance.

Aid dependence might not be the only reason why development aid can have a negative effect on governance. According to Smith (2007, p. 276), the intentions of Western donors are not always good. Western donors have repeatedly “ignored good governance in recipient states in order to pursue their own diplomatic or economic objectives” (Smith, 2007, p. 276). There are several reasons why aid rhetoric does not match aid patterns. Development aid is closely linked to foreign policy and security concerns. Bilateral aid is given more often to political allies and former colonies than to countries with good governance. Bueno de Mesquita and Smith (2009, pp. 310-311) argue that all nations transfer aid according to political survival interest of donor and recipient government, to protect their own hold of power. In Kenya between 1992 and 1997, Western donors endorsed bad governance in the country. Political stability was preferred to good governance reforms, so that the economic changes sponsored by Western donors could proceed. The growth of international terrorism has also altered priorities of donors. After September 11, the US promised Pakistan US \$ 1 billion in debt rescheduling, and the EU made concessions worth £950 million, despite the bad governance in Pakistan. Western donors needed Pakistan’s support on the war against terrorism (Smith, 2007, pp. 276-278). How and why bilateral aid is given, can depend on the recipient relationship with the donor country, which in turn can affect good governance in different directions (Mesquita & Smith, 2009; Smith, 2007).

H₂: *The more development aid obtained from DAC donors, the worse governance within developing countries.*

However, empirical analysis often conclude that conditioning aid on policy and governance reform is largely ineffective, and that external recourses can help bad as well as good governments survive by reducing the cost of doing nothing as well as the reducing the cost of reforming. By providing an alternative source of funding, aid can relieve pressure from governments to establish efficient policies and institutions necessary for attracting private capital. In that sense, how development aid effects governance, depends in the existing government in a country, and not on the pressure from donors (Knack, 2001, p. 312). The pre-existing quality of governance can determine the extent to which aid undermined institutions (Ear, 2007, p. 263). The type of development aid given can also determine if the effect is

positive or negative. Based on the theoretical arguments above, it could be that the effect of some types of development aid are positive, and some types of development aid are negative for good governance. Because Western aid is defined as bilateral DAC aid, and not for example aid from the World bank, the different DAC donors have different . In the case that development aid can be both positive and negative at the same time, depending on the type of aid and the donor, the effect can turn out as non-significant in a statistical analysis. Bilateral aid consists of very different donors, despite following the DAC principles in the allocation of aid. It is therefore a very complex phenomenon.

2.3. Chinese Development Aid

Development aid was introduced when the West was industrialized and rich, and the rest of the World was either non-industrialized and poor or communist. Since the 1990s, the world order on which aid was based on has changed rapidly. It began with the end of the Cold War, then by the growth of the Asian Tigers followed by China and other emerging economies, primarily the BRICs – Brazil, Russia, India and China, and subsequently the financial crisis in the OECD countries (Eggen & Roland, 2014, pp. 86-87). Today, China is a major player on the African continent within trade, development aid and diplomacy – and its influence in Africa is growing. The intensified relationship between China and African states has been subject to much debate and controversy. The discussion of Chinese engagement in Africa includes the Chinese motivation for engagement, the official justification, the political and economic drive for intensifying the relationship, and the practice and possible development impact such cooperation has had and will have in the future in African states (Grimm, 2014, pp. 993-994). Beyond the quantitative impact of growing development aid from China, this engagement may have significant qualitative impacts on African development, both positive and negative (Berthelemy, 2011, p. 6).

In the following section, I will present the theoretical and empirical background of how Chinese development aid might affect good governance in Sub-Saharan African countries. First, I will present a definition of Chinese development aid, and explain why it is difficult to define. Secondly, I will present the theoretical and empirical reasoning of why Chinese development aid can have a negative effect on good governance in Sub-Saharan Africa. Thirdly, I will present the theoretical and empirical arguments of why Chinese development aid might have a positive effect on the quality of governance in Sub-Saharan African states.

2.3.1. Definition of Chinese Development Aid and China`s Official Aid Program

It is difficult to give a clear picture of what Chinese development aid is. Chinese development aid does not easily align with the standard definition of ODA as presented above. In China`s White Papers on foreign aid, they categorize their development aid as South-South cooperation. However, China does not present a clear definition of their development aid that can be compared to the DAC-definition (Wolf, et al., 2013, p. 4; China`s Information Office of the State Council, 2014). China provides five basic principles of their development aid.

“...when providing foreign assistance, China adheres to the principles of not imposing any political conditions, not interfering in the internal affairs of the recipient country and fully respecting their right to independently choosing their own paths and models of development. Basic principles are; mutual respect, equality, keeping promise, mutual benefits and win-win” (China`s Information Office of the State Council, 2014, p. 1).

The white paper also mentions that the objectives of China`s foreign assistance are to “support the developing countries to reduce poverty and improve the livelihood of their peoples”. Further, China prioritizes supporting these countries to develop agriculture, enhance education level, improve medical and health services and build welfare facilities, and provide emergency humanitarian aid when they suffer severe disasters (China`s Information Office of the State Council, 2014, p. 2).

In practice, most of Chinese development aid given through projects, and not through budget support, which is the norm of Western donors. Chinese aid projects can take different forms: grants in the form of social projects (health, education, housing), material assistance, technical assistance and personal training, interest-free loans given notably for infrastructure projects, concessional loans provided by China EXIM Bank, and debt relief (Berthelemy, 2011, p. 11). This part of Chinese aid resembles DAC aid. However, China often aid through “package financing”. This means that the development finance is a mix between aid and investment, and/or concessional and non-concessional financing. Additionally, Chinese state-owned companies often blur the line between official governmental development finance and private flows; making it difficult to separate Chinese ODA from Chinese foreign direct investment (FDI) in African countries (Strange, et al., 2017, p. 5).

Much qualitative research is done on the effect of Chinese development aid African countries. However, there is little reliable and comprehensive quantitative data available, because China does not openly disclose their development aid budgets (Strange, et al., 2017, p.

937). China's resistance to aid transparency might reflect a broader disinterest in complying with Western (OECD-DAC) standards. Huse and Muyakwa (2008, p. 12) argue that China does not disclose much information about its development finance because of three simple reasons. Firstly, China is still a developing country, and therefore the Chinese population might object to China helping Africans instead of poor people in China. Secondly, China feels like it might be sensitive information to recipient countries, and argue that it is up to the African states themselves to report or not report how much aid they receive from China. Thirdly, China does not want African countries to compare the amounts of aid received among them.

As the discussion above demonstrate, it is difficult to define Chinese development aid, because it is fundamentally different from DAC aid, and because very little official data is publically available. Most literature on Chinese development aid stresses that Chinese development aid and Chinese official investments are highly interlinked and difficult to separate. Therefore, I argue that Chinese development aid should be defined somewhat broader than DAC aid. A broader definition of Chinese development finance is common in the literature on Chinese development aid when comparing it to DAC aid (Tan-Mullins, et al., 2010; Kilama, 2016; Pehnlet, 2007; Dreher & Fuchs, 2015; Wolf, et al., 2013). Chinese development aid will therefore be defined as Chinese development *finance*. Chinese development finance consists of the categories ODA-like, ordinary official finance-like (OOF), and vague official flows (VOF). The benefit of this categorization is that it explicitly accounts for the financial activities that do not easily fit in with the existing categorization schemes, while at the same time it can be compared to DAC definitions (China AidData, 2017; Dreher & Fuchs, 2015). Hence, when discussing "Chinese aid" in the analysis, I am referring to Chinese development finance.

2.3.2. How Chinese Development Aid Can Lead to Worse Governance

In the literature and discussions on Chinese development aid and governance, it is most often argued that Chinese development aid, or Chinese involvement, will lead to worse governance in developing countries. Several studies focus on the nature and quality of Chinese aid (Berthelemy, 2011, p. 7). The main argument of why Chinese development aid would have a negative effect on governance is the absence of conditionalities and the principle of non-interference (Dreher & Fuchs, 2015, p. 995; Naím, 2007, pp. 95-96; Kilama, 2016, pp. 77-78; Hernandez, 2015, p. 8; Woods, 2008, pp. 1207-1208). The Chinese government emphasize that the Chinese approach focuses on "negotiation and dialogue, respect for sovereignty, and the use of tripartite mechanisms of the UN" (Woods, 2008, p. 1208).

By critics of Chinese development aid, the determination not to involve themselves in the politics of recipient countries is seen as support for rough states (Woods, 2008, p. 1207). The principle of non-interference proposes that China's aid allocation should be independent of regime type and quality of governance in the recipient country. As such, China plays the role as "the dragon in the bush", luring the weakest regimes in Africa into worsen governance, because Chinese foreign policy does not comply well with standards and norms set by traditional donors (Kilama, 2016, p. 529). By financing troubled and illegitimate governments in Africa, China poses a challenge to good governance. Weak regulatory economic and bureaucratic apparatuses in many Sub-Saharan countries make economic cooperation with China a possible threat (Chilieshe, 2010, p. 12). In other words, by not interfering in recipients' internal affairs, China is "backing corrupt elites in rough states for exploitation of rights or other forms access to raw materials, in the process undermining Western initiatives to fight corruption and enhance governance standards" (Pehnelt, 2007, p. 211). Further more, this can have negative effects in the development prospects in Africa, since good institutions and good governance is crucial for sustainable development (Pehnelt, 2007, p. 211).

The literature contends that China's foreign policy relies on calculated self-interest, hid behind a "regime-neutral" approach. As such, the Chinese leadership seeks to maintain good relations with whatever regime in power in any country where China has diplomatic and security interests of is doing business – regardless of the character of the regime. Because democratic systems can be complex to navigate through, it is often easier for China to do business with narrow authoritarian regimes. From the recipients point of view, China's economic development and rapid modernization has given hope to authoritarian rulers in Africa (Nathan, 2016, pp. 23-24, 26). An example of this was when Angola broke of aid negotiations with the IMF in 2006. When Angola sought aid financing in 2006, the traditional donors would not hold a donor conference until Angola had presented a Poverty Reduction Strategy Paper and had made a deal on corruption and economic management reform with the IMF. Angola was then offered a concessional loan from China, tied only to a deal with future oil suppliers. Angola then broke negotiations with the IMF and made a deal with China (Kjøllestad & Welle-Strand, 2010, p. 9). This example show both that Chinese involvement can prevent important good governance initiatives form traditional donors, and how China uses aid for their own economic gain.

Chinese loans to African countries are a third cause of alarm, according to Western critics (Woods, 2008, p. 1207; Kilama, 2016; Chilieshe, 2010; Pehnelt, 2007). Many Western

donors have voiced concerns about possible indebtedness, if emerging donors offers new loans to low-income countries that have been granted debt relief by the established donors. They fear that China is now offering new loans to the debt-released countries, which in turn could have problems in the future of these countries (Woods, 2008, p. 1209). Additionally, it is expected that traditional donors will be less willing to engage in debt-relief in the future, when emerging donors are possible free-riders and cancelled debt quickly is replaced by new debt (Kjøllestad & Welle-Strand, 2010, p. 10).

The claim that China supports rough states, Wood (2008, p. 1208) argue, goes back to a broader critique of the Chinese economic model being transferred to African states. The fear is that the Beijing consensus will replace the Washington consensus⁵ on economic policy. If China exports its own economic policy model to Africa, it runs counter to the economic model promoted by Western donors. The argument is that development aid from emerging donors permits countries to put off opening the economy, and are instead offering them an artificial lifeline that enables the recipients to put off reforms that would bring about development (Woods, 2008, p. 1208). The term Beijing consensus was introduced to describe the Chinese development model in contrast to the Washington model. It refers partly to domestic policy choices, and partly to how China thinks about development in poor countries. China's own success story centers on building infrastructure, upgrading agriculture, developing manufacturing industries and investing in education. This is exactly what China does in African countries. However, China does not try to export its own model or ideology, and does not provide policy advice. Rather, China claims that they give poor African countries the tools to find their own way out of poverty (Eggen & Roland, 2014, pp. 94-95).

China does however impose some conditions on their development aid. Even though they do not involve themselves in the internal affair of the recipient country, China does make extensive use of input conditionalities, especially the tying of aid. China ties their aid by requiring the use of Chinese contractors and for Chinese funded projects. China also tie their aid by offering financial assistance and funding construction project in exchange for access to oil supplies. McCormick categorizes such aid as "China's aid for oil strategy". The only output-condition China puts on their development aid is that aid-receiving countries must acknowledge

⁵ The Washington Consensus is a set of 10 economic policy prescriptions considered to constitute the standard reform package promoted for developing countries, by Washington. The economic conditions are broadly free market ideas, supported by prominent economics and international organizations, such as the IMF, the World Bank, the EU and the US (Pettinger, 2017).

that there is one China that encompasses mainland China and Taiwan. Hence, China does not give development aid to countries that recognize Taiwan as a sovereign state (McCormick, 2008, pp. 84-85). However, these conditions are related to China`s own interests, and not their idea of what is best for the recipient. According to Eggen and Roland, such conditions are easily understood by African leaders, and preferable to Western conditions (Eggen & Roland, 2014, pp. 102-103). Based on the discussion above, the fourth hypothesis is the following:

H₃: *The more development aid from China, the worse governance within developing countries.*

The relationship between recipient and donor in development cooperation can be described as

“... a negotiation process which both sides have a set of (potentially divergent) interests and priorities they need to negotiate. The “competitive pressure” that new donors` growing presence in the aid landscape exerts on the traditional donors development policy regime affects the policy space of recipient governments” (Kilama, 2016, pp. 79-80)

As such, development aid from China could have an indirect effect on governance in the recipient country, by affecting how established donors condition their development aid. If emerging donors give development aid with fewer or no conditions, DAC donors could react by either propose a larger amount of conditions to address the potential macroeconomic effects that the availability of inexpensive lending might cause, or by asking for less reform to maintain competitive in the international aid-market (Hernandez, 2015, p. 9).

Hernandez (2015, pp. 9-10), illustrates the two options with the case of development aid and loans from the World Bank, which also applies for DAC aid. In the first case, new donors are not per se a financial alternative to development aid from the World Bank, because the latter does not completely satisfy the borrower`s or recipient`s demand for aid. The recipient will therefore use both sources of funding to support different development projects. Here, the World Bank can revise its conditionalities upwards to adjust for the effects of emerging donors on the recipient`s economy. If the new donors oppose a threat to debt sustainability, it is expected that the World Bank will impose stricter reforms.

In the second case, of imposing fewer conditions, the additional aid offered by the emerging donors causes a surplus in the supply of development resources, and therefore the recipient countries can choose from different options to finance a project. In other words, as the sharpest critics of emerging donors would call it; “to shop around for donors that are soft on bad governance, and that are prepared to tolerate or even participate in corruption” (Naím, 2007). In such an environment, the recipient selects the most desirable alternative and the World Bank might have to offer a competitive level of conditions if it is interested in keeping its presence in the country in question (Hernandez, 2015, p. 9). In turn, according to the argument of why DAC aid with conditions leads to better governance presented in 2.2.1, if DAC donors impose less conditions on their aid, it could lead to worse governance in developing countries⁶.

Eggen and Roland (2014, pp. 99-100) agrees with Hernandez, they argue that the best way to understand Western skepticism with Chinese aid, is by looking at what Chinese aid could do to Western Aid. China offers an alternative to Western aid, and could therefore undermine Western aid. During the 1990`s, DAC donors were alone in providing development assistance to developing countries, leaving their governments with no other choice but to accept Western demands. A big change in development aid that has happened the last 15 to 20 years is that developing countries today have the option to collaborate with richer countries, such as China, that do not try to transform them. The emerging donors revealed the disturbing possibility to Western donors, that their influence over aid-receiving countries is dependent on Western monopoly over aid. Which could mean that the Western hegemony over aid and development is over. Based on the discussion above, the fifth hypothesis regarding the indirect effect of Chinese aid is:

H4: *Higher levels of Chinese aid has a negative indirect effect on the effectiveness on DAC aid on good governance.*

2.3.2. How Chinese Development Aid Can Lead to Better Governance

Some scholars argues that the many concerns with Chinese development aid`s negative impact on good governance might be somewhat overrated. In addition, Chinese development

⁶ High levels of aid, channeled through governments with clear development agendas, can use aid funding to improve the quality of the civil service, strengthen policy and planning capacity, and establish strong institutions. (Knack, 2001, p. 331; Bräutigam & Knack, 2004, pp. 255-260).

aid might have a positive effect on good governance and development in developing countries (Dreher & Fuchs, 2015; Woods, 2008; Tan-Mullins, et al., 2010; Dreher, et al., 2016). The first explanations of why Chinese development aid might have a positive effect on good governance, originates from the argument on why Western aid might have a negative effect on good governance. As I have elaborated on earlier⁷, aid dependence could lead to larger bureaucracies and more rent-seeking activities. China mainly delivers aid through discrete projects, which the Chinese control from the initial planning process until the finalization of the project. As such, Chinese development aid leave less space for corruption, fraud and abuse of aid funds in the process, and is more effective in promoting economic growth, compared to DAC donors. In terms of governance, some researchers are suggesting that China is more responsive to recipient needs and are willing to “get things done” in a timely manner, hence, they are reducing the administrative burden placed on overstretched public bureaucracies in the developing world (Dreher, et al., 2016, p. 7; Tan-Mullins, et al., 2010, pp. 860-861).

Secondly, a notable part of Chinese development aid is given through technical support and education of government officials. Higher levels of education could help build better bureaucracies. According to the Information Office of the State Council The People`s Republic of China (2011), China runs different kinds of technical training programs for government officials, education programs, technical training programs, and other personnel exchange programs for developing countries. According to the theory presented above, better education and training of government officials, could lead to better governance (Bräutigam & Knack, 2004, p. 256). China focuses on building on local capacities and needs of local governments when they provide development aid.

Thirdly, despite the non-interference principle, the Chinese government should be interested in doing good business in African countries. According to theory, good governance is important for good development. Several scholars argue that this has had, and will have implications for Chinese development finance in the future. Grimm (2014, pp. 1000-1001) states that a challenge to the non-interference principle comes from domestic pressure in China. Chinese trade interests and investments are increasing substantially, and the stakes that Chinese economic actors risk are increasing. Hence, a strict hands-off attitude becomes more and more difficult. During the civil war in Libya in 2011, 35 860 Chinese workers were evacuated from the country. The evacuation was directed towards domestic politics and was meant to send a

⁷ See theoretical framework in section 2.2.2. How Development Aid from DAC Donors Can lead to Worse Governance

signal from Beijing that they do not tolerate that Chinese citizens (and assets) were harmed abroad. Hence, in the longer run, China cannot escape the issue of governance, because it is an essential precondition for maintaining stable economic relationships. Both Chinese companies and the Chinese government will need to find ways to protect their own political and economic investments, within an uncertain and rapidly changing Africa (Pehnelt, 2007, p. 14). The argument is also backed up by Tan-Mullins et.al. (2010, p. 876); China has faced challenges with “existing political problems in some countries either by design or by default”.

H5: *The more Chinese development aid, the better governance within developing countries.*

As with DAC aid, it could be that Chinese aid does not have an effect on good governance. If China gives aid to countries regardless of their quality of governance, the general statistical effect could be not significant, because their impact could be both positive and negative depending on the characteristics of the recipient country. The claim that Chinese aid could have both positive and negative consequences at once is supported by Varrall (2016). He contend that the different domestic agencies and actors on Chinese aid in China are very fragmented. Therefore, the effectiveness and direction of this effect depends largely on these actors. In October 2017, AidData released a new dataset and working paper on Chinese development aid globally between 2000 and 2014. Here they test whether China has a negative effect on the effectiveness of DAC aid with regards to economic growth. They find no support for the hypothesis that China has a negative effect on the effectiveness of DAC aid (Dreher, et al., 2017, p. 26). If this can be transferred to good governance as well, it might be the result of the indirect effect of China presented in **H4**.

2.4. Chapter Summary

Good governance is crucial for development in all countries. Consequently, Western development agencies condition their development aid on good governance in recipient countries. However, the effects of such political conditions are debated in the literature. On the positive side, it is argued that development aid can foster good in recipient countries by strengthening domestic institutions and bureaucracy. However, large amounts of development aid can lead to aid dependence, which in turn has a negative effect on good governance.

Additionally, the intentions of DAC donors might not always be good. Hence, both theoretical arguments will be tested in the empirical analysis. The majority of the literature on Chinese development aid claim that Chinese development aid has a negative effect on governance, because of the principle of non-interference. Nevertheless, there are some implications in the literature of some positive effects of Chinese development aid on governance. Lastly, Chinese development aid might affect governance indirectly, by influencing how Western donors affect good governance.

Chapter 3: Method

In this chapter, I will present and discuss the method that will be used to answer the research question. Until recently, quantitative data on Chinese aid allocations were not publically available. Therefore, most studies on Chinese aid are qualitative case studies (Strange, et al., 2015). Now that comprehensive quantitative data on Chinese development aid is available, it is important to fill the quantitative knowledge gap on the effect of Chinese development aid. The thesis will therefore explicitly use a quantitative method. First, the specific choice of method, namely panel data regression model, will be presented and discussed. Second, the estimation techniques fixed versus random effects will be discussed. In this section, I will demonstrate the theoretical and statistical reasons why fixed effects estimation will be used in the analysis. Third, the interaction term will be presented and discussed. The interaction term is based on the dependent hypothesis presented in chapter two. Lastly, the assumptions of the linear model will be discussed.

3.1 Panel Data Regression Model

The data used in this thesis is panel data, also referred to as cross sectional times series or longitudinal data (Beck & Katz, 2011, p. 332; Daugherty, 2011, p. 514; Gerring, 2012, p. 277). In a panel dataset each unit have more than one observation and are measured at two or more points in time. Hence, panel data is a combination of cross sectional and times series data, and therefore have both the time dimension of time series and the space dimension of cross sectional data (Daugherty, 2011, p. 514). The time dimension in panel data enables me to study the change in the (individual) level of units (Andreß, et al., 2013, p. 2). Because the same units are measured at several pints in time, panel data can be understood as a non-randomized research design. Therefore, “the absence of a manipulable treatment means that the mode complex of these designs are very unlikely to appear naturally” (Gerring, 2012, pp. 279-280). This means that the application of a panel data regression analysis is more complex. However, panel data are increasingly being used in the social sciences, especially within comparative political economy (Beck & Katz, 2011, p. 332).

As I am interested in studying how Chinese development aid affects changes in good governance, and not merely if it is significantly correlated with good governance, a panel data regression model is the most suitable method to answer the research question. The dataset used

in this thesis⁸ contains annual information from 2000 until 2013. The units are countries in Sub-Saharan Africa. The dataset that will be used have several missing observations, making the panel unbalanced.

There are many reasons for the increased interest in panel data analysis in the social sciences. An important reason is that panel data might offer a solution to the problem of omitted variable bias caused by unobserved heterogeneity. If there is unobserved heterogeneity present, it breaks the key assumption that the independent variables are not correlated to the error term (Daugherty, 2011, p. 514; Aneshensel, 2013, p. 91). This will be further elaborated on in the section on estimation technique⁹. Secondly, panel data can uncover dynamics that are hard to detect with cross sectional data. Panel data allow for observation of the effect of the variables at different points in time, which will make the results more robust and decrease the likelihood of spurious correlation (Daugherty, 2011, p. 515).

Thirdly, panel datasets usually have very large number of observations. If there are n units of observation and if the survey is undertaken in T time periods, there are potentially nT observations consisting of time series of length T on n parallel units (Daugherty, 2011, pp. 514-515). The increased number of observations is especially important for studies of countries in political science, as the number of countries in the World is just above 200 (Daugherty, 2011, p. 525). If I were to use cross sectional data to analyze the research question, I would only have 47 countries with one observation per variable. However, because I use panel data from 2000 to 2013 (14 years) I have potentially have 658¹⁰ observations in my dataset, despite a relatively low number of countries. Panel data therefore covers two dimensions two dimensions, namely time and space.

3.2. Fixed Effects versus Random Effects Estimation

The two main approaches to the fitting of models using panel data are known as fixed effects regressions and random effects regressions. The choice of estimation technique depends on the unobserved effects in panel data models (Daugherty, 2011, p. 518). Fixed effects models estimate the intercept term of each individual group unit. As such, each individual has its own individual characteristics that may or may not influence the independent variables. Fixed effects

⁸ See chapter 4 for information on the dataset and variables used in the thesis.

⁹ See section of fixed and random effects

¹⁰ $T*n=N$ or $14*47 = 658$

estimation is referred to as the “within-group regression model”. In fixed effects models, we assume that there is something within each country that may influence or bias the independent variables. Fixed effects estimation controls for this by removing the independent variables that does not vary over time. Fixed effects estimation is attractive because of its simplicity, and because it tackles unobserved heterogeneity bias. This is one of the biggest advantages with fixed effects estimation, because quantitative research is often criticized for leaving out important independent variables. Because the fixed effects model only analyze what causes change in the dependent variable within units over time¹¹, the problem is solved. Variables that do not change over time (such as institutions) cannot cause change over time unless they change over time as well. Whatever effect these variables have at one point in time is the same as they have at other points in time (Williams, 2015, p. 6; Daugherty, 2011, pp. 518-519).

If one is interested in variables that do not vary over time, fixed effects is not an effective tool because such variables are omitted. When the between-unit variation is greater than the within-unit variation, the standard errors of a fixed effects model might be too large to tolerate (Williams, 2015, p. 9). Random effects estimation is often considered more attractive compared to fixed effects estimation, because the characteristics that remain constant for each country are retained in the regression model (Daugherty, 2011, p. 525). In political science variables that do not change over time, such as political system, colonial legacy, and geography, are often of great theoretical value. However, to use a random effects estimation, none of the preconditions can be violated.

The first precondition is that the observations are randomly drawn from a given population. Daugherty (2011, p. 525) states that a panel data consisting of only the OECD countries would not be a random sample of the 200-something countries in the World. As I am interested in how Chinese development aid affects good governance in Sub-Saharan Africa, the first precondition is broken. Ideally, missing values should be missing completely at random. This precondition is often difficult in most research in social science, because countries with missing values are likely to be different from countries without missing values (Acock, 2014, p. 395). The data at hand do suffer from missing variables, especially on the variables on Chinese development aid. The reason why there is much missing data on Chinese development aid is because it is not publically available and because some countries might be more and some

¹¹ Here: if Chinese development aid change the level of good governance within Sub-Saharan African countries over time

less open on the amount of aid they receive from China. Hence, the openness of the country in question is important for the number of missing values (Daugherty, 2011, p. 525).

The second precondition is that the unobserved effect be distributed independently of the X_j variables. This might be tested with a Durbin-Wu-Hausman (DWH) test. The test determines whether the estimates of the coefficients, taken as a group, are significantly different in the two regressions. If the null-hypothesis of the DWH-test is rejected fixed effects estimation should be used, and if the null-hypothesis is not rejected, random effects should be used. The DWH-test is highly significant at a 1 percent level for both models. Because the null-hypothesis is rejected¹², and the observations are not a random sample of a given population, fixed effects estimation will be used in the regression models (Park, 2011, p. 12; Daugherty, 2011, pp. 525-127).

In this analysis, it is the general effect of Chinese aid on good governance within countries over time that is of interest. Therefore, using fixed effects lies in the nature of the research question. The theoretical framework suggests that both Chinese and DAC donors are selective when providing aid, DAC donors prefer countries with better governance and China prefer countries with worse governance. The focus of the thesis is not on variation between countries. As such, it is expected that quality of governance and the amount of development aid from DAC donors and China vary between countries. However, given this variation, what is the general effect of Chinese aid and DAC aid on good governance over time? Hence, keeping the variation between countries constant with fixed effects is preferred.

3.3. Interaction Effects

In political science, conditional hypotheses are quite common because contextual factors are important. An interaction effect is present when the effect of an independent variable (x) on the dependent variable (y), depends on the values of a third variable (z) (Midtbø, 2012, p. 136; Allison, 1999, pp. 166-167). Brambor, Clark and Golner (2006, p. 64) argue that political scientist should use interaction models whenever the hypothesis they want to test is conditional in nature. As I have argued in the thesis, it is theoretical reason to believe that the effect of DAC aid (X) on good governance (Y) varies depending on level of Chinese development aid (Z). In other words, if traditional donors react to the presence of emerging

¹² Chi2 = 0.000

donors by imposing fewer conditions on their development aid, Chinese development aid could indirectly affect good governance: Chinese aid negatively affect the effectiveness of DAC aid.

A model including an interaction term should not be read the same way as a model without an interaction term. First, the interaction term does not distinguish between the independent variable and the intervening variable¹³. Practically, this means that we do not know if it is the independent variable that is moderating the interacting variable or if it is the other way around (Allison, 1999, p. 168; Midtbø, 2012, p. 136). For the interaction term in this thesis, there is a possibility that it is DAC aid that influences Chinese aid's effect on good governance. We cannot statistically rule out this reverse causation. Again, this example show how important it is that the model is theory based¹⁴ (Aneshensel, 2013, p. 32).

Second, a significant interaction term can be difficult to interpret. Allison (1999, p. 168) explains that this is because the main effect in a model with an interaction term indicate the effect when the interacting effects has the value 0. Because the value of 0 does not make sense for all variables it might suggest a “ridiculous relationship”. In a model with an interaction term, it is important to remember that it is not the constituting variables that are of interest but the interaction term. However, it is important to include the constituting variables in the model, because they play an important role in generating the correct preconditions for the dependent variable (Allison, 1999, p. 168; Acock, 2014, p. 305). The coefficients of the constituting variables are used to calculate the intervening effect. A linear regression model¹⁵ asserts that X has a constant effect on Y, while in an interaction model the effect of a change in X on Y depends on the value of the conditioning variable Z (Brambor, et al., 2006, p. 73). Therefore, the effect of DAC aid on QOG will be measured at different levels of Chinese development aid.

3.4 Regression Assumptions and Robustness

The validity of a regression model is dependent on the degree the regression assumptions are fulfilled. If any of the assumptions are not met, the regression will be biased

¹³ When creating an interaction term in Stata, the two variables of interest are multiplied with each other. Hence, making is impossible to distinguish between the two (Midtbø, 2012, pp. 136-137).

¹⁴ Because I am interested in the effect of Chinese aid as the intervening variable, I will only calculate the effect of different levels of Chinese aid on the effect of DAC aid on QOG, not the effect of DAC aid as the intervening variable.

¹⁵ The models excluding the interaction term are linear regressions, but the presence of an interaction term makes the model non-linear.

and it could lead to less robust or wrong conclusions. However, some of the assumptions are more important than the others. The five assumptions for a linear regression model are that the model is linear in its parameter, that the independent variables are independent of the error term, that the model is homoscedastic, uncorrelated error term, normal distribution and multicollinearity (Daugherty, 2011, pp. 159-191; Allison, 1999, pp. 122-123).

In a panel data regression model violations of the assumption of an uncorrelated error term is very common. This means that the error term is correlated with itself. The logical explanation is that the same units are being measured at different points in time. The value on a variable at a point in time is usually similar to the value on the same variable at a different point in time, especially the values close in time (Midtbø, 2012, p. 112). If the observations were randomly collected from a given population, there would most likely not be a problem with autocorrelation. However, the very core of panel data is that the observations are not collected randomly. They are collected from the same units from the year before (Daugherty, 2011, p. 393). For example, the level of GDP in any country in any year will be closely related to the level of GDP the previous year. Because the dataset I use is panel data, all the variables in the analysis are likely to suffer from autocorrelation. Autocorrelation is overall more likely to be a problem when the interval between observations are shorter, and less likely if they are longer. In the dataset used in this thesis the intervals are yearly observations. In panel data, the most common form of autocorrelation is first-order autoregressive autocorrelation (AR (1)) (Daugherty, 2011, pp. 329-430).

It is important to underline that there are some challenges with regression diagnostics. The first is that testing for violations of one assumption could be affected by another violation. As such, it could be difficult to separate the violations of the different assumptions, because when we solve a violation of one assumption, it will affect other assumptions. Secondly, it is easier to discover violations in larger selections, than in small, despite the fact that violations often have bigger consequences in smaller selections. The regression diagnostics cannot replace a rigorous theory-based analysis. As such, the first regression diagnostics can be said to be the choices and discussions about theory, and the variables selected in the next chapter (Midtbø, 2012, pp. 105-106; Aneshensel, 2013, pp. 20-22). How the final model fulfill the regression assumptions and the challenges regarding the regression assumptions is elaborated on in chapter five.

There may be a number of possible estimators, a number of plausible specifications for each statistical models and so on. Additionally, there can be issues of conceptualization and

measurement of the variables in the models. Each of the choices made are likely to influence the estimates of the causal effect. Some choices can affect the magnitude and/or the direction of the coefficients (positive/negative), or the acceptance or rejection of the null hypothesis. Unfortunately, a theory-based analysis is not enough to resolve many of these issues, this is especially important if the theory is weak (Gerring, 2012, p. 319). The theoretical framework for my thesis is not per say weak, but theory on the effect of development aid and Chinese development aid is conflicting. Therefore, it is important to check for the robustness of the results¹⁶, by altering various elements in the analysis. The purpose of robustness checks is to test how precise a given estimate is in the face of different assumptions. If all plausible robustness tests have little impact on the findings in a model, then the model has high level of certainty. If the model is sensitive to small changes in the model, however, the level certainty is lower (Gerring, 2012, pp. 319-320).

Following the main results, the robustness of the models will be tested by running the regressions with different modifications. The first modification is to change the operationalization of Chinese development aid from number of Chinese aid projects to Chinese projects as share of GDP in recipient country. Secondly, the variable political stability will be excluded from the model because of its high correlation with the dependent variable. Lastly, GDP per capita will be exchanged with GNI per capita. The robustness of the models will also be discussed on the relation to the regression assumption. Each regression assumption will be thoroughly elaborated on, and I will demonstrate how the models are modified to account for possible violations of the assumptions.

3.5. Regression Models

The regression models in the analysis report the effect of different variables on quality of government. The regression tables in chapter five include the coefficient of the independent variables and the standard error in parenthesis. The stars to the right of the parenthesis represent the level of significance of the variables. One star indicate that the results are significant on a 1 percent level, two stars indicate significance at a 5 percent level and one star indicate significance at a 10 percent level. The closer the p-value is to zero, the higher is the probability that the effect is not random. The standard level to reject the null hypothesis is at 5 percent in a two-tailed test to avoid committing a type one error (Daugherty, 2011, pp. 38-41). Because the effect of aid on good governance can be both positive and negative according to theory, I

¹⁶ The robustness of the model also means the strength of the model.

will use a two-tailed test in all models. (Daugherty, 2011, p. 38). In the analysis, the different levels of significance will be commented on.

In the analysis, two models using fixed effects estimation will be compared with different modifications. Model 1 will test the effect of Chinese aid and DAC aid on QOG and Model 2 will include the interaction term. It is important to note that the results in Model 2 must be interpreted in a specific way. The coefficient of the variables constituting the interaction term report the effect of when the variable has the value 0. To interpret the coefficients of the variables, the coefficients of the interaction term needs to be multiplied with Chinese development aid, and added to the coefficient¹⁷.

¹⁷ Coefficient of Chinese aid + (coefficient of the interaction term* different levels of Chinese development aid).

Chapter 4: Data and Variable Description

In this chapter, I will present a description and an overview of the dataset and variables employed in my thesis. To answer the research question, it is necessary to operationalize theoretical concepts to measurable data. I will demonstrate how the variables are measured, and discuss the validity between the theoretical phenomenon I want to measure, and the actual measurement. The dataset I use in my analysis, is a combination between the award winning Quality of Government standard dataset (QOG) and AidData's recently released dataset on Chinese development aid.

4.1. The Dataset

The QOG standard dataset contains the majority of the variables needed for the analysis. This dataset is used by various scholars in different fields, and is of high quality. The dataset originally consists of 2500 variables from more than 100 data sources. The dataset contains several variables measuring the same concept. As such, I can easily compare variables and choose the best fitting operationalization of the concepts and phenomena presented in the theoretical chapter. Another advantage with the QOG dataset is that it is created by the institute of the scholars behind the operationalization of good governance as quality of government. The operationalization of the dependent variable is therefore the variable recommended by the creators of the concept. The dependent variable will as a result be of high validity. All variables except the variable on Chinese development aid are collected from the QOG dataset.

The second dataset is AidData's "Chinese Official Finance in Africa 1.2.", from the projects "Tracking Chinese Development Finance" and "Tracking Underreported Financial Flows". AidData has created "an innovative, open-source methodology to provide a more complete picture of non-DAC development finance activities" (AidData TUFF, 2017; China AidData, 2017). The data is new and a pioneer within data collection on aid from emerging donors, especially China. As mentioned, China does not release any information on their development finance, therefore there are some problems of validity in the data. However, the dataset is the most comprehensive and detailed source of China's development footprint in Africa ever assembled¹⁸ (AidData TUFF, 2017; China AidData, 2017). The latest version contains information on Chinese development finance to Africa from year 2000 to 2013. The

¹⁸ A new version of the dataset, containing more data from 2000-2014 and Chinese development aid globally, was released in October 2017. However, the release came too late in the process for me to change dataset.

analysis will therefore be restricted to this period. The geographical distribution of the dataset show that China`s activities are spread all over the African continent. The only countries that do not show up among China`s recipients are the countries that recognize Taiwan (Strange, et al., 2017, p. 25). After merging¹⁹ the variables I will use form the two datasets, 47 Sub-Saharan countries²⁰ and 658 country-years remain (Teorell b), et al., 2017; China AidData, 2017).

4.2. The Dependent variable: Quality of Government

As argued in the theoretical chapter, the definition of good governance is that of QOG. As such, it is natural to choose the variable on QOG that is recommended by the scholars behind the concept. The variable on QOG is therefore collected form the QOG dataset, which in turn has collected the data from the International Country Risk Guide (ICRG). Because the variable is coded by ICRG experts, there could be some problems with the validity of the data. According to Goertz (2006, pp. 95-96), the degree of faithfulness of a measure of a concept “is the degree to which the numeric measure matches the structure of the theoretical concept”. Additionally, how different coders choose to code and interpret the measure is connected to their own interpretation of the concept. Hence, different coders might have different views of how to code a country, despite having the same coding scheme. How a country is categorized is therefore dependent on the individual coder. In regards to reliability, I will argue that the variable is highly reliable, because the data is openly available and therefore easy to replicate.

In addition to the scholars behind the concept of QOG, several scholars studying good governance and development aid use the quality of government variable from ICRG (Bräutigam & Knack, 2004; Knack, 2001; Dahlberg, et al., 2017; Rothstein & Teorell, 2008). Bräutigam and Knack (2004, p. 266) argue that the among the various indicators of quality of government or good governance used in empirical research on development, the ICEG data are unique in covering the majority of African countries over a relatively long period of time. Hence, the variable is very good for the purpose of this thesis. The data is converted into a scale from 0 to

¹⁹ The two datasets have been merged using the “merge 1:1” command in Stata (Midtbø, 2012, pp. 52-53)

²⁰ The remaining countries in the analysis are: Angola, Benin, Botswana, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, DR Congo, Cote d`Ivoire, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, São Tome e Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan (-2011), Tanzania, Togo, Uganda, Zambia and Zimbabwe.

1, by the creators of the QOG-dataset, where higher values indicate higher quality of government. (Teorell, et al., 2017, p. 375). Because it can be more difficult to read the regression models when the values on the dependent variable are so low, I have multiplied the variable with 100. 0 is now representing the lowest level of quality of governance, and 100 represents the highest level of quality of government. The dependent variable contains 31 countries and 432 observations, and the overall mean is 36.55, with a standard deviation of 11.79. The overall mean indicates that the countries in question on a general basis suffer from low quality of governance. The QOG variable is the mean value of the ICRG variables “Corruption”, “Law and Order” and “Bureaucratic Quality” (Dahlberg, et al., 2017; Teorell b, et al., 2017). I will now present the definitions of the three components of quality of governance.

Corruption

This is an assertion of corruption within a political system. Such corruption is a threat to foreign investment for several reasons: it distorts the economic and financial environment; it reduces the efficiency of government and business by enabling people to assume positions of power through patronage rather than ability; and it introduces inherent instability into the political process. Even though the measure takes financial corruption into account, it is more concerned with accrual or potential corruption in the form of excessive patronage, nepotism, job reservations, “favors-for-favors”, secret party funding, and suspiciously close ties between politics and business. According to ICRG, these forms of corruption are potentially of much greater risk to foreign business in that they can lead to popular discontent, unrealistic and inefficient controls on the state economy, and encourage the development of the black market. The greatest risk of such corruption is that in the worst-case scenario, it will lead to overthrow of the government, a major reorganizing or restructuring of the country’s political institution, or, a breakdown of law and order, rendering the country ungovernable (Teorell, et al., 2017, pp. 375-376).

Law and Order

Law and order are originally assessed separately, with each sub-component comprising zero to three points. Law is an assessment of the strength and impartiality of the legal system, and order is an assessment of popular observance of the law. In that case, a country can score high on law, but low on order if it has a very high crime rate or if the law is routinely ignored without effective sanction.

Bureaucratic Quality

The institutional strength and quality of the bureaucracy is another shock or absorber that tends to minimize revisions of policy when governments change. High points are given to the bureaucracy that has the strength and expertise to govern without drastic changes in policy or interruptions in policy or interruptions in government services. In these countries, the bureaucracy tends to be autonomous from political pressure and to have established mechanisms for recruitment and training. Countries with low points tend to lack the good effects of a strong bureaucracy, because a change of government tends to be dramatic in terms of policy formulation and day-to-day administrative functions. (Teorell, et al., 2017, pp. 376-377).

4.2. Focal Independent Variables

4.2.1. Chinese Development Aid

The variables on Chinese development aid are collected from AidData's project "Tracking Chinese Development Finance", and the research release dataset "Chinese Official Finance in Africa 1.2". The dataset encompasses 14 years of Chinese development aid, from year 2000 to 2013. The research community and policy community have not been able to align on how to operationalize Chinese development aid in a way that make it possible to compare it with DAC aid. To compromise for this, AidData has compiled a database of thousands of media reports on Chinese finance abroad in Africa from year 2000 to 2013. They have categorized Chinese financial flows into eleven flow categories, where three of the categories falls within the category of Chinese development finance, namely ODA-like aid OFF-like aid and vague official finance (VOF)²¹. The three categories represent non-investment official financing from China to Africa, regardless of its developmental, commercial or representational intent. The benefit of this categorization is that it explicitly accounts for the financial activities that do not easily fit in with the existing categorization schemes, while at the same time it can be mapped back to onto the DAC definitions (China AidData, 2017).

Chinese development aid is operationalized as "the number of Chinese projects implemented or completed per year per country". The projects account for Chinese development finance. In the original dataset, each variable represent one project. The project variable has been summarized so each country has one observation per year. I will illustrate this with an example from the data. In the original dataset, Botswana had 18 observations with the

²¹ Vague official flows are flows that are either ODA-like or OOF-like, but where there is insufficient information to assign the flow to either ODA-like or OOF-like category.

value 1 in the 2003 time-period. After summarizing the project observations in 2003, Botswana now has one observation in 2003 with the value 18. It is important to note that in the dataset, some country-years have many projects and some country-years does not have any projects. This does not necessarily mean that a project only lasted a year, but it measures when the project was implemented or completed in that year.

The dataset is based on media based data collection, and not official data on aid allocations from the Chinese government, therefore, the data do suffer from validity-problems (Strange, et al., 2015, pp. 15-17). The creators of the dataset claim to measure Chinese aid, but because the data In the robustness test of the main model, I will therefore run a model where the variable on Chinese aid is “Chinese development aid as share of gross domestic product in the recipient country per year. This is the standard way to operationalize development aid, and how DAC aid is operationalized. The alternative definition of Chinese aid is included because a large amount of projects does not necessarily come with a big sum of money attached. As a result, it is not possible to say anything about the size of the project. In the original dataset on Chinese aid, the unit of analysis is “project”²² and each project variable has a monetary sum connected to the project. In the same way as in the project variable, the monetary variable is the sum of the projects in a given year, in 2011 US dollars. This variable is useful for comparison with DAC aid. However, many of the projects do not have a monetary amount attached due to lack of information of the given project²³. Hence, the project variable contains more observations than the monetary variable. Both variables on Chinese development aid are logarithmically transformed in the final models, due to problems of heteroscedasticity and extreme values²⁴.

4.2.2. OECD-DAC Aid

The variable on Western aid or OECD-DAC aid is from the QOG standard dataset. The variable is again collected from the research release AidData 3.0 by QOG. The variable

²² AidData does not track disbursements of Chinese official financing. However, they write in their users-guided that users may use the status variable to classify projects that have been implemented or completed, as disbursements of Chinese official financing (China AidData, 2017).

²³ If the monetary observation connected to a project-variable is missing, it has the value 0 or are coded as missing. I have coded the monetary observation as missing is it has the value 0. This is because a value of 0 will affect the average. A project is never without money attached, hence, a value of 0 indicates a missing value.

²⁴ This is elaborated on in Chapter 5.

measures the sum of commitments²⁵ [sum of development aid] received from donors not including international organizations. Aid commitments are commonly used in aid budget and in aid allocation studies, because donors exert full control only over commitments, while aid disbursements also depend on the recipient countries and implementing organizations. The variable is has both high validity and high reliability because it is based on open access data, and the official numbers are granted from the donor governments themselves (Teorell b), et al., 2017).

Such a general definition of development aid has been criticized. As mentioned in the literature, some scholar argue that when looking at the effect of aid on governance one have to look at the aid that goes specifically to good governance projects. There are several reasons why this is not done here. Firstly, much development aid not directly aimed at bettering good governance does have conditions on good governance attached. Secondly, aid that is aimed at other parts of society could have an indirect effect on good governance (Smith, 2007, pp. 9-10). By only focusing on development aid aimed at good governance, the effects of other types of aid could be overlooked and create biased results. Thirdly, it is a much used measurement in quantitative development aid research. It is of high validity and good for comparison (Tierney, 2011). Fourthly, it is difficult to obtain detailed disaggregated data on development from the DAC donors. I will therefore argue that for the purpose of this thesis, a wide definition is necessary.

In the models, DAC aid will be operationalized as share of GDP of the recipient country per year. To measure development aid as share of GDP or GNP is the standard operationalization in the literature (Bräutigam & Knack, 2004; Burnside & Dollar, 2000; Kilama, 2016; Bone, 1996; Strange, et al., 2015). The variable is measured as percentage of GDP because the data on GDP has more observations than GNP in the QOG standard dataset (Teorell b), et al., 2017). The GDP variable is collected form UN Statistics (Teorell, et al., 2017,

²⁵ These data include commitments of the form: subsidies, loans at favorable rates to multilateral agencies; development loans at the market rate; technical assistance; programs of transferred assistance by sector in the form of money or in kind and some capital investment activities. It is worth noting that the following is not considered foreign aid: military equipment and service; military debt stocks; credit for export support or trade financing; loan guarantees; flows of aid from NGOs, loans from funds held in the recipient country; foreign direct investment (FDI), bank loans without guarantees, portfolio investments and financing contributions from multilateral development organizations (AidData User's Guide, 2011)..

p. 577). The variable is logarithmically transformed in the final models, due to problems of heteroscedasticity and extreme values²⁶.

4.3. Control variables

4.3.1. Level of Economic Development: GDP Per Capita

Higher economic development is often mentioned in the literature as having a positive impact on good governance. Countries with a higher level of economic development tend to have a higher level of good governance (Pere, 2015, p. 35). The measure of level of economic development in the thesis will be Gross Domestic Product (GDP) per capita. This is a common operationalization of economic development in the literature (Pere, 2015; Knack, 2001). I will argue that GDP per capita is a better measure of economic development than similar measures, such as annual GDP or annual growth in GDP. This is because the countries I analyze, Sub-Saharan African countries, on average have a low GDP per capita (Knack, 2001). GDP makes it hard to compare countries in a substantial way, because large countries most often have a higher GDP than smaller countries. Despite a country having a high annual growth, such a measure cannot say anything about how poor or rich a country is. GDP per capita, on the other hand, gives a substantial measure of level of economic development, because it takes into consideration the size of the population. Additionally, GDP per capita makes comparison across countries and years more accessible. Empirical evidence generally concludes that GDP per capita is strongly positively correlated with good governance. I therefore expect that higher GDP per capita will correlate positively with good governance in the models.

Data on GDP per capita is collected from the QOG dataset, which in turn have gathered their data from Gleditsch's "Expand Trade and GDP" dataset. GDP per capita is measured in constant US dollars in 2005 (Teorell, et al., 2017, pp. 311-312). In the regression models, the variable is log-transformed to account for non-linearity and skewedness. Logging of GDP variables is a common treatment in the literature (Pere, 2015, p. 35; Daugherty, 2011, pp. 196-197). The original variable was first transformed to measure an increase in 100 US dollars instead of an increase in 1 dollar, before the log-transformation. Alternatively, the variable could have been transformed into a categorical variable accounting for high, medium and low GDP per capita, or a dummy variable. However, this does not comply well with the empirical

²⁶ This is elaborated on in Chapter 3.

data. Despite there being differences in GDP per capita in the countries in the analysis, most of the countries are poor, and have a low GDP per capita compared to the rest of the World (World-Bank, 2017).

4.3.2. Democracy

Theoretically, it is often argued that democracy and good governance goes hand in hand. Democracy foster good governance and good governance foster democracy (Kraay, et al., 1999). Therefore, it is important to control for democracy in the model. Avoiding to control for democracy could bias the regression results. Because many definitions of good governance²⁷ include features of democracy and the other way around, the variables tend to be highly correlated. It does not seem to be a big problem with my data²⁸. I expect that being a democracy has a positive effect on good governance.

The Quality of Government dataset contains a variable on democracy, that combines Polity IVs measure of democracy from -10 to 10, and Freedom House`s democracy scale from 1 to 7. The original variable on democracy is on a scale from 0 to 10, where 0 is least democratic and 10 is most democratic. The version I will use has imputed values for countries where data on Polity is missing, by regressing Polity on the average Freedom House measure (Teorell, et al., 2017, p. 291). The scale is divided into three intervals according to degree of democracy; 0 – 3.33, 3.34 – 6.67, and 6.68 – 10. Hence, countries with a score of 6.68 and above are democracies. Because I am interested in controlling whether being a democracy or not has an effect on good governance, I create a dummy from this variable. A country is coded as non-democracy and has the value 0 if its original value was between 0 and 6.67. A country is coded as a democracy and has the value 1 if its original value was between 6.68 and 10 (Dahlberg, et al., 2017; Bone, 1996).

4.4.5. Population size

Countries with larger populations have a larger tax revenue that may decrease the importance of development aid. Therefore, countries with larger populations might be less affected by development aid. In Sub-Saharan Africa, populations are growing at a fast rate. In countries with bad governance, they might not have the resources to tackle a growing population. There is a broad consensus in the literature that population size and growth does have an effect on institutional settings. In countries with poor policy environments, rapid population

²⁷ See 2.1.1. Definition of Good Governance

²⁸ The correlation between democracy and QOG is 0.17. See correlation matrix in Appendix.

growth can constrain economic growth (Gupta, et al., 2011, p. 1; Bräutigam & Knack, 2004, pp. 267-268). As such, Population may affect the level of QOG in a country.

The variable on population is collected from the QOG dataset, which in turn has gathered the data on population size from Gleditsch`s Expand Trade and GDP Data. The variables measures the size of population in 1000`s. The variable contains information on 46 countries in Africa and 552 observations. The variables only contains data from 2000 until 2011, it has data on all countries in the dataset except Sudan, compared to other population variables with several missing countries (Dahlberg, et al., 2017, p. 312).

4.4.6. Development: Infant Mortality

Infant mortality is a much used indicator of health in developing countries, but it can also measure the capacity of a country to offer basic services. Infant mortality is repeatedly used as a control variable in econometric analyses on development aid and good governance (Knack, 2001, p. 317; Kotsadam, et al., 2017). The chance that an infant makes it to their first birthday depends on a variety of direct and indirect determinations; socioeconomic conditions like household poverty, infrastructure, sanitation, clean water, and the education of the parents, in particular the mother (Kotsadam, et al., 2017). Infant mortality is therefore a good operationalization of development in a country that is not necessarily economic²⁹.

The variable on infant mortality is from the QOG dataset, which in turn have gathered the variable form the World Bank and the World Wide Governance Indicators. Infant mortality rate is the number of infants dying before reaching one year of age, per 1000 live births in a given year (Teorell b), et al., 2017, pp. 598,658).

²⁹ Here HDI would also have been a good operationalization of development. However, the variable on HDI has a high number of missing countries, which would have affected the analysis. Therefore, infant mortality is used instead.

Table 4.1. Variable Description

Variable type	Variable	Measure	Source
Dependent variable	<i>Quality of Government</i>	ICRG Indicator of Quality of Government. 0= lowest QOG, 1= highest QOG. Min/max year: 2000/2013 N: 31 n:432	International Country Risk Guide: QOG 2017 (icrg_qog)
Independent variables	<i>Chinese Development Aid</i>	Number of Chinese development finance projects per country-year (logged) Min/max year: 2000/2013 N: 44 n: 467	AidData: Strange et.al. 2017
	<i>OECD DAC Aid</i>	Sum of commitments received from donors (not including international organizations). (% of GDP) (logged) Min/max year: 2000/2013 N: 46 n: 641	AidData: QOG 2017 (aid_crsc)
Control Variables	<i>Gross Domestic Product Per Capita</i>	GDP per capita (constant prices, 2005 US\$) (logged) Min/max year: 2000/2011 N: 46 n: 552	Expand Trade and GDP Data: QOG (gle_rgdpc)
	<i>Democracy</i>	Ranges democracy on a score from 0 (least democratic) to 10 (most democratic). Dummy variable (>0.67=democracy, <0.67=non-democracy) Min/max year: 2000/2013 N:47 n: 644	Combination of Polity and Freedom House: QOG (fh_ipolity2)
	<i>Political stability</i>	Ranges political stability between -2.5 and 2.5 (higher scores indicate better outcomes) Min/max year: 2000/2013 N: 47 n: 598	Worldwide Governance Indicator: QOG (wbgi_pse)
	<i>Population Size</i>	Size of population in 1000`s Min/max year: 2000/2011 N: 46 n: 552	Gleditsch: QOG (gle_pop)
	<i>Infant Mortality</i>	Mortality rate of infants dying before the age of 1 year, per 1000 live births. Min/max year: 2000/2013 N: 47 n: 644	Worldwide Governance Indicator: QOG (wdi_mortinf)

4.5. Descriptive Characteristics of the Data

The descriptive characteristics of my data are presented in table 4.1. Because my data are panel data, I use a special command in Stata that reports the within and between standard deviation of the variables (xtsum). This command gives more information than the regular summary command in Stata, because it allows us to see the ratio of within and between variance in the independent, and control variables.

Table 4.2. Descriptive Statistics of the Data

Variable	Observations	Countries	Mean	Std. Dev.	Min	Max
QOG (DV)	432	31	36.553	11.792	8.33	66.66
Chinese pro. (log)	467	44	1.8587	.7222	.6931	4.5643
DAC/GDP (log)	641	46	1.6178	1.2130	-3.0123	4.7610
GDP per capita (in 100 \$) (log)	552	46	2.6976	.9257	.6881	5.3192
Democracy (dummy)	644	47	.3602	.4804	0	1
Population (in 1000)	552	46	16077.13	24768.08	77	162470.7
Political Stability	598	47	-.5538	.9636	-3.3239	1.1923
Infant Mortality (per 1000 born)	644	47	68.342	25.78	12.1	143.3

The summary of regular characteristics above shows that most variables have a high amount of observations. However, the dependent variable QOG is missing a higher number of observations compared to the rest of the variables. As the number of countries show, the missing observations are a cause of missing counters. The QOG variables only contain observations on 31 countries, compared to over 40 countries in the rest of the variables. The high number of missing values on the dependent variable can have an impact on the analysis. The mean value of QOG is only 36.55, with a standard deviation of 11.79. This indicates that the countries in general have very low quality of governance. If the same study had been done in a cross sectional analysis, the models would have included very few observations.

Table 4.3. Within and Between Variation

Variable	Between Deviation	Standard Deviation	Within Deviation	Standard Deviation
QOG	11.506		3.227	
Chinese projects (log)	.3650		.6195	
DAC/GDP (log)	1.0698		.5883	
GDP per capita (in 100 \$) (log)	.9191		.1703	
Democracy (dummy)	.4889		.222	
Population (in 1000)	24889.7		2515.502	
Political Stability	.9158		.3371	
Infant Mortality (per 1000 born)	23.47		10.63	

Table 3.2. shows that the majority of the variables, the variation is greater between countries than within countries. On the dependent variable, the standard deviation within countries is only 3.227, while the between standard deviation is 11.506. At first glance, it seems that it would be more interesting to run a model with random effects estimation. However, demonstrated in chapter three, the data is not suitable for random effects estimation. In addition, the focus of the thesis is not on the difference between countries, but on the average effect that China has over time on QOG. Therefore, it is the variations within countries when the variables that do not change over time are held constant that is of interest. The variable on Chinese development aid vary more within than between countries. The logical explanation is that both variables represent Chinese development aid projects, and not the flow of aid funds. Hence, some country-years have many projects, and some have none or very few.

The variable on population has a high degree of variation within and between. This is due to large population differences between the countries, and that Sub-Saharan countries in general have a very high population growth rate. Additionally, it is natural that populations grow over time. Population growth can be seen in in relation to infant mortality. Infant mortality has declined over time in most countries, as such more children grow up, leading to high population growth. Growth in GDP per capita within countries is also naturally grow over time.

Chapter 5: Results and Analysis

In this chapter, the results of the panel data regression analysis will be presented and discussed. As discussed in chapter three, the results from two models will be compared in the analysis: one model excluding and one model including the interaction term. Two regression tables including two models will be presented as the main results. After the main results, the robustness of the models will be tested. I will focus on the focal relationship when commenting, but I will also comment briefly on the control variables. Table 5.1 display the expected direction of the coefficient of the focal variables in the hypothesis presented in chapter two. When referring to Chinese aid in the analysis, I am referring to the variable on the number of Chinese projects, and DAC aid refers to DAC aid as share of GDP.

5.1. Main results

5.1.1. Focal relationship

Table 5.2. displays the effects of the focal relationship in the models. Model 1 presents the relationship of Chinese aid and DAC aid on quality of government, and Model 2 presents the effect of the interaction term on quality of governance. This first regression table does not include the control variables presented in chapter three. The simple models are included for two reasons. The first reason is to analyze the focal relationship without the impact of the control variables. Secondly, the inclusion of a model excluding the control variables, opens up for comparison with the model including the control variables. As such, it is interesting to analyze if the focal variables changes when including the control variables in Table 5.2. The first table presents in general terms how Chinese aid and DAC aid affects quality of government. Based on the literature review and the hypotheses, the relationship between the variables could be both positive and negative. As explained in the method chapter, all models employ fixed effects estimation.

Table 5.2. Focal Relationship: Including and Excluding the Interaction Term

	Model 1: Focal relationship	Model 2: Focal relationship, including the interaction term
Chinese projects (log)	-.27 (.17)	-.34 (.30)
DAC/GDP (log)	.41 (.24)*	.32 (.38)
Interaction ³⁰ (Chinese projects*DAC/GDP)		.04 (.15)
Constant	37.44 (.17)***	37.59 (.20)***
Sigma U	11.82	11.81
Sigma E	2.34	2.34
Rho	.96	.96
Observations	294	294
Countries	29	29
AIC	-1307.5	-1309.9
BIC	-1318.5	-1324.7

Level of significance: *= p<0.10, **=p<0.05, ***=p<0.01 (two-tailed test) (Dahlberg, et al., 2017; Teorell b), et al., 2017; Strange, et al., 2015)

In Model 1, the coefficient of Chinese aid is negative, which indicates that Chinese aid has a negative effect on QOG. This is the expected effect of **H₃**: “The more development aid from China, the worse governance within developing countries” The coefficient tells us that when Chinese aid increases with one percent³¹, QOG decreases with 0.27 units. However, the relationship is not statistically significant. The coefficient of DAC aid is positive, which indicates that higher levels of DAC aid has a positive effect of level of QOG. The coefficients tells us that when DAC aid increases with one percent, QOG increases with 0.41 units. The relationship is significant at a 10 percent level, which does indicate that higher levels of DAC aid could have a positive and statistically significant effect on QOG, which is the expected effect of **H₁**: “The more development aid from DAC donors, the better governance within developing countries”.

In Model 2, neither Chinese aid nor DAC aid are statistically significant, however, it is the interaction term that is of interest. As mentioned in chapter three, the variables on Chinese aid and DAC aid are only included in the Model 2 because they are important for the error term (Allison, 1999, p. 168). The interaction term is far from statistically significant. The results indicate that the effect of DAC aid on QOG does not depend on level of Chinese aid. This would

³⁰ The variables in the interaction term are logarithmically transformed

³¹ The coefficients will be interpreted as percentages because they are logarithmically. This is the case with all the logarithmically transformed variables in all models (Allison, 1999, pp. 154-155).

be a very interesting finding, as China is repeatedly accused of diminishing the effectiveness of DAC aid. I will elaborate on the interaction term in the full model.

Sigma U and sigma E tell us that the majority of variance in QOG is due to differences between countries, because sigma U is much larger than sigma E. Using random effects estimates instead of fixed effects estimates could therefore be a better fit. However, as elaborated on in chapter three, the preconditions for running a random effects estimation are violated. The interclass correlation, measured by rho, is very high in both estimations. In both models, 96 percent of the variance is due to differences across panels. This confirms that QOG is highly dependent on previous values³². The high rho also suggests that QOG does not change much. Both the AIC and the BIC values indicate that Model 1 fits the data better than Model 2, because the values are lower in Model 1. Higher values indicate *worse* explanatory power (Midtbø, 2012, pp. 101-102). The difference in 2.48 in AIC and 6.17 in BIC between the models, give positive support for Model 1. In the bivariate regression model (See Table 2 in the Appendix), the coefficient of Chinese development aid is negative, and the coefficient of DAC aid is positive, but neither of the results are statistically significant.

5.1.2. Full Model

The models in Table 5.3. analyze the relationship of the Chinese aid and DAC aid on QOG, and control for GDP per capita, democracy, population, political stability and infant mortality. The control variables are included to rule out spurious explanations. The control variables are the influences that I wish to exclude from the estimate of the focal relationship or the variables that are associated with the dependent variable. They can also be thought of as “rival independent variables” that represent competing theoretical explanations. Hence, control variables are used to rule out the possibility that the focal relationship is redundant with other inferences on the dependent variable (Aneshensel, 2013, p. 200). From the literature review and hypotheses generation, the effects of the focal variables could go either way.

³² The dependent variable suffers from serial correlation or AR (1). This is elaborated on in chapter three.

Table 5.3. Full model: Including and Excluding the Interaction Term

	Model 1: Full model	Model 2: Full model, including the interaction term
Focal variables		
Chinese projects (log)	-.34 (.18)*	-.39 (.33)
DAC/GDP (log)	.24 (1.26)	.19 (.40)
Interaction ³³ (Chinese projects* DAC/GDP)		.02 (.16)
Control Variables		
GDP Per Capita (in 100 \$) (log)	2.01 (1.25)	2.05 (1.25)
Democracy (Dichotomous)	.70 (.78)	.7 (.78)
Population (in 1000)	.00 (.00) *	.00 (00) *
Political Stability	.24 (.69)	.24 (.70)
Infant Mortality	.12 (.05)**	.12 (.75)**
Constant	19.09 (.75)***	19.02 (.75)***
Sigma U	15.38	15.36
Sigma E	2.20	2.2
Rho	.97	.97
Observations	227	227
Countries	29	29
AIC	-979.39	-981.45
BIC	-1006.79	-1012.28

Level of significance: *= p<0.10, **=p<0.05, ***=p<0.01 (two-tailed test) (Dahlberg, et al., 2017; Teorell b, et al., 2017; Strange, et al., 2015)

As in Table 5.2., Model 1 in table 5.3. indicate that Chinese aid has a negative effect on QOG, and that DAC aid has a positive effect on QOG. When including the control variables DAC aid is no longer statistically significant at a 10 percent level in Model 1. However, Chinese aid is now statistically significant at a 10 percent level in Model 1. The interaction term in Model 2 is still not statistically significant when including the control variables in the equation. The AIC and BIC values indicate that Model 1 has better explanatory power than Model 2, which corresponds with the AIC and BIC values in Table 5.2.

In Model 1, the coefficients of Chinese aid is -.34, which indicates that when Chinese aid increases with one percent, QOG decreases with 0.34 units. A decrease of 0.34 units is quite small on a scale from 0 to 100. However, it is important to keep in mind that the logarithmically

³³ The variables in the interaction term are logarithmically transformed

transformed variable on Chinese aid ranges from 0.6931 and 4.5643 (see Table 4.3 in Chapter 4). Additionally, an increase of one percent is a very small increase in aid, especially when measuring numbers of Chinese projects. Therefore, it can be more interesting to look at the coefficient when Chinese aid increases with ten percent instead of one. By multiplying .41 with 10, we find that when Chinese projects increase with ten percent DAC aid increases with 4.1 percent on average. The coefficient of DAC aid is .2487, which indicates that when DAC aid increases with one percent, QOG increases with .24 units. The values of DAC aid varies between -3.0123 and 4.761. Here it is interesting to look at when DAC aid increases with more than one percent. When DAC aid increases with ten percent, QOG increases with 2.4 units on average.

A change of 4.1 and 2.4 units when Chinese aid and DAC aid increases with 10 percent is not very high. However, it is expected that it takes time to change good governance in countries. The descriptive statistics in Table 4.2. in chapter four demonstrate that QOG on average is very low in the Sub-Saharan African countries in the analysis. On a scale from 0 to 100, the highest value on QOG in the dataset is 66.

The results are similar to the results in Table 5.2., and they go hand in hand with the expected effect in **H₁** and **H₃**. This correlates with the views of many Western donors; namely, that Western aid is promoting better governance in Africa, and that China provides rough aid that promotes worse governance and support of rough states. The p-value of Chinese aid is 0.074 and therefore statistically significant at a 7.4 percent level. DAC aid has a p-value of 0.364 and is therefore far from being statistically significant. The models in Table 3 in the Appendix, display the effect of Chinese aid when DAC aid is excluded from the models, and DAC aid when Chinese aid is excluded from the models. The results are very similar to the models where both variables are included. The effect of Chinese aid is the same when DAC aid is excluded, but the positive effect of DAC aid is greater when Chinese aid is included in the model. The effect of DAC aid is far from statistically significant. This suggests that the model is robust to the inclusion of both focal variables.

In Model 2, the coefficients of the constitutive term have to be interpreted in a specific way. The coefficients of DAC aid in Model 2 does not report the average effect of change in the variables on QOG. The coefficients only report the effect of the variables when Chinese development aid equals zero. Similarly, the coefficients of Chinese development aid only captures the effect of Chinese development aid when DAC aid is zero. Chinese projects never have the value of zero. As demonstrated in Table 4.2., the minimum value of the variable is

0.6931. Hence, it is incorrect to say that a positive and significant coefficient on DAC aid (or Chinese aid) indicates that an increase in DAC aid (or Chinese aid) is expected to lead to an increase in QOG (Brambor, et al., 2006, pp. 71-72). As explained in chapter three, it is possible to calculate the coefficients of DAC aid on QOG at different levels of Chinese aid³⁴. This is calculated in table 5.4.:

Table 5.4. The effect of DAC aid on QOG at different levels of Chinese aid, full model with interaction term

Chinese aid		Effect (coefficients) of DAC aid on QOG at different levels of Chinese aid
Log value	Number of projects	
.6931	2	$-.393 + (.0205 * .6931) =$ -.3787
1.7917	6	$-.393 + (.0205 * 1.7917) =$ -.3562
2.3978	11	$-.393 + (.0205 * 2.3978) =$ -.3438
2.7725	16	$-.393 + (.0205 * 2.7725) =$ -.3361
3.4965	30<	$-.393 + (.0205 * 3.4965) =$ -.3213
4.5643	96 (max)	$-.393 + (.0205 * 4.5643) =$ -.2994

Dependent variable: QOG. (Dahlberg, et al., 2017; Teorell b), et al., 2017; Strange, et al., 2015; Allison, 1999, pp. 167-169)

The coefficients at all levels of Chinese aid are negative, this indicates that Chinese development aid in general has a negative impact on DAC aid's effect on QOG within countries over time. What is interesting is that the negative effect is bigger at higher levels of Chinese aid. The coefficient of the lowest value of Chinese aid is $-.3787$, which corresponds to two Chinese aid projects in the non-logarithmically transformed variable. The coefficient of the highest value of Chinese aid is $-.2994$, which corresponds with 96 Chinese aid projects in the non-logarithmically transformed variable. In other words, Chinese development aid does have a negative impact on DAC aid's effect on QOG within countries. However, the more Chinese development aid, the smaller the negative effect. This is why the coefficient of the interaction term is positive, despite Chinese aid on average has a negative impact on the effect of DAC aid on QOG. The results then only partly corresponds with the expectation in **H4**. Nevertheless, because the interaction term is far from statistically significant with a p-value of .859, the null hypothesis is not rejected.

The results of the control variables do not change substantially from Model 1 to Model 2. This is because the interaction term constitutes of the focal variables, and therefore do not

³⁴ Coefficient of Chinese aid + (coefficient of interaction term * different levels of Chinese aid)

provide substantially new information into the model. Higher GDP per capita has a positive effect on QOG in both models, but the coefficients are not statistically significant.

Democracy has a positive effect on QOG. Because the democracy variable is dichotomous, the coefficient measures how much QOG increases when a country goes from not being a non-democracy to being a democracy. The variable is far from statistically significant. Population seems to have a positive effect on QOG, but the effect is very small with a coefficient of .0002. This indicates that when a population increases with 1000 people, QOG increases with .0002. It is important to remember that an increase of 1000 people in a population of several millions is quite small. The effect is statistically significant at a 10 percent level.

Political stability has a positive effect on QOG within countries over time. Countries with higher political stability also have higher levels of QOG. Because I operate with two tailed tests, this indicates that countries with worse political stability also have lower QOG. The result is far from statistically significant. The coefficient of infant mortality is positive, which indicates that countries with higher infant mortality rates have higher QOG. The result is statistically significant at a 5 percent level. The result does not align with the theoretical expectation that higher rates of infant mortality is associated with lower QOG, as explained in chapter 4. As with population, it is important to look at the size of the effect. The coefficient tells us that when infant mortality increases with one, that is one out of 1000 live births, QOG increases with .12 in both models. Hence, despite the relationship being statistically significant, the effect is very small.

Sigma U and sigma E indicates that the variation is bigger between countries than within countries, as in the models in table 5.2. Rho is very high in both models in table 5.3., 97 percent of the variance is caused by differences across panels. As in table 5.2., this is due to autocorrelation in the models. The number of observations has decreased in the full models, but the number of countries remain the same. The higher number of missing values could have an impact on the results in the full models compared to the focal models in table 5.2. The AIC and BIC values indicate that Model 1 fits the data better than Model 2, because the values are smaller in Model 1.

5.1.3. Preliminary Theoretical Interpretation

Model 1 in the full model indicates that Chinese development aid on average has a negative impact on QOG within countries over time, and that DAC aid on average has a positive impact on QOG within countries. The direction of the results correlates with the expected effect

in “**H1**: DAC aid has a positive effect on good governance” and “**H3**: Chinese aid has a negative impact on good governance”.

That Chinese aid is negative indicates that we can rule out **H5**: “The more Chinese development aid, the better governance within countries”, despite not rejecting the null-hypothesis of **H3**. This is because of the absence of a positive effect. The conclusion that Chinese aid does not lead to better governance do make sense; it is not the objective of Chinese aid to create better governance. The only political conditions on Chinese aid are related to not recognizing Taiwan. It is not likely that this condition will have positive effects on QOG. On the other hand, it is not an objective of China to diminish QOG in recipient countries. The motive is simply to cooperate with the government in the recipient country, regardless of their quality of government. I have argued in chapter two that China might prefer to cooperate with countries that have lower QOG, because it can be easier to do business with such regimes, compared to navigating through complex bureaucratic systems. However, it is the effect of China after they have chosen to give aid to a country that is of interest. Therefore, for the purpose of this analysis, it is not important that China chose to give aid to countries with low quality of governance: but what happens when they have determined to give aid to a country, over time.

It is important to remember the problem of endogeneity when interpreting the results from the regressions. The results demonstrate that Chinese aid and DAC aid could have an effect on QOG within countries over time, but the opposite might also be the case. As mentioned in chapter two, China could choose to give more aid to countries that on average have lower QOG than the countries that the DAC donors choose to give aid to. As such, it could be the level of QOG in a country that determines the amount of Chinese aid and DAC aid, or the variables could affect each other simultaneously. To account for this reverse effect, I will be careful when interpreting causality.

The interaction term goes in the opposite direction than expected in **H4**. Despite the effect of Chinese aid being negative, larger amounts of Chinese leads to smaller negative effect on the effectiveness of DAC aid. A possible explanation for the relationship mentioned in the literature could be that DAC donors respond to more Chinese aid by applying more conditions on recipients. In this case, more conditions could moderate the negative effect of Chinese aid on the effectiveness of DAC aid. The theoretical explanation behind **H4** is that Western donors

respond to more Chinese aid by applying fewer conditions³⁵. The high p-values of the focal variables in Model 1 and Model 2 indicate that the chance of committing a type 1 error is very high. Nevertheless, a result that is not statistically significant does not necessarily equal an insignificant finding. If the model is robust, the results could indicate that it does not make a difference whether aid is coming from China or from the DAC donors in relation to good governance. If this is the case, it could be a very interesting finding for both theoretical reasons and for policy implications, as this is one of the main critiques of Chinese aid in Africa.

5.2. The Robustness of the Results

As discussed in the method chapter, panel data designs are non-randomized; it is therefore many ways to model the data. Hence, it is important to check the robustness of the main models. A common exercise in empirical econometric studies is to check how core regression coefficient estimates behave when the regression specifications is modified in some way, typically by adding or removing repressors³⁶. If the signs and magnitude of the estimated regression coefficients are plausible, this is often taken as a sign that the model is robust (Ly & White, 2014, p. 194). The robustness of a regression model is also related to the regression assumptions. If any of the models violate the regression assumptions, the model is less robust.

I will first check the robustness of the model by operationalize Chinese development aid as percentage of GDP instead of number of aid projects. Secondly, I will run a model excluding the variable on political stability because it is highly correlated with QOG. Thirdly, I will run a model where the control variable GDP per capita is exchanged with GNI per capita. In this section, I will only run the full models. Lastly, the regression assumptions and how the regression assumptions are modified not to violate the assumptions are elaborated on. As in the last section, Model 1 excludes the interaction term, and Model 2 includes the interaction term.

³⁵ See “2.3.1. How Chinese Development Aid Can Lead to Worse Governance” in chapter two.

³⁶ “The usage of the term “robust” must not be confused with the concept of robustness in the statistics literature, which refers to the insensitivity of an estimator to adding or removing sample observation, typically extreme in some way. A more accurate terminology for “robustness” here might be “insensitivity to covariate selection”.” (Ly & White, 2014, p. 194). The concept of robustness that is used in the statistics literature, is the robustness that will be referred to in the section on regression assumptions.

5.2.1. Chinese Aid as Share of GDP in the Recipient Country

A normal approach when checking the robustness of the results is to change variables to see if the results are vulnerable to change. Because the data on Chinese aid is one of a kind – it does not exist other comparable and openly available quantitative data on Chinese aid – it is not possible to compare the results of Chinese aid with other quantitative sources. However, in the dataset form AidData, there is a monetary amount attached to each project. I have used the attached amount to create a variable on Chinese development aid as share of GDP in each country-year³⁷. Because the operationalization of the variable is different from the project variable on Chinese aid, it could generate different results.

Table 5.5. Chinese Projects as Share of GDP

	Model 1:	Model 2:
Focal Variables		
China/GDP (log)	-.14 (.08) *	-.21 (.18)
DAC/GDP (log)	.02 (.37)	.12 (.45)
Interaction ³⁸ (China/DAC*DAC/GDP)		.03 (.09)
Control Variables		
GDP Per Capita (in 100 \$) (log)	1.42 (1.52)	1.40 (1.53)
Democracy (Dichotomous)	.56 (1.02)	.53 (1.02)
Population (in 1000)	.00 (.00)	.00 (.00)
Political Stability	.73 (.92)	.73 (.92)
Infant Mortality	.13 (.06) **	.13 (.06) **
Constant	22.15 (.97)***	(22.09)***
Sigma U	13.61	13.62
Sigma E	2.34	2.34
Rho	.97	.97
Observations	145	145
Countries	25	25
AIC	-637.92	-639.77
BIC	-661.73	-666.56

Standard errors in parenthesis. Level of significance: *= p<0.10, **=p<0.05, ***=p<0.01 (two-tailed test) (Dahlberg, et al., 2017; Teorell b), et al., 2017; Strange, et al., 2015)

The results in Table 5.5. are similar to the results from the main models in table 5.3. Despite the two variables on Chinese aid measuring the same phenomena they are only weakly correlated. When running a bivariate correlation analysis on the two measurements, the value

³⁷ See chapter 4, for detailed description of the variable on Chinese development aid as share of GDP.

³⁸ The variables in the interaction term are logarithmically transformed

is only 0.18³⁹. As in Model 1 in table 5.3., the coefficient of China/GDP is negative, which indicate that Chinese aid has a negative effect on Quality of Government. As in Table 5.3., the relationship is statistically significant below a 10 percent level. This suggests that Chinese aid has an impact on QOG within countries over time, and that the effect is robust. The coefficient of DAC aid is positive in both models, but the relationship is far from statistically significant in any of the models. The coefficients of China/GDP are smaller in the models in Table 5.5 than in the main models, which indicates the effect of China/GDP is smaller than the effect of Chinese projects. This is very likely to be connected to the monetary amount being a very small proportion of GDP.

The control variables change somewhat: all control variables have a smaller effect on QOG than in the main models, except from the effect of political stability, which increases. They are, however, not statistically significant in Table 5.5. The most obvious reason why the model change is because of a bigger number of missing values on the China/GDP variable than on the Chinese projects variable.

Because the models are generated using fixed effects, and therefore measure the average effect within countries across years, the exclusion of the large number of observations and four countries are likely to affect the averages. Despite these changes, I will argue that the model is robust to changing the measurement of Chinese aid. However, the model lose much information when changing the China variable; 82 observations and 4 countries. The results from the main models are therefore better at generalizing the effect of aid, which is the objective of the thesis. Despite the decrease in the effectiveness of the focal variables, the direction and significance level of the focal variables do not change. I will therefore conclude that the model is robust to changing the variable on Chinese development aid.

5.2.2. Excluding Political Stability

The control variable political stability is highly correlated with QOG⁴⁰. The most likely explanation of why the variables are highly correlated is because the variable political stability is collected form the World Bank Governance Indicators (WBGI) (Teorell, et al., 2017, pp. 598-599). The WBGI are the disaggregated good governance indicators from the World Bank.

³⁹ See Appendix Table 1

⁴⁰ Correlation value of 63.06 in a bivariate correlation analysis. As I will demonstrate in the section on regression assumptions, the variables does not suffer from multicollinearity just form correlation.

Political stability per se is not a part of the ICRG indicator of good governance, but because the World Bank sees political stability as a feature of good governance, it could affect the results.

Table 5.6. Excluding Political Stability

	Model 1	Model 2
Focal Variables		
Chinese projects (log)	-.35 (.18) *	-.48 (.32)
DAC/GDP (log)	.38 (.25)	.23 (.39)
Interaction ⁴¹ (China/DAC*DAC/GDP)		.07 (.15)
Control Variables		
GDP Per Capita (in 100 \$) (log)	3.71 (1.21) ****	3.78 (1.21) ****
Democracy (Dichotomous)	.62 (.78)	.61 (.78)
Population (in 1000)	.00 (.00) ****	.00 (.00)
Infant Mortality	.04 (.05)	.04 (.05)
Constant	16.25 (.85)****	16.33 (.86)****
Sigma U	15.25	15.13
Sigma E	2.25	2.25
Rho	.97	.97
Observations	246	246
Countries	29	25
AIC	-1073.66	-1075.51
BIC	-1098.20	-1103.55

Standard errors in parenthesis. Level of significance: *= p<0.10, **=p<0.05, ***=p<0.01 (two-tailed test) (Dahlberg, et al., 2017; Teorell b), et al., 2017; Strange, et al., 2015)

When excluding political stability, the focal variables do not change substantially. The coefficient of Chinese aid is still negative and statistical significant at a 10 percent level. The size of the coefficient is somewhat larger in the model excluding political stability. A p-value of 0.06 indicates that the coefficient is close to being statistically significant at a 5 percent level. The coefficient of DAC aid is still positive, but the size of the coefficient is much larger here. The effects is still far from statistically significant in Model 1.

In Model 2, none of the focal variables are statistically significant. The coefficients of Chinese aid is still negative and the coefficient of DAC aid is still positive. The positive value of the interaction term indicate that, as in the model including political stability, when the amount of Chinese aid increases, the negative impact of Chinese aid on the effectiveness of

⁴¹ The variables in the interaction term are logarithmically transformed

DAC aid decreases. The results are therefore very similar to the results of Model 2 in the main model.

The control variables, on the other hand, do change as a result of removing political stability. GDP per capita is now statistically significant at a 1 percent level, and the effect is bigger than in the main model. Going from being a non-democracy to a democracy still has a positive effect on QOG. However, the relationship is far from statistically significant. Population still has a positive effect on QOG, and the effect is now statistically significant at a 1 percent level. The effect of population is bigger when political stability is excluded from the model. Infant mortality still has a positive effect on QOG. However, the effect is much smaller than in the main model, and the effect is no longer statistically significant at any level.

The majority of the variance in the model is still due to differences between countries, as Sigma U is still much larger than Sigma E. Excluding political stability from the model leads to an increase in the number of observations. Regardless of the changes in the control variables, the focal variables does not change substantially. The level of significance and direction of the coefficient of the focal variables remain the same, despite the effect being somewhat bigger here than in the main model and the control variables changing. The main model is therefore robust to excluding the variable on political stability in both Model 1 and Model 2.

5.2.3. Gross National Income Per Capita Instead of GDP Per Capita

There are several other ways of measuring level of economic development in a country, than GDP per capita. Here, GDP per capita will be replaced with Gross national income (GNI) per capita. GNI per capita measures all *income* of a country`s residents and businesses, regardless of where it is produced, divided by midyear population. Compared to GDP, GNI does not include the earnings of foreigners living in the country, but it only reports how much is earned by the country`s citizens and businesses (Amado, 2017; Teorell, et al., 2017, p. 640).

Table 5.7. Level of Economic Development Measured as GNI Per Capita

	Model 1	Model 2
Focal Variables		
Chinese projects (log)	-.3695 (.2247)	-.3235 (.376)
DAC/GDP (log)	.2325 (.294)	.2828 (.4401)
Interaction ⁴² (China/DAC*DAC/GDP)		-.0272 (.1777)
Control Variables		
GNI Per Capita (in 100 \$) (log)	2.181 (.6636) ***	2.176 (.67) ***
Democracy (Dichotomous)	1.166 (.10432)	.11707 (1.049)
Population (in 1000)	-.0001 (.0002)	-.0001 (.0002)
Political Stability	.2671 (.8375)	.2649 (.8404)
Infant Mortality	-.1148 (.103)	-.1148 (.1036)
Constant	8.859 (1.1878)***	8.888 (1.191)***
Sigma U	8.9981	8.9818
Sigma E	2.2751	2.283
Rho	.9399	.9393
Observations	173	173
Countries	23	23
AIC	758.4343	760.4239
BIC	783.6606	788.8035

Standard errors in parenthesis. Level of significance: *= p<0.10, **=p<0.05, ***=p<0.01 (two-tailed test) (Dahlberg, et al., 2017; Teorell b), et al., 2017; Strange, et al., 2015)

When GDP per capita is exchanged with GNI per capita, Chinese aid loses its significance at a 10 percent level in Model 1. The coefficient is still negative and the size of the effect only changes with 2.44 percentage points. DAC aid is still far from statistically significant in Model 1. The coefficient is still positive and the size only changes with 1.62 percentage points. In Model 2, the coefficient of Chinese aid is still negative, and DAC aid is still positive, however, the direction of the interaction term changes. The coefficient of the interaction term is now -.0272. This indicates that more Chinese aid over time, leads to bigger negative effect of DAC aid within countries⁴³. Despite the change in direction of the effect, the interaction term is far from statistically significant with a p-value of 0.879.

⁴² The variables in the interaction term are logarithmically transformed

⁴³ If we use the same formula $(-.3235 + (-.0272 * \text{level of Chinese aid}))$ and the same intervals (2, 6, 11, 16, 30, 96 Chinese aid projects) as in table 5.4. to calculate the effect of DAC aid on QOG, the results are the following: -0.3401, -0.3722, -0.3887, -0.3989, -0.4186, and -0.4438.

The control variables in Model 1 and in Model 2 do change compared to the main models. GNI per capita is statistically significant at a 1 percent level, compared to GDP per capita that is not statistically significant at any level in the main models. As in the main models, the effect is positive. This indicates that the GNI per capita measure is quite different from GDP per capita. Model 1 is robust to changing GDP per capita to GNI per capita because the coefficients of the variables of interest do not change substantially. The direction of the coefficient are the same, the size of the effect is almost the same, and none of the focal variables of interest are statistically significant. In Model 2, on the other hand, the result is not robust to changing GDP per capita. The direction of the interaction term changes from the main model. However, because the effect is far from statistically significant in both the main model and here, the conclusions are the same; Chinese aid does not seem to affect the effectiveness of DAC aid. The focal variables are therefore robust to changing GDP per capita to GNP per capita, which indicates that the main model is robust. However, the level of significance of Chinese aid increases to a level over 10 percent. This makes the temporary conclusion that China has a negative effect on QOG less robust.

5.2.4. Regression Assumptions

Linearity

The first assumption is that the model is linear in its parameters. Linearity is one of the central statistical conditions for the linear regression model⁴⁴. If the relationship between the dependent variable (DV) and the independent variables (IV) is not linear, we cannot hope to fit a good linear line on the relationship between the DV and IV with our coefficients. If the effect is not linear, we are dealing with functional form error (Aneshensel, 2013, pp. 66-67; Midtbø, 2012, p. 130). This serious problem leads to misleading coefficients. The linearity of the models is tested with the command “nlcheck” in Stata⁴⁵. The variables with a significant result from the “nlcheck”, have been checked for linearity by using scatterplots and histograms.

The violation of the linearity assumption could be caused by extreme values. According to Midtbø (115-118), there are three types of extreme values; outliers, leverage and influential

⁴⁴ A regression model does not necessarily have to be linear. There are other methods that deal with non-linear models, that I will not elaborate on here.

⁴⁵ An nlcheck is used after fitting a model, by categorizing the predictors into bins, refitting the model including dummy variables for the bins, and then performs a joint Wald test for the added parameters. A significant result indicates that the linearity assumption is violated (Jann, 2008).

values⁴⁶. It is however only influential values that violates the assumption. An influential value is an observation that is an outlier and has high leverage. The coefficients are sensitive towards influential values, and the regression equation is not able to predict them properly. Because the unit of analysis is countries, that are a natural part of the population, they should not be removed (Midtbø, 2012, p. 119).

Many relationships in social science are curvilinear (Acock, 2014). As such, these relationships break the assumption of linearity. I will illustrate such a non-relationship with a highly relevant example. Within the theoretical and empirical field of good governance, there is an ongoing debate at about the non-linear relationship between good governance or corruption and democracy. The general theory is that, compared to authoritarian regimes, democratization has a negative effect on quality of government in the early stages of democratization. Thereafter the effect become positive. Hence, making the relationship between democracy and quality of government non-linear or U-shaped⁴⁷. In a linear regression analysis, such a natural non-linear relationship would break the first assumption⁴⁸.

Several of the variables in my model have influential values and/or curvilinear relationship with the dependent variable. The variables in question are the Chinese aid, DAC aid, GDP per capita, GNI per capita, and population. The variables have therefore been logarithmically transformed to account for this. Logarithmically transforming the population variable did not change the curvilinearity. Therefore, the models include the original variable on population. As such, the linearity assumption is violated to some degree. However, the model will never be perfectly linear in reality, hence, to not violate the first assumption it is enough that it is close to linear (Aneshensel, 2013, pp. 66-67; Midtbø, 2012, p. 130).

Mean Independence

The second regression assumption is that the independent variables are not correlated to the error term. In the equation, this means that the error term should be zero (Allison, 1999, p. 124). According to Allison (1999, p. 124), the assumption of mean independence is the most

⁴⁶ Outliers are recognized by large residuals and large deviation between predicted and observed values. The deviation is caused by an unusual value on the dependent variable given the values on the independent variables. Values with high leverage are far away from the mean (Midtbø, 2012, pp. 115-118).

⁴⁷ The control variable on democracy in the model is dichotomous, making a u-shaped relationship between democracy and quality of government impossible.

⁴⁸ In my model, the variables Chinese Projects, China/GDP, DAC/GDP and GDP per capita break the first regression assumption. The variables have been logarithmically transformed in the models.

important assumption in a linear regression model⁴⁹. Violations of the assumption can be caused by three conditions related to the error term.

The first conditions relates to omitted independent variables. The second condition is caused by reverse causation⁵⁰. (Allison, 1999, pp. 124-125). Reversed causation is very possible to be the case here, because level of QOG could determine how much aid a country receive, and from which country. The third condition is that if there is measurement error in the IV`s, this error will be a part of the ε (Allison, 1999, p. 125). There are several empirical and theoretical reasons why the models presented above could break the assumption of mean independence. However, when fixed effects is used it solved the problem of unobserved heterogeneity. This is because fixed effects only analyze what causes change over time in the dependent variable over time, within units. Secondly, variables that do not vary over time are omitted.

Homoscedasticity

The third regression assumption assumes that the regression is homoscedastic, namely, that “the variance of the error term in each observation is constant” (Daugherty, 2011, p. 282). In other words, the probability of the error term reaching a given positive or negative value will be the same in all observations. When the assumption is not met, we have a problem with heteroscedasticity (Daugherty, 2011, pp. 282-283). Heteroscedasticity does not affect the estimates of the coefficients, but it does affects the standard errors, t-values, F-values and the confidence intervals of a linear regression model. As such, the test of significance is not valid, and one might draw wrong conclusions (Midtbø, 2012, p. 107). It is therefore important to control for heteroscedasticity.

There are various graphical and formal statistical tests to detect heteroscedasticity in Stata. A popular rest is the Breusch-Pagan (BP) test. The null hypothesis of the BP test is that the variance in the error term is homoscedastic. When testing for heteroscedasticity, the result are significant for both the models with the Chinese aid projects variable, and the Chinese aid as share of GDP. Several authors (Midtbø, 2012, p. 109; Allison, 1999, p. 128; Daugherty, 2011, pp. 192-193) suggests going through the model specification again. Even after log transforming the variables that break the assumption of linearity, the BP test is still significant.

⁴⁹ Allison (1999, p. 125) argues that mean independence is critical because 1) violations can produce severe bias in the estimates, 2) there are often reasons to expect violations, and 3) there is no way of testing the violation without additional data. Because the thesis is based on non-experimental data, violations of the assumption is a substantial possibility.

⁵⁰ This means that the DV has an effect on the IV`s

A solution to the problem, suggested in the literature (Midtbø, 2012, pp. 109-110; Daugherty, 2011, p. 297; Allison, 1999, pp. 127-128), is to use robust standard errors in the final models. Robust standard solves the problem of biased p-values, and makes the interpretation of the regressions more robust (Allison, 1999, pp. 127-128).

Homoscedasticity

The fourth assumption is that the error term is uncorrelated, namely that there is no correlation between the error terms of any of the independent variables. The consequence of a correlation within the error term are the same as for heteroscedasticity; the results of the regression often conclude that there is a relationship between two variables, when it does not exist (Allison, 1999, pp. 128-129). However, correlation within the error term also affects the robust standard errors, making them misleading (Midtbø, 2012, p. 112). It is therefore important to solve the problem of correlated error terms.

In times series data and panel data analysis autocorrelation is very common⁵¹. To test for autocorrelation in my models and for each of the independent variables, I ran a Wooldridge test⁵². The Wooldridge test checks for autocorrelation in linear panel data models. The test is very attractive because it requires relative few assumptions and is easy to implement (Drukker, 2003, p. 168). A significant result indicates serial correlation⁵³ in the model. The test is significant for both models. To check which variables that suffer from autocorrelation, I ran the test on each of the independent variables to see if they are correlated to themselves. Nearly all the independent variables and the dependent variable are correlated to themselves, except the variable on Chinese aid. The reason is that these variables represent Chinese development projects and when they were implemented or completed. Hence, they are bound to change more over time than the more continuous variable on DAC aid, that represent transfers from the annual budget of the donor countries in each year. For the dependent variable, positive or negative change is expected to take time. The Wooldridge test for the dependent variable is significant; it is correlated with itself. This is known as first order autoregressive, or AR(1). To accommodate for this problem, it is suggested to use the command “xtregar” instead of “xtreg”

⁵¹ Autocorrelation in panel data is elaborated on in Chapter three.

⁵² The command “xtserial” in Stata (Drukker, 2003).

⁵³ Serial correlation is the same as autocorrelation, but described autocorrelation in panel data and times series data. Dependence in the error term can also occur in cross-section data, especially for units within groups (Midtbø, 2012, pp. 112-113)

when running the regressions in Stata. Therefore, xtregar is used in all regression models⁵⁴ (Drukker, 2003; Stata Corporation, 2003, pp. 212-213; Torres-Reyna, 2007)

Normal Distribution

If the error term is normally distributed, the probability of under or overestimate a value should be about the same. Allison (1999, 130) describes normal distribution to be the least important of the assumptions, because it does not affect efficiency nor unbiasedness. However, normal distribution is more important in small samples⁵⁵, because extreme values will have a bigger impact on the results. In small samples, violation of the normality assumption can lead to inaccurate confidence intervals and p-values (Midtbø, 2012, pp. 114-115; Allison, 1999, pp. 130-131).

When checking for normal disturbance in the residuals, the test indicate that they are not normally distributed. Allison (1999, pp. 130-131) suggests to be more conservative in the interpretation of the p-values when the assumption is broken in smaller samples, to avoid type-I error⁵⁶. Allison (1999, p. 130) propose to only conclude that the p-value is significant at a 1 percent level, instead of a 5 percent when the number of observations drops below 100. In the analysis of the results above, I have therefore been mode careful in the interpretation of the p-values, and discussed the strength of the coefficients at different levels of significance.

Multicollinearity

Multicollinearity occurs when two or more of the independent variables are highly correlated. When a model suffers from multicollinearity, it is difficult to know how important each of them are as a predictor (Acock, 2014, p. 287). The regression assumption is that the independent variables should not be perfectly collinear. Hence, it is only perfect multicollinearity, and not high multicollinearity, that breaks the regression assumption. However, because high collinearity can affect the individual coefficients, I test for multicollinearity in Stata with a VIF-test (Variance Inflation Error) and by looking at the correlation matrix⁵⁷ (Midtbø, 2012, p. 128; Daugherty, 2011, p. 165; Allison, 1999, p. 140).

⁵⁴ “xtregar” also accommodates for unbalanced panels where observations are unequally spread over time (Stata Corporation, 2003), which is the case with the dataset (see Chapter 4).

⁵⁵ In the final models, the sample size is between 250 and 100. Allison (1999, pp. 130-131) argues that in a sample over 200 violation of the normality assumption is not a problem. It will probably not affect the confidence intervals or the p-values. He writes that is becomes critical when the sample size drops below 100.

⁵⁶ Type-I error: concluding that a variable has an effect when it does not (Allison, 1999, p. 131).

⁵⁷ See Table 1 in the Appendix

None of the variables have a high correlation above 0.50, except from political stability and democracy. The correlation between QOG and political stability is 0.63, and the correlation between QOG and democracy is 0.55. However, VIF is a more precise measure of multicollinearity, because each of the independent variables are measured against all the other independent variables. If the VIF values are larger than 10, multicollinearity is a problem (Midtbø, 2012, pp. 129-130). In my models, multicollinearity does not seem to be a problem. The VIF-values vary between 1 and 4.

Multicollinearity is, however, very common in models including an interaction terms. This will increase the standard errors and makes it less likely that the interaction term will be statistically significant. The VIF values of Chinese aid and DAC aid respectively, is 9.72 and 8.74⁵⁸ in the full model including the interaction term. A much used solution to high multicollinearity is to center the relevant variables. Centering variables in a model including an interaction term to avoid high multicollinearity is criticized, because multicollinearity if caused by too little information in the data. Centering the data does not provide new data, hence, it cannot overcome the problem of multicollinearity (Brambor, et al., 2006, pp. 70-71). Therefore, this is not done in this analysis. Brambor et. al. (2006, p. 70) argue that the problem of multicollinearity in multiplicative interaction models is overstated. Because such models are interpreted differently than linear models, the problems caused by multicollinearity do not have big impact on the interpretation of the model.

5.3. Chapter Summary

In the regression tables presented above, Chinese aid has had a negative effect on QOG and DAC aid has had a positive effect on QOG in all “Model 1’s”. Chinese aid is statistically significant at a 10 percent level in all full models except from the model where GDP per capita is exchanged with GNI per capita. This result makes it difficult to conclude that Chinese aid is in fact negative. DAC aid is only statistically significant at a 10 percent level in Model 1 when the control variables are excluded. Model 1 therefore seems to be quite robust, because the modifications does not qualitatively change the conclusions. The results in Model 1 are the same as the expected effects in **H1**: “The more development aid form DAC donors, the better governance within countries” and **H3**: “The mode development aid from China, the worse governance within developing countries”. The expected effect in **H2**: “The more development aid from DAC donors, the worse governance within developing countries” ad **H5**: “The more

⁵⁸ The VIF values of the control variables vary between 1 and 3.

development aid, the better governance within developing countries”, are rejected in all models. The coefficients of Chinese aid never has a positive effect on QOG, and DAC aid never has a negative effect on QOG. This is also the conclusion of the models in Table 2 and Table 3 in the Appendix.

In Model 2, neither the focal variables nor the interaction term is not statistically significant in any of the regression modifications. The effects are robust to changing the operationalization of Chinese aid and to the exclusion of political stability, but the direction of the interaction changed in Table 5.7. The effect is therefore not robust to changing GDP per capita to GNI per capita. However, because the effect is not statistically significant in any of the models, the conclusion is the same for all models; Chinese aid does not seem to have any effect on the effectiveness of DAC aid. This result contradicts the many accusations of the indirect effect of Chinese aid in the literature, and rejects the expected effect of **H4**.

Allison (1999, p. 167) argues that if the interaction term statistically significant, then the reasonable strategy is to drop in favor of a model excluding the interaction term. The AIC and BIC in all regression tables shows that Model 1 explain fits the data better than Model 2. I will however argue that both Model 1 and Model 2 are important to different parts of the theory. This is because Model 2 relates to the interacting effect of Chinese aid on the effectiveness of DAC aid. In the next chapter, I will argue why the findings in both models can be important for better understanding the effect of Chinese development aid.

The robustness tests of the models indicate that the focal independent variables are quite robust. The direction of the interaction term do change when GDP per capita is exchanged with GNI per capita. However the effect is far from statistically significant, therefore the outcome of the regression does not change.

The regression assumptions are controlled for in all models. The models do suffer form autocorrelation, or AR (1), but the problem is accommodated for by using the command “xtregar” in all models in Stata. The assumptions of linearity, heteroscedasticity and normal distribution is to some degree violated, but the most severe violations are removed by respecification of the models.

Chapter 6: Discussion of Results

In this chapter, I will discuss the results from the analysis above in relation to the hypotheses and the theoretical framework presented in chapter two. I will first present some of the limits of the analysis, and argue why it has some important contributions regardless of the limitations. Second, the effectiveness of DAC aid will be discussed. Third, the effectiveness of Chinese aid will be discussed. Following, I will summarize the finding of the thesis and any concluding remarks. Lastly, the implications of the thesis and suggestions for future research will be presented.

6.1. Limitations of the Analysis

Before discussing the results from the analysis, I will present some of the limitation of this study. First, the dataset from AidData is based on media based data collection, and not official data from the Chinese government (Strange, et al., 2015, pp. 15-17). As such the dataset report the number of aid projects to recipient counties, not the total aid budget distributed to recipients from the Chinese government. The variable is therefore a proxy on Chinese aid. As discussed in chapter four, this does create validity problems.

There is some uncertainty connected to the level of aggregation of the QOG variable and the variables of Chinese aid and DAC aid. In this thesis, DAC aid is defined as all types of aid commitments, regardless of purpose and donor. If some types of aid have a positive effect of good governance and some types of aid have a negative effect on good governance, the result can turn out non-significant in statistical analysis. The same argument applies to the aggregated dependent variable. Development aid might have a positive effect on one aspect of good governance, a negative effect on second aspect, and no effect on a third aspect. If this is the case, then this might be the reason why DAC aid is not statistically significant in this analysis. I will illustrate this with an example from the literature. Ear (2007, pp. 276-277) uses disaggregated governance indicators to study the effectiveness of aid on governance. She found that aid had a positive effect on political stability, but a negative effect on government effectiveness and regulatory stability. Her findings suggests that aid can play a positive role when its components are considered, and that development aid can have different effects on good governance depending on its level of aggregation.

Despite some methodological challenges, the dataset on Chinese aid from AidData is new and pioneering within collecting data on Chinese aid. The dataset is therefore the most comprehensive dataset on Chinese aid to Africa that is openly available today. Now that data is available, it is both important and needed to use it to try to fill the gap in the literature. Given the scale of Chinese aid, ignoring its effect when studying development aid can bias empirical results and lower research validity. Therefore, I argue that it is important that the new dataset is used in this type of analysis. Additionally, the robustness checks in chapter five show that the models are quite robust. Hence, it is possible to draw some conclusions based on the results. I will now illustrate how the results from the hypotheses relate to theory. In Table 6.1., a brief summary of the hypotheses and the main findings in the thesis is presented.

Table 6.1. A Brief Summary of the Hypotheses and the Main Findings

Hypothesis	Main Findings	Support of Hypothesis
H₁: <i>The more development aid from DAC donors, the better governance within developing countries.</i>	The effect of DAC aid is positive in all models presented in chapter five and in the regressions in the appendix. This means that more DAC aid over time within countries, has a positive effect on QOG. However, the effect is not statistically significant in any of the full models.	No
H₂: <i>The more development aid from DAC donors, the worse governance within developing countries.</i>	Because the effect of DAC aid is positive in all models, the hypothesis is discarded. However, the effect of DAC aid is not statistically significant . Therefore, we cannot conclude that the effect is positive either.	No
H₃: <i>The more development aid from China, the worse governance within developing countries</i>	The effect of Chinese aid is negative in all models and statistically significant at a 10 percent level ⁵⁹ . This indicate that Chinese aid does have a general negative effect on QOG within countries over time.	Partly, but only at a 10 percent significance level
H₄: <i>Higher levels of Chinese aid has a negative indirect effect on the effectiveness of DAC aid on good governance</i>	The indirect effect of Chinese aid on the effectiveness of DAC aid within countries is negative. However, the more Chinese aid, the smaller is the negative indirect effect of China over time. However the effect not statistically significant . This suggests that the idea that Western aid is less effective when China gives more aid is not supported.	No
H₅: <i>The more Chinese development aid, the better governance within developing countries.</i>	The effect of Chinese aid is negative in all models and statistically significant at a 10 percent level . The results clearly show that Chinese aid does not have a general positive effect within countries over time.	No

⁵⁹ The level of significance varies between 6 percent and 7.4 percent in the different models in chapter five. However, it is not statistically significant then GDP per capita is changed with GNI per capita.

6.2. The Effectiveness of DAC aid on Quality of Government

The first two hypotheses relate to DAC and Model 1, which is the model excluding the interaction term. The hypotheses **H₁** “The more development aid from DAC donors, the better governance within development countries”, and **H₂** “The more development aid form DAC donors, the worse governance within developing countries” are mutually exclusive in this analysis. The hypotheses represent two different theoretical views of how aid can affect good governance in recipient countries. On the one hand, it is argued that development aid can have a positive effect on good governance by building better bureaucracy and local institutions by releasing governments form binding constraints. Additionally, Western aid often comes with conditions attached on good governance and policy reform, which in turn can lead to better governance (Knack, 2001, p. 311; Bräutigam & Knack, 2004, pp. 255-260; Rajan & Subramaniam, 2007, pp. 322-323).

On the other hand, it is stated that aid can affect good governance negatively. Despite the good intentions of donors, foreign aid can diminish good governance by encouraging corruption and rent-seeking activities, fuel conflict between interest groups, and divert human resources form the public and private sector to aid-funded projects (Ear, 2007; Knack, 2001; Bräutigam & Knack, 2004; Quazi & Alam, 2015; Asongu, 2014; Tavares, 2003). Additionally, it is claimed that the intentions of donors are not always good. Donors often give aid for geopolitical or economic reasons, where the survival of the sitting government in the recipient country is the objective of aid allocations, regardless of good governance. This is especially important when studying bilateral aid, because the donors are country governments with their own foreign policy and development objectives (Smith, 2007; Mesquita & Smith, 2009).

The main findings in chapter five is that DAC aid on average has a positive effect on QOG within countries over time, but the effect is far from statistically significant in any of the models. The results indicate that DAC aid has no average effect on QOG, because neither of the hypotheses are confirmed. This means that it is not possible to rule out that DAC aid has an effect on QOG, but at the same time is it not possible to rule out that is does not. However, some of the theories presented above are more relevant to explain this outcome.

First, an argument presented in chapter two is that external resources can help good as well as bad governments survive, by reducing the cost of doing nothing and reducing the cost of political reform. As such, how development aid affects QOG depends on the existing government and institutions in the recipient country, and not on the pressure from donors

(Knack, 2001). This argument seems very plausible. However, because the analysis is based on a fixed effects estimation, it is not possible to control for such differences between countries. The aim is at finding out if DAC aid has a general effect in recipient countries, regardless of such country-differences. The results indicate that it does not. Because country-specific attributes are omitted, I cannot conclude based on these results that country differences is the reason why there is no general effect in the data. This must be left for future analysis.

Second, bilateral DAC aid represent many countries with different foreign policies regarding development aid and relations with recipient countries. As such, development aid from the US can be very different from aid from Norway or Denmark. Bilateral donors give different types of aid for different purposes. Bilateral aid is therefore a very complex phenomenon. As such, different types of bilateral aid from DAC donors may affect good governance differently. The variable on DAC aid is the sum of all DAC aid commitments per year. Despite being a much-used measure when one wants to *generalize* Western aid, the general measure might fail to control for the complexity of the phenomenon. This argument also discredits some of the literature where the argument is that Western aid have either a positive or negative effect on QOG in general. Maybe these theories tries too hard to generalize something that is very dependent on context. Hence, the results does indicate that generalizing the effect of Western bilateral aid within countries over time, will lead to results that are not significant.

To the degree that the results can be relied on, they question the view that Western aid is good while Chinese aid is bad. This is a very interesting finding, because of the harsh critique of China in Africa from Western donors. When it seems as if DAC aid does not have any general effect on QOG over time, and their intentions might not be as good as they communicate.

6.3. The Effectiveness of Chinese Aid on Quality of Government

The hypotheses **H₃**: “The more development aid from China, the worse governance within developing countries” and **H₅**: “The more Chinese development aid, the better governance within developing countries”, are also mutually exclusive. The hypotheses represent two different views of Chinese aid mentioned in the literature and discussions on Chinese aid. The most common view is that Chinese involvement will diminish governance. However, some scholars argue that the negative consequences of Chinese aid may be exaggerated, and that Chinese aid might have some positive consequences on governance. The

main findings in chapter five show that Chinese aid on average has a negative effect on QOG over time. The result is significant at a 10 percent level, or more precisely, at a 7.4 percent level in the main model in chapter five, except from when GDP per capita is exchanged with GNI per capita. H_5 is therefore discarded; there is evidence in the data that Chinese aid does not have a positive effect on QOG. However, H_3 is only partly supported, because there is some uncertainty related to the level of significance. Hence, Chinese aid does not have a positive effect on QOG, but the effect may not be negative either.

China values the principles of non-interference and South-South cooperation over political conditions and a traditional donor-recipient relationship. Therefore, China does not try to change the internal politics in the countries where they provide aid, as opposed to DAC donors. A central claim made by critics of Chinese aid is that China provide aid for their own self-interest and not because they are interested in developing African countries. As such, it is argued in the theory in chapter two that China is interested in the natural resources in Africa. The results can only say something about the possible effect of Chinese aid on QOG within countries over time, and not how Chinese aid differs between countries with regards to such self-interest. This is because natural resources do not vary over time and fixed effects omits all time-constant variables from the estimation. However, the intention is to say something about the general effect over time, regardless of these time-constant factors. In other words: How does Chinese aid work over time in relation to QOG after they have chosen to give development aid – regardless of the existing level of QOG?

The result that China does not have a positive effect on QOG is not surprising. The intentions of China is not to promote or better QOG, therefore we cannot expect that it will. It is especially important for China not to try to change governments in other countries, because they wish to promote their development aid as South-South *cooperation*. As such, they wish to contrast their aid to DAC aid, which has a clear donor-recipient relationship, where one is generous and has the upper hand, and the other one is grateful (Ravelo, 2017). China is quite clear on their motivations; they do wish to gain access to natural recourses, and to use development aid for diplomatic reasons, but at the same time they cooperate with recipients to create what they call a won-win situation. However, the aim of this thesis it not to study the motivations behind Chinese aid, but the effect that these motivations might have. Nevertheless, these motivations might be the reason why the effect if negative in all models.

If we compare the results of DAC aid and Chinese aid on QOG, it becomes clear that the two types of aid are very different. First, while creating better governance is an important

target for most DAC donors, China does not have intentions to change the policies in the recipient country. Second, the way that China gives aid is in sharp contrast to the way DAC gives aid. This is the reason why I have argued that Chinese aid should be defined different from DAC aid. China gives much of its aid through projects, often infrastructure projects, and Chinese ODA and Chinese official investments are highly interlined. DAC, on the other hand, give more aid through for example budget support, with conditions attached, and they often have other objectives. Therefore, it is not surprising that the two types of aid generate different results. Additionally, it is somewhat expected that DAC aid does not have any general effect on QOG over time, because the variable consists of so many countries with different motivations in different countries. China, on the other hand, seems to be more interested in doing good business with whatever country, regardless of regime. This could be one of the reasons why China has a general negative effect on QOG, compared to DAC aid. Hence, China is not trying to worsen governance, but they are not trying to raise the level of governance either.

The second claim about China is related to the fourth hypothesis, **H4**: “Higher levels of Chinese aid has a negative indirect effect on the effectiveness of DAC aid on good governance”. By offering alternative development finance to African governance, China can prevent good governance initiatives from traditional donors. China does have a negative effect on the effectiveness of DAC aid, but the interaction goes in the opposite direction than expected. When Chinese aid increases over time, the negative effect of DAC aid on QOG decreases. The effect is not statistically significant. Therefore, I find no support for this much debated hypothesis; hence, **H4** is discarded.

When comparing the result of **H4** to the results from the other hypotheses, this is the most surprising of them. It is somewhat expected that DAC aid does not have an effect on QOG because of the complexity of the phenomenon. In addition, it is somewhat expected that Chinese aid has a negative or not significant effect on QOG, and not a positive effect on QOG, because their intention is not to try to change the country where they give aid. However, the most repeated critique of China in Africa is that it will prevent good governance initiatives from traditional donors. Additionally, it is argued that Chinese aid will force Western donors to ask for less reform and policy change to stay competitive in the aid market. This is however not the case according to the data. This result suggests that DAC donors should focus more at trying to cooperate with China, instead of only casting blame upon China. China will continue to expand its influence in the World, not just within the field of development aid. Therefore, Western donors should focus more on the actual effects of China, instead of China's intentions.

The result of the interacting effect of China can be compared with the results from AidData's most recent released working paper on Chinese aid globally. Here AidData tests whether Western aid is less effective at accelerating growth in countries that also have significant access to Chinese aid. They argue that China does not have any effect on the effectiveness of DAC aid (Dreher, et al., 2017, pp. 26-27). Their method, use of additional data sources, and their research question is somewhat different. However, their findings are very similar to the findings in this thesis. As such, they generate support for the findings I have made here (Dreher, et al., 2017). The fear of the effect of China might be caused by the fear that Western hegemony over aid and development is over. DAC donors are no longer the only actors that can influence African countries with the use of aid.

The insights I have made here, suggest that more research on the effect of Chinese aid much is needed. All evidence point in the direction that China will expand its influence, and remain a major player in the field of international development aid (Grimm, 2014, pp. 993-994; Berthelemy, 2011, p. 6). Therefore, it is not enough to base the critique of China on assumptions. They need to be tested empirically; both to better predict how international aid will develop in the future, but also to foster more cooperation between China, the West, and recipient countries, to create better solutions for Africa and developing countries in other parts of the world in the years to come.

6.4. Concluding Remarks

This thesis was motivated by the growing importance of China as a donor, and the various claims that China diminishes good governance in Sub-Saharan Africa. The last twenty years the World has seen a change in the global development landscape, as emerging donors, with China in the lead, are representing a growing proportion of the total amount of development aid. By applying a theoretical framework on the possible effects of Western aid and Chinese aid on good governance, five hypotheses have been generated. The literature review and hypotheses focused on the lack of consensus in the literature on aid effectiveness, and the lack of empirical quantitative evidence on the effectiveness of Chinese aid. The thesis has tried to answer the following research question:

«Does Chinese development aid have an effect on good governance in Sub-Saharan Africa?».

Through the application of the method of panel data regression analysis using fixed effects, this thesis has tried to find out whether China has an effect on good governance in Sub-Saharan Africa. The dataset in this analysis consists of variables from the award-winning QOG dataset and the pioneering dataset on Chinese development finance from AidData from 2000 to 2013. The findings indicate that Chinese aid does not have a positive effect on quality of government over time, but that it is difficult to say with certainty that the effect is negative. The absence of a positive effect is somewhat as expected, because China does not try to improve governance in recipient countries. The theoretical framework and the analysis demonstrated that DAC aid and Chinese aid are quite different, which is a possible reason why they generate different results. Moreover, the robust non-significant result of DAC aid is very likely to be caused by generalizing a very complex phenomenon. It is also possible that DAC aid does not have any general effects on QOG over time. This must be left for further analysis.

The most critical finding in this analysis is the rejection of the hypothesis on the effect of Chinese aid on the effectiveness of DAC aid. The sharpest critic of China as a donor is that it allows recipients to “shop around” for the aid that best suits their interests and donors that is soft on bad governance. In turn, this will diminish the effectiveness of DAC aid. I find no support for this claim in this analysis. The results from this analysis suggests that DAC donors and critics of Chinese aid should focus more on China’s actual effects in recipient countries, instead of focusing on the intentions alone. As the result from DAC aid imply that conditioning aid on policy reform, is largely ineffective. Hence, the findings suggests that the intentions of donors may not have any general impact on good governance, and that it might be other factors that determine the success of development aid.

6.4. Implications and Further Research

This analysis has several implications. First and foremost, it has shown the importance of conducting empirical evidence on the effect of Chinese aid on good governance. The findings on Chinese aid indicates that existing research on the theme has not taken into account the actual effects of Chinese aid over time. Existing research has put too much effort into analyzing the intentions of Chinese aid, instead of the actual effects. This is especially important with regards to the finding that Chinese aid does not seem to have any effect on the effectiveness of DAC aid, despite the repeated critique of China regarding this in the literature. It is not enough to

assume that Chinese aid is “bad”; these claims must be backed by robust empirical evidence, especially if policies are to be based on these assumptions.

Secondly, there is evidence that China's principle of non-interference is challenged, and they are involving themselves more and more in the internal politics of countries around the World (Speed, 2017). In August this year, China opened its first military base on the African continent. China has for several years used their marine security ships to patrol the area around the Horn of Africa, to protect their own resources and recipient countries against Somali pirates. At the same time, they have been clear on their position of non-interference and refusal to interfere in the internal politics of the countries in Africa. As mentioned, these politics were challenged, after the civil war in Libya in 2011, when China evacuated 36 000 Chinese workers from the country. It is argued that in the aftermath of this incidence, China has realized that they have to involve themselves more in the politics of recipient countries to protect their own assets and interests. In recent years, China has taken a more active role in the UN and in the African Union to try to influence the political landscape in Africa (Speed, 2017; Pehnelt, 2007; Tan-Mullins, et al., 2010; Grimm, 2014). This has not been taken into account in this thesis, because data were only available from before 2013. However, it will be very interesting to follow this possible development in the future, and it should be included in future research when data becomes available. The possible politicizing of Chinese aid is a subject that should be studied qualitatively as well as quantitatively.

The results suggest that the complexity of DAC aid is the reason why it turns out non-significant in the analysis. However, if the individual DAC donors are so different that their positive and negative effects on governance is the explanation of the non-significant result, this call for better coordination. If DAC donors wish to help to lift the level of governance in Sub-Saharan Africa and elsewhere, international cooperation and coordination of development aid seems very important. For the level of good governance to increase, the effects from different donors should not zero each other out.

The results from this thesis clearly show that it is very important to gain more insight on the effects of Chinese development aid on good governance. There is room for much further research on the topic. The dataset I have used to answer the research question does have some weaknesses. Therefore, the effectiveness of Chinese aid on good governance, and the relationship between the two variables should be studied more closely, as more and better data becomes available. It is not only important to gain insight in how Chinese aid affects good

governance, but to find out more about the general effects of development aid and how it can create better governance in practice, not just in theory.

For future research on the subject, I will recommend to use the newly published data from AidData on Chinese aid *globally*, to control for contextual factors and country-specific differences. The new dataset contains data from 2000 to 2014 on 140 countries in Africa, Asia, the Pacific, Latin America, the Middle East, and Central and Eastern Europe that receive Chinese aid (Dreher, et al., 2017, pp. 1-2). The inclusion of more countries will lead to a drastic increase in observations, which in turn will better the data and results. This dataset makes it possible to compare the effects in Africa to the effects in other countries. As such, it is possible to check if the findings in this thesis can be generalized to recipients outside Sub-Saharan Africa. In addition, it should now be possible to analyze how contextual and country specific factors might affect the effectiveness of Chinese aid. The second recommendation I will make is therefore to extend the use of interacting variables in the research on the effectiveness of Chinese aid. It is important to broaden our knowledge on how institutions, natural resources, geography and so on can affect the effectiveness of China, but also to compare these effects to DAC aid. The within and between effect should therefore be studied more carefully. The new dataset from AidData was published one month before the deadline of this thesis. Therefore, there was not time to change the data, method, and research question to be able to use the new dataset in this thesis, and improve the analysis.

The third recommendation I will make, it is to use more disaggregated data on Chinese and DAC aid. It is possible to disaggregate Chinese aid to ODA, OOF and VOF. It would be very interesting to investigate whether these types of aid have different effects on good governance, both in general over time and between countries. The same argument applies for DAC aid. The results in this analysis suggest that DAC aid might be too complex to study the general effect of all DAC aid. To separate DAC aid from different countries or different purposes could generate a more nuanced picture of aid effectiveness, which should be compared to disaggregated aid from China. The aim here was to generalize, but in the future more specific analyses would be of interest.

The last recommendation I will make is to study the effect of good governance before and after China became a major donor. As such, it is possible to combine the dataset from AidData starting year 2000, with data on good governance and DAC aid from before this time. This would make it possible to study if there has been any significant changes with regards to good governance after China entered into the aid market, compared to when DAC donors were

the only major players within the field of development aid. Such an analysis would strengthen the findings or non-findings of the effect of Chinese aid.

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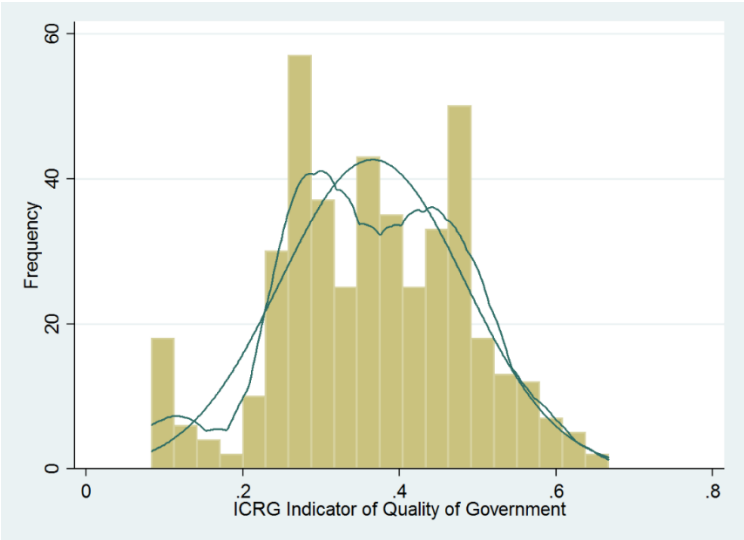
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Appendix

Table 1: Correlation Matrix ⁶⁰

	QOG	Chinese projects	China/GDP	DAC/GDP	GDP p. cap. (100)	Demo.	Pop.	Polit. Stabil.	Infant mort.
QOG	1.00								
Chinese projects	0.042	1.00							
China/GDP	0.03	0.09	1.00						
DAC/GDP	-0.20	0.01	0.03	1.00					
GDP p. cap. (100)	0.12	0.09	0.01	-0.26	1.00				
Demo.	0.17	-0.003	0.05	0.13	-0.02	1.00			
Pop.	-0.001	-0.01	-0.05	-0.12	-0.20	-0.18	1.00		
Polit. Stabil.	0.511	0.001	0.09	-0.01	0.17	0.3	0.36	1.00	
Infant mort.	0.47	-0.19	-0.05	-0.25	-0.39	-0.22	0.09	-0.30	1.00

Figure 1: Frequency distribution of the dependent variable, Quality of Government



Source: (Teorell b), et al., 2017)

⁶⁰ The command “corr” was used to produce the correlation matrix in Stata (Midtbø, 2012, pp. 84-86). The variables used in the correlation matrix, are the original variables before log transformation of some.

Table 2. Bivariate regression tables, Chinese aid and DAC aid

	Model 1: Chinese projects	Model 2: China/GDP	Model 3: DAC aid
Chinese projects (log)	-.2776 (.1793)		
China/GDP		-.1394 (.0809) *	
DAC/GDP (log)			.1484 (.1882)
Constant	38.1442 (.1574)***	39.0511 (.2144)***	35.629 (.1198)***
Sigma U	11.6879	11.4244	11.5028
Sigma E	2.3509	2.7951	2.0498
Rho	.9611	.9435	.9692
Observations	295	174	400
Countries	29	25	31
AIC	1313.868	827.3368	1680.026
BIC	1321.242	833.6549	1688.009

Level of significance: *= p<0.10, **=p<0.05, ***=p<0.01 (two-tailed test). Dependent variable: QOG. (Dahlberg, et al., 2017; Teorell b), et al., 2017; Strange, et al., 2015)

Table 3. Full model, Chinese aid and DAC aid separately

	Model 1: Chinese projects	Model 2: China/GDP	Model 3: DAC aid
Chinese projects (log)	-.3403 (.1916) *		
China/GDP		-.1481 (.0819) *	
DAC/GDP (log)			.2098 (.2175)
Control variables			
GDP Per Capita (in 100 \$) (log)	1.9525 (1.2389)	1.4338 (1.5014)	1.7776 (1.1533)
Democracy (Dichotomous)	.6805 (.784)	.5696 (1.0159)	.5398 (.6018)
Population (in 1000)	.0002 (.0001) **	.0001 (.0001)	.0000 (.0001)
Political Stability	.3244 (.6927)	.7391 (.916)	.6691 (.5552)
Infant Mortality	.1373 (.0531)***	.1371 (.0654)**	.0879 (.0436)**
Constant	18.8541 (.7539)***	39.0511 (.2144)***	25.1867 (.9849)***
Sigma U	15.54	11.4244	12.129
Sigma E	2.1969	2.7951	2.1035
Rho	.9804	.9435	.9708
Observations	228	174	309
Countries	29	25	31
AIC	981.9515	827.3368	1311.053
BIC	1005.9757	833.6549	1337.187

Level of significance: *= p<0.10, **=p<0.05, ***=p<0.01 (two-tailed test). Dependent variable: QOG. (Dahlberg, et al., 2017; Teorell b), et al., 2017; Strange, et al., 2015)

Table 6: Chinese aid as share of GDP

Variable	Obs.	Coun-tries	Mean	Std. Dev.	Between Std. Dev.	Within Std. Dev.	Min	Max
China/G GDP	200	26	.0428-2	2.3473	1.0889	2.1472	-9.6594	2.1782
Variable type	Variable		Measure				Source	
Independent variable	<i>Chinese Development Aid</i>		Amount of 2011 US\$ attached for all projects in a given country-year (% of GDP) (logged) Min/max year: 2000/2013 N: 26 n: 200				AidData: Strange et.al. 2017	

Table 7: GNI per capita

Variable	Obs.	Coun-tries	Mean	Std. Dev.	Between Std. Dev.	Within Std. Dev.	Min	Max
GNI per capita (log)	447	45	17.7755	1.4401	1.4821	.0277	14.0246	21.8705
Variable type	Variable		Measure				Source	
Control Variable	<i>Gross National Income Per Capita</i>		GNI per capita (constant prices, 2005 US\$) Min/max year: 2000/2013				World Development Index, World Bank: QOG (wdi_gnicapcon2005)	

Definition of Gross National Index: “Gross national income divided by midyear population. GNI is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net recipients of primary income (compensation of employees and property income) from abroad” (Teorell, et al., 2017, p. 640)

Results form regression diagnostics are available upon request.