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# CHINESE OFFICIAL FINANCING in SUB-SAHARAN AFRICA

## What are its effects on Africans' regime preferences?

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**Abstract.** China's rising development financing activities have attracted considerable attention especially after the announcement of the Belt and Road Initiative in 2013. While Chinese official financing can help fill the infrastructure gap that is seen as an important obstacle to development in most African nations, there is widespread concern for its potentially adverse effects on political norms and good governance. Contributing to existing literature about Chinese official financing, foreign aid and their effects, this thesis wants to investigate the role Chinese financing may play as an instrument for the promotion and legitimization of China's authoritarian development model and political system. Based on existing literature, I establish several links through which citizens affected by Chinese development projects will change their support for and approval of democratic and autocratic political systems. Combining geocoded data on Chinese official finance flows from 2000 to 2014 and six rounds of geocoded public opinion survey data for twelve countries with a quasi-experimental design, local effects of Chinese development projects on regime preferences are identified. My empirical findings indicate a positive effect on support for democracy in unstable democracies as well as increased disapproval of presidential dictatorships in countries with stable democratic regimes.

**Keywords:** International investments, Foreign Aid, Voting Behavior, Development Policy, Institutional Arrangements

**JEL:** F21, F35, D72, O22, O17

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# Acronyms

<b>BRI</b>	China International Development Cooperation Agency	1
<b>CEF</b>	Conditional Expectation Function	24
<b>DAC</b>	Development Assistance Committee	5
<b>DHS</b>	Demographic and Health Surveys	10
<b>EU</b>	European Union	1
<b>FOCAC</b>	Forum on China-Africa Cooperation	1, 4, 38
<b>GDP</b>	Gross Domestic Product	5
<b>HRW</b>	Human Rights Watch	10
<b>ICT</b>	Information and Communication Technology	9
<b>MOFA</b>	Ministry of Foreign Aid	3
<b>MOFCOM</b>	Ministry of Commerce	3
<b>ODA</b>	Official Development Assistance	3–5, 10, 15, 32, 33, 37, 40
<b>OECD</b>	Organisation for Economic Cooperation and Development	1, 3
<b>OFF</b>	Official Finance Flows	2, 3, 5, 6, 9, 13, 15, 18, 20, 22, 25, 27–34, 37–41
<b>OLS</b>	Ordinary Least Squares	16, 17, 24
<b>OOF</b>	Other Official Flows	3, 5, 15
<b>RCT</b>	Randomized Controlled Trial	37
<b>TUFF</b>	Tracking Underreported Financial Flows	14
<b>UNSC</b>	United Nations Security Council	5

# 1. Introduction

The year 2000 marked the establishment of the Forum on China-Africa Cooperation (FOCAC), a first step for Beijing to institutionalize Chinese-African cooperation on topics related to development assistance, economic development, trade and political partnerships (Barton and Men, 2013). Welcoming the initiative, more than a thousand leaders from 48 African countries attended the first Beijing Summit of the FOCAC in 2006, where Chinese president Hu Jintao announced commitments to advancing a "new type of strategic partnership" (MOFCOM, 2006). These announcements were followed by China's official financing commitments rising from US\$5 billion in 2006 to US\$60 billion in both 2015 and 2018 (ODI, 2018). With an increased share of foreign aid in official finance commitments, China became the third largest official donor to the continent after the United States and the European Union (EU) in 2018 (ODI, 2018).

In parallel, China's international investment ambitions have attracted large international attention with the launch of the Belt and Road Initiative (BRI) in 2013. With connectivity and infrastructure development lying at the centre of the BRI, its proclaimed aim is also to reduce barriers to trade, promote financial integration and enhance policy coordination as well as people-to-people exchange (Y. Huang, 2016).<sup>1</sup> As of September 2019, 40 out of the 55 African states as well as the African Union, had signed some sort of memorandum of understanding on the BRI (ODI, 2019).

In view of China's increasingly vast array of financing arrangements with African nations, in particular, uncertainty remains about the type of funds, their underlying terms and the motives behind. This uncertainty is fueled by both China's intransparency with respect to its official figures and the difficulties of the Organisation for Economic Cooperation and Development's (OECD) categorization of global development finance to accommodate for some of the complex structures of Chinese development financing instruments (Bräutigam, 2009). Amongst the manifold opinions raised, there is particular concern with regard to Chinese ambitions to export its so-called "China model" of authoritarian capitalism at the expense of potentially underwriting bad governance and stabilizing authoritarian regimes (Sun, 2014; Wood, 2008; Y. Huang, 2016).

As existing economic literature has identified inclusive and participatory institutions - and democracy as a prerequisite of these - as enablers of sustainable economic development (see Acemoglu and Robinson (2013) and Rodrik (2000)), it is highly important to investigate the context and impact of Chinese official development financing from a global development perspective. In particular, more understanding has to be generated about the impact of Chinese official financing on foreign perceptions of the Chinese state as a role model of development and related changes in governance practices and the institutional environment. Scholars have so far examined the effects of foreign aid on governance and development mainly on a macro-level.

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<sup>1</sup>According to Y. Huang (2016), the projects include countries and subregions that together account for 64% of the world's population as well as 30% of GDP.

This thesis therefore sets out to study to which extent Chinese Official Finance Flows (OFF) will influence citizens' approval of autocratic ruling as opposed to supporting the democratic system in Sub-Saharan Africa. The idea is that citizens' preferences of either regime is shaped by a multitude of factors that are partly influenced by exposure to Chinese development projects. If the objective of Western "traditional" foreign aid has long been to promote democracy, liberal institutions and political accountability as catalysts for positive economic development, these consequences of Chinese practices have to be followed attentively. For this purpose, I use georeferenced data on Chinese Official Finance Flows as well as georeferenced public opinion survey data from 2000 to 2014 in order to identify local effects of Chinese (OFF) on regime preferences in a quasi-experimental setting.

Two main contributions are made: Firstly, the thesis sheds more light on China's official investment activities in African countries and provides empirical analyses of their effects. Secondly, it contributes to the limited literature on the interlinkages between foreign aid and individual political attitudes on the micro-level.

The following section serves to put Chinese OFF into context and discusses the most relevant theoretical and empirical literature. It ends with a theoretical framework to capture how Chinese OFF are expected to influence Africans regime preferences based on the literature studied before. The third section presents the data and the empirical strategy used. Section four analyzes the results, followed by a number of robustness checks and a general discussion of the validity of the empirical strategy and implications of the findings in section five. Section six concludes.



## 2. Literature and Theoretical Considerations

The following section presents theoretical and empirical literature related to the research question. Some background about several aspects of Chinese development finance is provided in the first subsection. The objective thereafter is to first identify factors that influence regime preferences in the African context, followed by existing empirical findings of the local effects of Chinese OFF on exactly those aspects that are identified as factors of influence before. Based on these, the fourth and last subsection theorizes the relationship between Chinese OFF and regime preferences. More specifically, a table captures the direction of the expected effect of Chinese OFF on regime preferences for each factor of influence.

### 2.1 Chinese Official Finance Flows - An Overview

#### 2.1.1 Terms and definitions

The global development finance structure can be separated into the funds provided by the private sector and those bankrolled through the government (OFF)(Bräutigam, 2011b). The latter, on which this thesis lays its focus, can be subcategorized into Official Development Assistance (ODA) - Aid in its strictest sense - and other official flows (OOF). In order to qualify as ODA, the OECD's definition for data up to 2017 prescribes that the funds given to developing countries and to multilateral institutions have to be both motivated by a welfare and economic development promoting purpose and offered on concessional terms, which means that the loans have to include a grant element of 25 percent and higher using a ten percent discount rate (OECD, 2020a). OOF, in comparison, include loans with a grant element of less than 25 percent as well as "official bilateral transactions, whatever their grant element, that are primarily export facilitating in purpose" (OECD, 2020b). By definition, export credits fall into this category, as well as both subsidies to the private sector aimed at alleviating lending conditions to developing countries and funds that donor countries may offer to their firms in order to guarantee or subsidize their private investment activities in recipient countries.

Until recently, China's two primary instruments of ODA provision - grants and zero-interest loans - fell under the responsibility of the Ministry of Commerce (MOFCOM), whereas China Eximbank, one of the two policy banks that also play a key role in advancing China's domestic development objectives, provides concessional loans (Bräutigam, 2011a). Only in March 2018, the China International Development Cooperation Agency (CIDCA) has been established to overtake the responsibilities of MOFCOM and Ministry of Foreign Affairs (MOFA) and consolidate the management of external assistance.

As for OOF, both China Eximbank and China Development Bank are involved in offering export buyers' credits, official loans at commercial rates and strategic lines of credit to Chinese

firms (Bräutigam, 2011b). In the following, the term development projects or development finance will be used to refer to all funds provided by the Chinese state, whereas the term Chinese Aid will strictly be limited to ODA flows.

### **2.1.2 Official finance allocation motives**

During the early phases of China's aid policy, during the Cold War period, Chinese official finance flows consisted of grants and interest-free loans only (Bräutigam, 2011a). These are said to have mainly been motivated by political and ideological interests (Dreher and Fuchs, 2015). With Mao Zedong, Chinese foreign aid expanded significantly to the African continent in pursuit of political leadership in the developing world (Davies, 2007), but 1995 reflected a turning point in China's aid policy, as foreign aid was now being embedded into the overall trade and investment activities and included new forms of finance such as low-interest preferential loans and joint ventures (Kobayashi, 2008). This form of cooperation entered a new phase with the previously mentioned Beijing (FOCAC) summit in 2006 and the creation of the China Africa Development Fund (MOFCOM, 2006).

All the while, China maintains its principle of non-interference and state sovereignty that has consisted a major pillar of its foreign policy since the five principles of peaceful coexistence had been formulated between 29 newly independent Asian and African states in 1955 (Pehnelt, 2007). Based on Sun (2014) and Y. Huang (2016), four broad national interests that motivate China's current economic engagement with Africa can be identified. Politically, the Chinese government grants assistance in return of support for its One China Policy and other political agendas in multilateral fora. Economically, gaining access to natural resources and new export markets helps China sustain its economic growth. In terms of security interests, security infrastructure to protect its interests outside its borders also motivate part of their funding.

Fourthly and lastly, China wants to promote the success of its own development model outside its national borders to win support for its political ideology. Sun (2014) argues that it is in the largest authoritarian regime's nature to attribute fundamental importance to the preservation of its legitimacy. While domestic legitimacy is achieved through increased economic welfare enabled by reforms and openness, the objective internationally is to show that the "China model", a combination of political authoritarianism and economic capitalism, can provide economic development and political stability in African countries without democracy. The China model is thus to be promoted as a viable alternative to Western democracy, which had for decades been conveyed as a universal value. Along this line, Custer et al. (2019) name official finance as one of five public diplomacy instruments - informational, cultural, exchange, elite-to-elite diplomacy and financial diplomacy - that China uses strategically to project an attractive image of itself to the world. These instruments, it is reasoned, should move citizens and leaders outside China from growing awareness of its political model to increased favorability and greater alignment.

Compared to aforementioned theoretical claims, empirical findings do emphasize the importance of foreign policy objectives and commercial interests in determining the allocation of Chinese

OFF, but the insignificance of institutional quality is only found to apply to ODA flows (Dreher, Fuchs, Parks, et al., 2018; Landry, 2018). Specifically, using data of all Chinese official finance commitments to Africa from 2000 to 2013, Dreher, Fuchs, Parks, et al. (2018), find that ODA flows seem to be largely motivated by indicators such as Taiwan recognition and United Nations Security Council (UNSC) membership as well as poverty needs. Access to resources and institutional quality, by contrast, seem not to matter (Dreher and Fuchs, 2015). Other, less concessional forms of OFF are found to be mostly guided by economic interests such as trade relations, oil resources and the debt to Gross Domestic Product (GDP) ratio (Dreher, Fuchs, Parks, et al., 2018). Contrary to initial expectations, higher corruption levels seem to positively influence the allocation decision of OOF (Dreher, Fuchs, Parks, et al., 2018).

### 2.1.3 General concerns

As emphasized in the introduction, limited clarity about the scope and motivations of China's growing ties with African countries combined with the unconditional nature of Chinese official financing fosters concerns about immediate and long-term negative implications on recipient countries' development and governance. Under the title "Rogue Aid", a widely cited article accuses new donors of "undermining development policy [...] stifling real progress [...] underwriting a world that is more corrupt, chaotic and authoritarian, which is in no one's interest but the rogues." (Naim, 2007, p.96, 95). Arguing from a somewhat one-sided perspective, this article refers to the more widely shared concern that Beijing's insistence on non-interference undermines undergoing efforts of Western donors to promote good governance, democratic institutions and fiscal accountability. As China enters as an alternative source of financing, recipient countries can turn to China without having to follow the prescriptions made by Western donors (Hilsum, 2005; Lammers, 2007; Tull, 2006). This way, China might replace well-established DAC practices and objectives with its own development model and thus render demands for institutional progress ineffective (Wood, 2008).

A second concern regards the risk of unsustainable debt levels as a result of the Chinese government being willing to provide non-concessional loans to projects that other financiers deem financially unsustainable (Custer et al., 2019; Manning, 2006; Pehnelt, 2007). This concern is further reinforced as the terms and conditions of these loans are only partially disclosed (Horn et al., 2019). Thirdly, it is feared that some investments, despite not having the potential to contribute to local welfare, are not appraised with care and implemented for political reasons. Most exemplary for this behavior are prestige projects such as large stadiums or parliamentary buildings as a favor to political leaders (Tull, 2006). A fourth aspect regards China's extraction of resources, which is a result of their practice to have loans collateralized with resources. A practice that it had experienced as a recipient of aid itself earlier (Bräutigam, 2009). Other aspects that are not limited to official finance, but Chinese investments abroad in general, include low standards both regarding the environment and labor rights (Kaplinsky et al., 2007) and the predominant use of Chinese labor and material and thus risks of reducing local employment and supplier opportunities (Mohan, 2013).

It has to be noted, however, that some criticism is partly fueled by a failure of public reporting to make the distinction between those shares of Chinese OFF that qualify as Aid and those legitimately motivated by commercial interests, as has been heavily emphasized by Bräutigam (2009). As this subsection has provided an overview of Chinese OFF, terms and definitions, allocation decisions and general concerns, the next subsection's objective is to establish some background information on democratic support and regime preference formation in the Sub-Saharan African context.

## **2.2 Democratic Support in Sub-Saharan Africa**

As a starting point in thinking about political systems and regimes, David Easton (1975) in his theory of political support, distinguishes between three components of a regime. These are values, norms and rules, and the structure of authority, i.e. the power distribution patterns with respect to authoritative decision-making. Related to this conceptualized distinction, Park and Chang (2013) identify three specific notions in terms of which support for democracy can be measured. Next to attitudes towards specific democratic norms and procedures, and attitudes towards specific democratic institutions such as the multiparty system and general elections, the focus of this thesis will remain on attitudes toward democracy as a whole, measured as accepting democracy as the most preferable form of governance. Some understanding of the evolution of Sub-Saharan African political systems and the factors in influencing regime support has to be developed at this point in order to be able to theorize on the influence of Chinese development finance on democratic support.

### **2.2.1 Characterization of Sub-Saharan African regimes**

The political landscape in Africa was dominated by authoritarian regimes up until the end of the cold war period (S. I. Lindberg and S. Lindberg, 2006). Optimism amongst proponents of democracy arose during the 1990s, when a number of countries around the world, including many Sub-Saharan African states underwent processes of democratization (S. I. Lindberg and S. Lindberg, 2006). Scholars of democracy and political systems, however, do not agree on whether this optimism is justified as forms of "electoral authoritarianism" and hybrid regimes have newly been established that, officially, are designated democracies (Collier and Levitsky, 1997; Joseph, 1997; Levitsky and Way, 2010; R. Rose and Shin, 2001).

The terms "electoral authoritarianism", "hybrid regimes" or "semi-democratic" are used to characterize regimes that did not complete a full process of democratization, but, instead, adopted some version of mixed democratic and autocratic rule in which the inadequacies of elites meet low popular democratic expectations (A. Goldsmith, 2010). R. Rose and Shin (2001) concede that this nomination especially applies to countries that had, in the third wave of democratization, introduced contested elections before the necessary socio-economic foundations and institutions for democracy had been existent; typical especially for a number of African countries over the past two decades. These regimes are characterized by the adherence to some of the principles

of constitutional and pluralistic rule, but a lack of adoption of protection of individual political liberties, respect for legitimate political opposition and more far-reaching institutional restraints.

The polity IV data series provided by the Center for Systemic Peace (Marshall et al., 2017) collects annual scores that reflect a complex assessment of qualities of both democratic and autocratic authority in governing institutions. Based on their data, the number of autocracies in Africa has seen a drastic fall in 1990 and has been decreasing ever since. Meanwhile, the number of African countries classified as democracies based on the score has been increasing from five in 1990 to around 15 to 20 countries contemporaneously, whereas the number of anocracies, defined as a "regime that mixes democratic with autocratic features" (Marshall et al., 2017) and equivalent to what has been discussed under the terms of hybrid regimes and electoral authoritarianism has seen an immediate rise after 1990 to around 33 African countries and lingers around this number up until today (Arezki et al., 2012).

Bearing this background knowledge in mind, potential factors that may shape regime preferences on an individual level shall be discussed in the following.

### **2.2.2 Support for democracy - Factors of influence**

There is no consensus amongst scholars on whether support for a regime is mostly determined by economic outputs or political values. The rational choice theory centers around an individual who has well-defined preferences over potential outcomes and consequences of her actions (Acemoglu and Robinson, 2001). Based on this preference relation, the individual will choose the action, including support for a certain political regime, that delivers the most preferred outcome for herself above ideological reasonings (Diamond, 1992). Therefore, both the state's capacity to respond to citizens' demands and citizens' assessment of how the state performs in meeting those demands are essential in determining support for a political regime. These demands have in this strand of theory usually been narrowed down to materialistic well-being and economic outcomes.

Relatedly, Kotzian (2011) claim that, for their sample of 36 countries, national economic performance seems to be most decisive system-level factor for system support whereas public support for liberal democracy does not seem to be improved by the degree of democracy and political liberties. Research on political transition experiences in postcommunist Central and Eastern Europe or former East Germany similarly find that evaluations of the national economy as well as individuals' economic circumstances are most important in determining support for democracy (Dalton, 1994; Kitschelt, 1992).

M.-h. Huang et al. (2008), however, caution against theories that treat political attitudes as simple derivatives of economic conditions. Instead they broaden the previously introduced understanding of the rational choice approach by the inclusion of political demands, but similarly assume that dissatisfaction with the government due to its failure to perform on certain issues may ultimately erode confidence in the ability of the political system itself. These performance evaluations, however, are found to be based on both political and economic factors, where political goods that include freedom, political accountability and representativeness matter more than

economic conditions. Chu et al. (2008) also confirm that the survival of young democracies based on popular support does not primarily rely on economic growth and material well-being.

In the African context, Bratton and Mattes (2001) similarly discover from the Afrobarometer public opinion surveys, conducted between 1999 and 2001 in twelve countries, that support for democracy amongst Africans is not necessarily linked to satisfaction with the performance of the government. Rather, its approval depends on its ability to guarantee basic political rights. Using the same Afrobarometer data and survey round, Mattes and Bratton (2007) find that, contrary to conventional beliefs, Africans do not primarily form their political opinions based on social circumstances or cultural values, but rather based on their learnings about its content and consequences through their awareness of public affairs, direct experience of the government and conclusions from national political history.

Magalhães (2014), by contrast, argues that, despite an existing link between government satisfaction and support for the democratic principle, one should not be seen as a cause for the other. Instead, it is claimed that specific support - support to the current government as defined by Easton (1975) - may be affected by short-term events and economic performance, whereas diffuse support - support for a political system itself - is established over time through consistent performance by a new regime and socialization and is thus robust to short term fluctuations. R. Rose and Mishler (2002) differentiate between well-established democracies where political attitudes are changed only slightly and societies that experienced transformations or have only recently transitioned to democratic forms of ruling such that their citizens' political attitudes may significantly reflect short-term fluctuations in government performance.

### **2.2.3 Foreign aid and regime change**

In contrast to only limited research on the influence of foreign aid flows on individual political preferences, the links between foreign aid and democratic transition with a focus on mechanisms that affect government behavior have been subject to extensive research. A brief overview of these will complement our understanding of interlinkages between foreign funds and political changes.

Most scholars have focused on aid revenues as a form of non-tax revenues, comparable to oil revenues, that the government can discretely use for its own strategical interest given the lack of accountability towards the citizens that lies in the nature of these extra funds (Bader, 2015; Djankov et al., 2008; A. Smith, 2008). This lack of accountability and reduced pressure on political legitimacy can contribute negatively to the democratization process when those resources can be used to buy and reward loyalty from a small group of supporters that is theorized to be critical for an autocrat to remain in power (Ahmed, 2012; De Mesquita and A. Smith, 2010; Van de Walle, 2001).

Moreover, foreign aid revenues are expected to induce moral hazard, reducing incentives for governments to invest into effective institutions and to produce public goods such as rule of law as the government does not have to bear the full consequences of malfunctioning institutions once foreign aid can be used to provide remedies (Booth, 2011; Bräutigam and Knack, 2004; Moss et al.,

2006).

Morrison (2007), however, posit that the negative implications of these non-tax revenues might be limited to poorly governed societies, whereas a state with good institutions may use the revenues for the benefit of the citizens. In fact, a range of literature argues that the effectiveness of aid in promoting development depends on the institutional environment in the recipient country (most notably Burnside and Dollar (2000)). As a result, foreign aid might simply have a regime stabilizing effect instead of purely negative implications for democratic institutions. (B. Smith, 2004; Dutta et al., 2013). A. A. Goldsmith (2001) similarly argues that the moral hazard argument underestimates local ownership, the willingness of local leaders themselves to achieve institutional change, and the power of new ways of thinking about governance etc. transmitting into the country with technical assistance and educational exchanges. With that respect, Bermeo (2011) and Dunning (2004) argue that the extent to which donors are interested in the democratization outcome of a recipient should be able to influence the outcome itself. Their empirical findings show that aid from democratic donors is positively associated with the likelihood of a democratic transition as compared to no effect for authoritarian donors and that it is less likely to be associated with authoritarian transitions than that of authoritarian donors.

This subsection has identified and discussed three potential factors of influence for regime preferences. These are the belief about which type of regime will best meet personal economic needs, the belief about which type of regime will best provide political goods and lastly, satisfaction with the government. Along the line of these, empirical findings on the effects of Chinese development projects on economic development, practices and norms as well as individual perceptions of donor and government are explored in the following subsection.

## **2.3 Local Effects of Chinese Development Projects**

### **2.3.1 Economic development**

Aiddata's Chinese OFF dataset shows that an important part of Chinese official finance in Africa is targeted at the development of infrastructure projects in sectors related to power generation, water supply, information and communication technology (ICT) and transport facilities. It was estimated that, in 2007, power generation capacity and household access to electricity in Africa was about half the level of South Asia, a region with a lower GDP per capita at that time (Foster et al., 2009). Overall, there seems to be a large gap in infrastructure development indicators that separates Sub-Saharan African countries from other developing regions, which might cost them a yearly one percentage point reduction in per capita GDP growth (Foster et al., 2009). China's provision of large-scale finance for infrastructure may thus potentially help to reduce these existing deficiencies and contribute to economic development. In fact, in China itself, improved transport infrastructure seemed to have played an important role in promoting economic growth and alleviating poverty between 1994 and 2002 (Zou et al., 2008).

Empirical evidence with regards to economic development is similarly positive about Chinese

official development finance. Studying Chinese development projects in 47 African countries, Dreher, Fuchs, Hodler, Parks, P. A. Raschky, et al. (2019) find a significant contribution to subnational economic development, measured as nighttime light emissions per capita, on both district and provincial level. Interestingly, this effectiveness is despite a disproportionate distribution in the allocation of Chinese official finance towards regions of birth of the the recipient countries' political leaders, which had been shown in previous findings (Dreher, Fuchs, Hodler, Parks, P. Raschky, et al., 2016). Moreover, results from 138 countries between 2000 to 2014 show that not only do these projects increase economic activity where they are implemented, but due to positive economic spill-over effects, they actually contribute to a reduction in economic inequality Bluhm et al. (2018).

In addition, Martorano et al. (2020), using the same geocoded Aiddata and various development outcomes from the Demographic and Health Surveys (DHS), find households near Chinese projects to fare better in terms of education and child mortality in the long-term, with additional improvements in health for social sector projects in particular.

### **2.3.2 Practices and norms**

In contrast to previous findings on economic indicators, studies about other local effects have been less optimistic. Chinese development projects seem to increase the probability of individuals reporting bribery experiences in Tanzania (Not for ODA projects) and other African countries while using the same set-up did not find a similar effect for World Bank projects (Brazys et al., 2017; Isaksson and Kotsadam, 2018a). It is hypothesized that this might stem from norms transmission and increased economic benefits that are available for capture. The difference then arises from the fact that, having a greater interest in policy outcomes, the World Bank manifests "donor control" and applies a higher degree of oversight as opposed to the Chinese government seeming to facilitate "aid capture" with its non-interference principle (Milner et al., 2016).

Concerning labor rights standards, Isaksson and Kotsadam (2018b) show that, using geocoded Afrobarometer data from 18 African countries over the period 2000 to 2012, trade union involvement is significantly lower once Chinese development projects are implemented. The same does not apply to projects implemented by other bilateral and multilateral donors. Based on interviews with 47 workers, owners and managers at several construction sites run by four Chinese companies in Namibia, Jauch and Sakaria (2009) report a lack of adherence to regulations regarding employment conditions, minimum wage and work-hour regulations required by national labor law. Similar findings are reported by HRW (2011) (HRW) which compared labor practices of Chinese state-owned companies in the Zambian copper mining industry, drawing on 170 interviews with mine workers, mining union officials, journalists and others.

### **2.3.3 Individual perceptions of donor and government**

Within the context of my research question, it is particularly relevant how Chinese official development finance changes individual perceptions of China and satisfaction with their own government.



Wang and Elliot (2014) study African perceptions about China's presence, conducting surveys, field research and interviews with African scholars as well as Chinese and American expats in eight Sub-Saharan African countries. Their results indicate that, on the one hand, China is viewed as contributing to the countries' economic development as a beneficial investor, business partner and donor and that both Chinese culture and the Chinese development model of authoritarian state-capitalism has gained followers. On the other hand, complaints about damage to local business environments, predatory resource extraction and geo-strategic behavior are on the rise.

Responses from the Afrobarometer's sixth survey round show that the most prevalent reasons for a positive perception of China is their investments in the country's infrastructure, China's business investment and the quality or cost of Chinese products. In contrast, negative perceptions are driven by the perceived low quality of Chinese products and taking jobs and business from local people. Responses vary starkly from country to country. Interestingly, out of the 32 Sub-Saharan countries included in the survey, the share of respondents viewing China as the best model for future development is higher than that for the US in eleven countries.

Literature on effects of foreign aid on perceptions of donors, in general, is limited. Dietrich, Mahmud, et al. (2018) find that a US-funded health initiative in Bangladesh induced positive views on the US, conditional, however, on the individuals' knowledge about the funder. Similarly, B. E. Goldsmith et al. (2014) find that a US aid program addressing HIV in several countries raised public opinion of the US. They conclude that targeted, sustained, effective and visible foreign aid can strategically help to induce positive perceptions about the donor country.

Regarding the influence of foreign aid on citizens' opinion on their government, existing research remains controversial. Blair and Roessler (2018) summarize that the majority of existing literature argues that foreign aid decreases government legitimacy by disrupting the virtuous cycle between government provision of public goods and government legitimacy. Essentially, the virtuous cycle consists of public goods being provided by the government, which increases its legitimacy amongst citizens, which increases their willingness to pay taxes, which increases the revenues for governments to be able to provide public goods. Brass (2016) claims that citizens may be led to question their government's capability in providing public goods while Jablonski (2014) theorizes that citizens might be dissatisfied with the distribution of Aid and suspect unequal treatment and favoritism by the government. Improvement in citizens' perceptions of their government, on the other hand, can be expected as citizens mistakenly attribute the provision of public goods to their government (Cruz and Schneider, 2017; Guiteras and Mobarak, 2015) or credit the government for its ability to channel foreign resources into the country despite the public goods not being provided by the government itself (Dietrich, Mahmud, et al., 2018). Empirically, Blair and Roessler (2018) and Dietrich and Winters (2015) find that Chinese Aid and knowing that the public good is foreign funded, does not seem to have any impact on the citizens' relationship with their state authorities, measured in terms of satisfaction with the government or willingness to comply with taxing.

## 2.4 Theorizing Chinese Development Finance and Regime Preferences

Based on the findings of existing literature presented in the previous sections, the objective is now to systematically connect the various aspects into a framework that helps to understand the potential channels through which Chinese development finance flows are linked to individual regime preferences on a local level. In summary, existing literature points at the following factors that are expected to shape regime preferences and also found to be affected by Chinese development projects.

- Belief about which regime can deliver best on economic outcomes and material well-being (Acemoglu and Robinson, 2001; Dalton, 1994; Kitschelt, 1992; Kotzian, 2011).
- Belief about which regime can deliver best with regard to political goods (Bratton and Mattes, 2001; Chu et al., 2008; Evans and Whitefield, 1995; M.-h. Huang et al., 2008).
- Satisfaction with government performance, i.e. specific support (Bratton and Mattes, 2001; Chu et al., 2008; M.-h. Huang et al., 2008; Kotzian, 2011).

The expected direction of the effect of Chinese development projects on regime preferences with respect to each of these factors is presented in Table 2.1. A distinction is made between stable democracies and those democracies that are characterized as having hybrid regimes, as the susceptibility of regime preferences to short-term influence factors related to economic performance is expected to differ between them, as claimed by R. Rose and Mishler (2002). Although some might argue that support for democracy and disapproval of authoritarian rule are two sides of the same coin, they are treated separately in the analysis as correlations between these two variables using Afrobarometer data are less than 0.4 and thus show that one does not necessarily imply the other.

Table 2.1 starts with the positive effects that Chinese development projects have been found to have on economic conditions and individual poverty indicators (Bluhm et al., 2018; Dreher, Fuchs, Hodler, Parks, P. A. Raschky, et al., 2019; Martorano et al., 2020). While citizens in stable democracies are assumed not to change their regime preferences based on these short-term economic indicators, individuals in less stable societies are likely to reassess their beliefs about which regime is able to satisfy their economic demands better. As the increase in economic conditions can be attributed both to the government for those who do not know that the projects are foreign-funded and China for those who know of their involvement, support for democracy in unstable democracies is expected to increase and disapproval of autocratic forms of ruling is expected to decrease.

The effect of Chinese development projects on political liberties, which have been found to be very important for citizens in supporting a specific regime has been shown to be rather negative. In particular, the reported increase in corruption levels and suppression of trade union formation is easily associated with Chinese presence and throws a negative light on the ability of the authoritarian regime to grant political liberties and ensure political accountability (Brazys et al.,

Table 2.1: Expected Effects of Chinese Development Projects on Democracy Support by Channel

	Support for Democracy		Disapproval Autocratic Rule	
	Democratic	Hybrid	Democratic	Hybrid
Economic Conditions	0	+	0	-
Political goods	+	+	+	+
Specific support	0	0	0	0
Total	+	++	+	0

2017; Isaksson and Kotsadam, 2018a; Isaksson and Kotsadam, 2018b; Jauch and Sakaria, 2009). When the democratic system stands in direct comparison with above-mentioned deteriorations associated with the Chinese, people exposed to Chinese development projects may be led to increase both their support for a democratic system and disapproval of authoritarian rule.

With regard to the link between foreign aid and satisfaction with the performance of the government, the majority of related literature argues that foreign aid disrupts the virtuous cycle of public good provision and government legitimacy. Given that Blair and Roessler (2018) and Dietrich and Winters (2015), however, do not find any effects for Chinese development projects on government satisfaction and the fiscal contract, the table marks the effect of Chinese OFF on regime preferences via the channel of specific support for the government satisfaction with a plus. Since this channel is only related to the domestic regime, a zero is noted for disapproval of autocratic rule. Moreover, specific support for the government is argued not to translate into diffuse support for a regime in stable societies, either effect of Chinese development projects on government satisfaction would not affect regime preferences, which is why Chinese OFF are not expected to affect regime preferences through this channel.

Aggregating the individuals effects into one expected effect for each regime type-country combination, the framework shows an overall expected positive link between Chinese OFF and democracy support for individuals in countries with both democratic and hybrid regimes and an expected increase in disapproval of autocratic forms of ruling in stables democracies. It is important to note that this framework does not aim to make any predictions, nor even hypotheses about the results. Its purpose is rather to summarize the findings from the literature in a structured way in order to be able to guide thoughts about the influence of different factors in determining regime preferences along this line. Optimally, this table will make the interpretation of the results and potential explanations easier to understand.

As this section has established the conceptual and theoretical understanding of Chinese OFF, regime preference formation and their links in the context of Sub-Saharan Africa, section three presents the data and empirical strategy, followed by an analysis of the results in section four.

### 3. Data and Empirical Strategy

For the empirical analysis, I rely on geocoded data of Chinese official finance flows from 2000 to 2014 and geocoded Afrobarometer survey data for those twelve Sub-Saharan countries for which data is available for all of the six survey rounds over the years between 1999 and 2015. These countries are Botswana, Ghana, Lesotho, Mali, Malawi, Namibia, Nigeria, South Africa, Tanzania, Uganda, Zambia and Zimbabwe. The following three subsections will briefly present the data that are used, followed by an introduction to the empirical strategy that is applied to analyze the causal relationship between Chinese Official Finance and regime support.

#### 3.1 Chinese Official Finance Data

Data on Chinese official finance flows including their project location coordinates are provided by the Aid Data’s geocoded Chinese Official Finance to Africa dataset, first introduced on a project-level basis by Strange, Parks, et al. (2015) and geocoded by Dreher, Fuchs, Hodler, Parks, P. Raschky, et al. (2016). Due to a lack of publicly available official data on Chinese aid and official finance activities, this dataset was constructed based on AidData’s TUFF methodology, an open-source media based data collection technique. Variables of interest that the dataset contains are all projects that have been completed or are being implemented and their assigned geocoordinates, the precision level at which these geocoordinates were assigned, project title, recipient countries, start and end date of transaction, status of implementation, sector, type of flow such as grant, debt forgiveness, stand-alone technical assistance and others and the categorization into ODA-like, OOF-like and vague flows. Information on the actual start and completion date, the committed and disbursed amounts as well as the implementing agency is not available for all projects.

Relying on information available through public media outlets, the data collection strategy underlying this Aiddata’s dataset is naturally exposed to several challenges concerning data completeness, accuracy and credibility (Reeves et al., 2006; Woolley, 2000). These are discussed in great detail by Strange, Parks, et al. (2015) along with various measures that were taken to account for these issues and ensure the reliability of the data. Similarly, AidData’s geocoding process follows a strict quality assurance protocol detailed in AidData (2017).<sup>1</sup>

Once the original dataset is reduced to the twelve countries of interest, 1412 project records remain. Of these 1412 projects, only those for which sufficiently granular location information is available can be included into the analysis. For this purpose, each project record is assigned a precision level ranging from one to eight to permit data users to select different subsets of the data depending on the level of granularity at which information is needed. Precision level one and two are assigned when coordinates correspond to or are less than 25 km away from an exact location

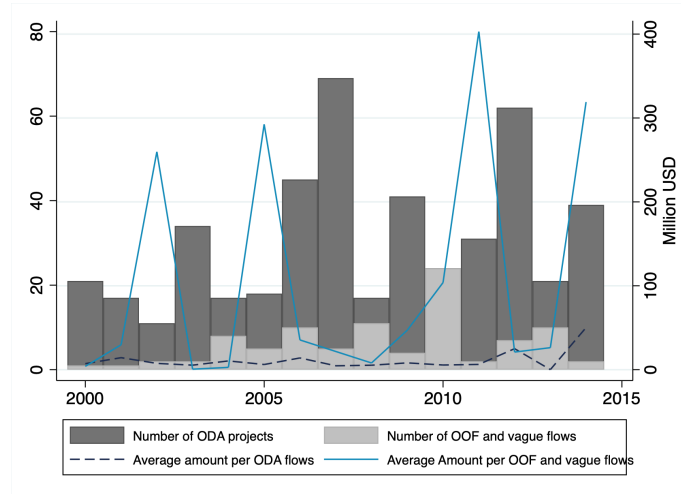
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<sup>1</sup>A brief summary of both the TUFF methodology and the geocoding process can be found in appendix A. Detailed information on the data collection methodology can be found in Strange, ODonnell, et al. (2014).

such as a populated place (village, city) or a physical structure such as a health center or road. As my identification strategy relies on the preciseness of measured distances between projects and respondents, the sample is reduced by roughly half to include only 690 project records up to a precision level of 2. Out of these projects, more than 90 percent have coordinates that correspond to an exact location. A robustness check will also test for the sensitivity of the results, using 874 project records up to a precision level of three.<sup>2</sup>

Figure 3.1 shows the number of projects up to precision level two that are under implementation or have been completed per year of agreement. Financial flows are classified according to the previously defined ODA and OOF classes, while vague official flows are those flows for which information on intent and concessionality was not sufficient for a classification (Bluhm et al., 2018). The number of ODA projects includes the part of the bars that is colored as light-grey. It can easily be seen that the number of ODA projects take up a greater part of total official flows, but seem to have lower average committed amounts. This thesis' primary analysis will make no distinction between the different flow classes as the relationship under investigation is expected not to differ significantly between ODA and non-ODA flows. Since existing literature has shown, however, that the motivations for these two flow categories differ partly and there is concern that this difference may lead to varying effects, a separate sub-analysis is run on ODA flows only.

Figure 3.1: Number of Projects per Flow Class and Year

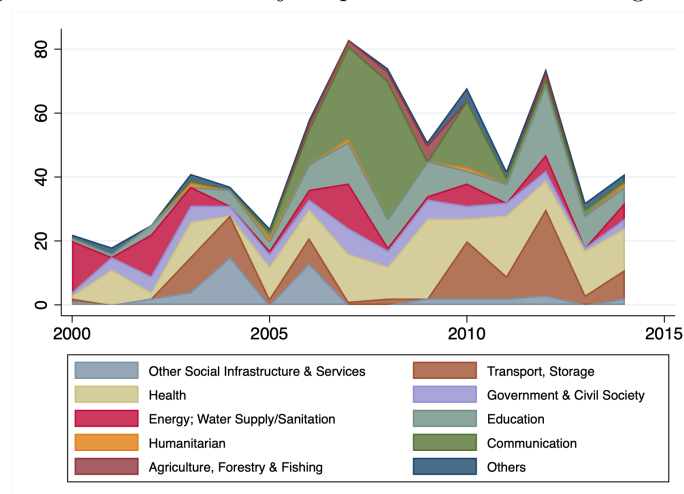


Data Source: *Strange, Parks, et al. (2015)*

Figure 3.2 sheds more light on the distribution of projects per sector. Several sectors seem to be particularly popular in attracting Chinese official flows. These are, from bottom to top, Transport and Storage, Health, and Communication. The sudden surge in the number of communication related projects after 2005 is particularly prominent. By comparison, humanitarian assistance and Agriculture, Forestry and Fishing related financial flows seem to be underrepresented on this precision level or even in general.

<sup>2</sup>While narrowing down the projects based on their precision codes is necessary to allow for an accurate estimation of the effects of Chinese OFF, the estimates will be limited to those official flows that have been attributed to a specific project location without taking into account those flows that are, for instance, channeled to the government in the form of budget support. Bearing this constraint in mind, I will continue to use the general terms Chinese OFF or Chinese development projects for simplicity.

Figure 3.2: Number of Projects per Sector and Year of Agreement



Data Source: *Strange, Parks, et al. (2015)*

## 3.2 Afrobarometer Public Opinion Data

The Afrobarometer is a non-partisan series of national surveys that aims to capture social political and economic public attitudes in African countries. In cooperation with national partners, seven survey rounds have so far been completed every two to three years between 2001 and 2018. Having started off with twelve countries in the first survey round, the number of countries captured by the latest rounds has risen to more than 35 countries with either 1200 or 2400 respondents per country each year. Interviews are conducted face to face in the main local languages. The respondents are sampled following a multi-stage randomized sampling process such that each national survey sample is a representative cross-section of all of the country's citizens older than 17 years.<sup>3</sup>

The first six Afrobarometer survey rounds are geocoded on the enumeration area level using the same AidData geocoding methodology that was outlined before. These enumeration areas are uniquely identified across the whole dataset and usually consist of eight respondents. Out of the 121056 data points that are available for the twelve countries across six years, 46 percent are assigned coordinates at a precision level higher than two and are excluded from the sample with a similar reasoning as for the project records.

The Afrobarometer supplies three primary dependent variables of interest that capture the degree to which democracy is supported and to which autocratic forms of ruling such as one party rule and presidential dictatorship are disapproved. In order to enable the use of Ordinary Least Squares (OLS) regressions for my analysis, all these variables are transformed into binary variables. Table 3.1 shows the survey questions for the three outcome variables for regime preferences and how the response options are chosen to be assigned the values zero and one. As can be seen, the indicator variable for one-party rule and presidential dictatorship is one for disapproval and zero for both approval and neutrality. This choice is made because the distribution of responses is highly skewed towards disapproval such that a change from disapproval to neutrality is more important to capture than an increase in approval.

<sup>3</sup>A brief summary of the sampling procedure can be found in appendix A.

Table 3.1: Afrobarometer - Regime Preference Dependent Variables

	Question	Indicator Variable
Support Democracy	With which one of these statements are you most in agreement?	1 Democracy is preferable to any other form of government 0 To people like me, it doesn't matter what government 0 In certain situations, non-democratic government can be preferable
Disapproval One-Party Rule	Would you disapprove or approve of following alternatives: Only 1 political party allowed to stand for election and hold office.	1 Strongly disapprove 1 Disapprove 0 Neither disapprove nor approve 0 Approve 0 Strongly Approve
Disapproval One-Man Rule	Elections and Parliament are abolished so that president can decide everything.	1 Strongly disapprove, 1 Disapprove 0 Neither disapprove nor approve 0 Approve, 0 Strongly Approve

Taken from Afrobarometer survey round codebooks

Secondary outcomes of interest are related to perceptions of living conditions, the national economy, lack of food and income and political satisfaction. To enable the use of Ordinary Least Squares (OLS) regressions for my analysis, all these variables are transformed into binary variables. The survey questions and the respective response options for each of these variables, as well as how the binary variables are coded, can be found in Table A.1 in appendix A.

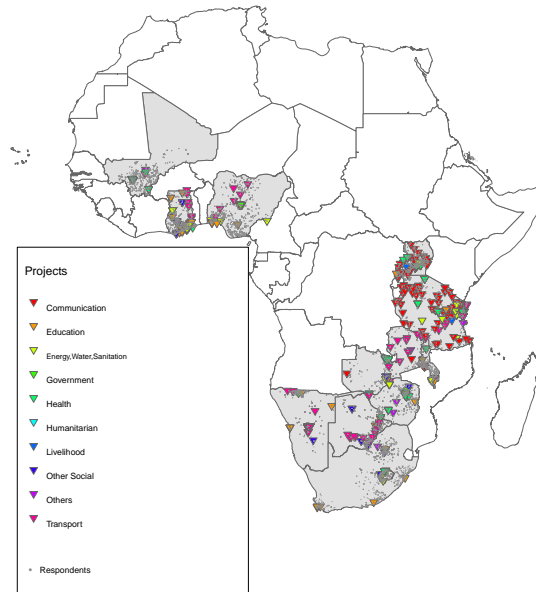
Individual characteristics that have to be controlled for include gender, age, rural or urban location, race, occupation and level of education. The level of education distinguishes between no education, primary, secondary and tertiary education and is included as a single ordinal variable. For race, the distinction is made between African, Asian and any other. As for occupation, the distinction is made between those who are unemployed or have never worked, students, those working in the government or in politics and individuals with any other occupation. Both race and occupation enter into the regression by category. Later survey rounds cover certain topics more extensively, but the data used is limited to those variables that are available in all survey rounds. Moreover, the exact date of the interview is included in all survey rounds except the first one.

### 3.3 Final Dataset

Matching both datasets with help of the geocoordinates, the final dataset for analysis initially contains six repeated cross sections with 65491 observations. Since a number of respondents in Nigeria and South Africa, in particular, are more than 200km up to several hundred km away from the nearest project, around seven thousand of these observations with distances greater than 200km are excluded from the sample, reducing the final dataset to 58212 observations. As will be explained in more detail for the empirical strategy, this decision is made in order to ensure comparability between the observations. Figure 3.3 depicts all project and respondent cluster locations from this dataset, where projects are colored according to their sector. It is interesting to notice that both Tanzania and Uganda (the two grey-shaded countries furthest east) have received a large number

of OFF, predominantly in the communication sector. Meanwhile, OFF have only been sparsely allocated to South Africa or Mali (in the north).

Figure 3.3: Map of Project and Respondent Locations



Data Sources: *Strange, Parks, et al. (2015)*, *Afrobarometer Data, Round 1 to 6 (2016)*

In addition, the polity IV data series, introduced in the literature review, provides the polity2 score that is relevant for the analysis. The polity2 score is used in order to account for the expected difference in effects that is due to the type of regime and stability of democratic institutions, as presented in the theoretical framework. Updated yearly, this data series provides annual scores of the regime authority characteristics ranging from -10 to 10 for almost all independent nations. These are determined evaluating the competitiveness and openness of national elections, constraints on the executive authority as well as the nature of political participation and political competition, thereby providing a more complex assessment of governing institutions as opposed to common mutually exclusive categorizations of forms of governance. As shown in the theoretical 2.4, the 21-point scale regime authority spectrum can be converted into regime classifications where countries with values lower than -5 and higher than 5 are classified as autocracies and democracies and those scoring in between are defined as anocracies. The difference between closed and open anocracy (-5 to 0 vs. 0 to -5) lies in whether competition for governance is limited to the elite or open to others too. Neither of the twelve countries in our sample is classified as an autocracy, but a distinction can be made between countries that had a score of 6 and higher, thus classified as democracies, for the majority of the period from 1990 to 2014 and those that have scored less than six and have therefore been classified as anocracies (referred to as hybrid regime in the following despite all countries officially being democracies) for the entire period. Accordingly, the sample includes four countries classified as anocracies, which are Nigeria, Tanzania, Uganda and Zimbabwe.<sup>4</sup>

<sup>4</sup>A list of the countries and their polity2 scores can be found in Table A.2 in appendix A.



## 3.4 Empirical Strategy

As has been emphasized earlier, my empirical strategy relies on precisely assigned geographic coordinates of both individuals and the projects in order to be able to identify treated and untreated individuals according to their distances to the projects. These precise coordinates are provided for each unique enumeration area (roughly eight individuals each) and each project, such that distances between projects and respondent clusters can easily be determined. The non-panel structure of the survey data and variation in the locations that are interviewed each survey round does not allow for a direct comparison of individuals before and after a project has been implemented. Nevertheless, my empirical strategy is guided by the underlying assumption that, with respect to factors that might influence the outcomes of interest, the projects affect individuals only up to a certain cutoff distance away from it.

### 3.4.1 Baseline specification

Based on Isaksson and Kotsadam (2018a), my baseline specification is given by

$$Y_{ivt} = \beta_0 + \beta_1 \text{present}_{it} + \beta_2 \text{future}_{it} + \gamma_1 X'_{it} + \alpha_r + \delta_t + \epsilon_{ivt} \quad (3.1)$$

where subscripts  $i, v$  and  $t$  denote individual, cluster and time measured in years. Using a linear probability model, the outcome variable is expressed in terms of the indicator variable  $\text{present}_{it}$  that assumes the value one for those respondents that live within the cutoff distance of a project that has been completed before the date of the interview and zero otherwise and the second indicator variable  $\text{future}_{it}$  which marks those respondents that live within the cutoff distance of a project for which implementation is presumed not to have been completed yet at the date of the interview. These two indicator variables are mutually exclusive since individuals who live within a completed project will only be marked as belonging to the  $\text{present}_{it}$  group irrespective of whether another project is going to be completed in their vicinity in the future. In effect, individuals are separated into three mutually exclusive categories: The omitted pure control group consisting of individuals outside the cutoff distance of any present or future project, the treated treatment group consisting of individuals that live within the cut-off distance of an already completed project such that the indicator variable  $\text{present}_{it}$  is one, and the untreated treatment group consisting of individuals that live within the cut-off distance of a project which is going to be completed in the future such that the indicator variable  $\text{future}_{it}$  takes the value one.

$\alpha_r$  are region fixed effects that control for any time-invariant differences in regime preferences that are specific to each of the 352 regions in the sample,  $\delta_t$  are spatially invariant year fixed effects that at the same time account for survey round specific differences and  $X_{it}$  is a vector of the individual control variables that have been mentioned before. Heteroskedastic standard errors are clustered at the enumeration area level  $v$  as this is the level at which geo-coordinates are assigned and errors are assumed to be correlated.

In principle, I would want to estimate the following equation.

$$Y_{it} = \beta_0 + \beta_1 \text{present}_{it} + \gamma_1 X'_{it} + \alpha_r + \delta_t + \epsilon_{it} \quad (3.2)$$

where the estimate of the coefficient of interest,  $\beta_1$ , would ideally provide an unbiased estimate of the average marginal effect of Chinese OFF on regime preferences. Essentially, the estimate is given by the difference in means between the group of individuals that live within the cutoff distance of a completed project and those that do not, everything else equal. Assuming that the outcome variable is linear in its regressors, the real average treatment effect of Chinese OFF, conditional on individual covariates and fixed effects, can be expressed as

$$\begin{aligned} \mathbf{E}(Y_{it} | \text{present}_{it} = 1, X_{it}) - \mathbf{E}(Y_{it} | \text{present}_{it} = 0, X_{it}) = \\ = \beta_1 + \mathbf{E}(\epsilon_{it} | \text{present}_{it} = 1, X_{it}) - \mathbf{E}(\epsilon_{it} | \text{present}_{it} = 0, X_{it}). \end{aligned} \quad (3.3)$$

The concern is now that the allocation of Chinese OFF is not likely to be determined randomly, but most probably based on factors that are correlated with regime preferences. For instance, an incumbent president might choose to allocate Chinese development projects strategically to areas where political support and satisfaction with his government are particularly low. Individuals living in these locations might therefore exhibit lower support for the specific regime type even before any project had been completed. Since these factors would be captured in the error term, the difference in conditional expectations of the error term  $\mathbf{E}(\epsilon_{it} | \text{present}_{it} = 1, X_{it}) - \mathbf{E}(\epsilon_{it} | \text{present}_{it} = 0, X_{it})$  would not be zero in this case. The estimate of  $\beta_1$  would therefore provide a biased estimate of the effect of Chinese OFF on regime preferences, resulting from those individuals living in locations that are selected as project sites differing from others already before the project has even been started.

To account for this selection bias, the indicator variable  $\text{future}_{it}$  is included into the regression equation. The real average treatment effect of Chinese OFF, conditional on individual covariates and fixed effects, can now be expressed as

$$\begin{aligned} \mathbf{E}(Y_{it} | \text{present}_{it} = 1, \text{future}_{it} = 0, X_{it}) - \mathbf{E}(Y_{it} | \text{present}_{it} = 0, \text{future}_{it} = 1, X_{it}) = \beta_1 - \beta_2 + \\ + \mathbf{E}(\epsilon_{it} | \text{present}_{it} = 1, \text{future}_{it} = 0, X_{it}) - \mathbf{E}(\epsilon_{it} | \text{present}_{it} = 0, \text{future}_{it} = 1, X_{it}) \end{aligned} \quad (3.4)$$

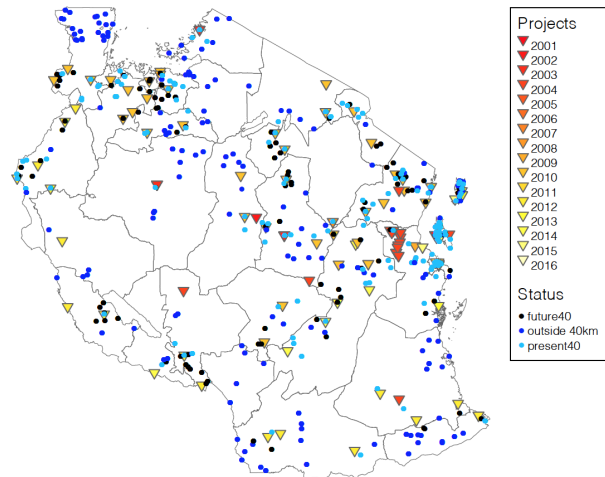
The identifying assumption is that any inherent differences in outcomes that are due to having been selected as a project site are exhibited to the same extent by the locations that have already seen a project completion and those where a project will have been completed some time after the survey. This assumption is equivalent to  $\mathbf{E}(\epsilon_{it} | \text{present}_{it} = 1, \text{future}_{it} = 0, X_{it}) = \mathbf{E}(\epsilon_{it} | \text{present}_{it} = 0, \text{future}_{it} = 1, X_{it})$  such that they cancel each other out. Under this assumption, comparing the estimates of  $\beta_1$  and  $\beta_2$  thus yields an unbiased estimator of the marginal effect of Chinese OFF on regime preferences, conditional on fixed effects and observable individual characteristics. It is to be

noted that these two groups could be compared directly using a sample with only the individuals within the cut-off distance. The "pure" control group observations are only kept in the sample to allow for a more precise estimation of year and region fixed effects.

In order to identify the treated individuals, a suitable cutoff-distance to a project has to be defined based on assumptions about its geographical reach. Several aspects have to be considered when defining the cut-off distance. Firstly, the larger the cut-off distance, the larger the size of the treatment group, the better for the preciseness of the estimates. Secondly, the larger the cut-off distance, the higher the share of non-treated individuals included in the treatment group, which leads to a smaller estimated effect size due to an attenuation bias. Inversely, a cut-off distance that is so small that treated individuals are assigned into the control group, will likewise lead to an attenuation bias. Additionally, any bias that results from a misallocation of treatment and control status will become relatively more important with a smaller cut-off distance. Cut-off distances used by other authors vary between 25km and 50km, depending on the identification strategy, the choice of precision codes, and the outcomes of interest (Blair and Roessler, 2018; Isaksson and Kotsadam, 2018a; Martorano et al., 2020). For my analysis, I choose to select 40km as a reasonable cut-off distance, a compromise between the choices made by previous literature, and based on the assumption that this is the zone around a project within which individuals will be affected by potential benefits of infrastructure provision or be exposed to the presence of Chinese contractors. Additional robustness checks, however, will also test for changes in results resulting from smaller or larger cut-off distances.

Figure 3.4 illustrates the categorization of respondent clusters into  $present_{it}$ ,  $future_{it}$  and pure control group individuals and their position in relation to the projects for the example of Tanzania. Projects are colored according to their year of completion and observations further than 200km from any project are excluded in order to ensure that observations are comparable and there are no geographic outliers that unnecessarily drive the results. The boundaries delimit different regions.

Figure 3.4: Map of Project and Respondent Locations in Tanzania



Data Sources: *Strange, Parks, et al. (2015)*, *Afrobarometer Data, Round 1 to 6 (2016)*

### 3.4.2 Second specification

One concern arises from the length of time that lies between the completion of the project and the date of the interview. One can rightfully argue that a location that is chosen as a destination for a project implementation ten years after the interview does at the time of the interview not yet exhibit the characteristics that will ultimately motivate its choice as a project site. Likewise, the effects of a completed project are likely to change over the years. For instance, spill-over effects to nearby areas might occur as described by Bluhm et al. (2018) such that the differences to neighboring locations might diminish over time. To account for these differences, a second specification relies on a subcategorization of both the  $present_{it}$  and the  $future_{it}$  variable.

$$Y_{ivt} = \beta_0 + \beta_1 1.catpresent_{it} + \beta_3 2.catpresent_{it} + \beta_2 1.catfuture_{it} + \beta_4 2.catfuture_{it} + \gamma_3 X'_{it} + \alpha_r + \delta_t + \epsilon_{ivt} \quad (3.5)$$

The variable  $1.cat\_present_{it}$  is an indicator variable that assumes the value one for all respondents for which the most recent project was completed within the last three years prior to the interview and  $2.cat\_present_{it}$  is an indicator variable that assumes the value one for all respondents for which the most recent project was complemented more than three years before the interview. Similarly, the  $1.cat\_future_{it}$  variable assumes the value one for respondents for which the future project will have been completed less than seven years after the interview and  $2.cat\_future_{it}$  is one for any time gap larger than that. In effect, agreements for projects are on average made two years before the date of completion such that the individuals for which  $1.cat\_present_{it}$  and  $1cat\_future_{it}$  is one are interviewed roughly within five years before or after the financial flows are agreed on and transferred.

This specification allows to avoid a potential violation of the identifying assumption that results from the length in time lying between project completion and interview date for the untreated treatment group individuals. Moreover, it allows to distinguish between short-term and long-term marginal effects of Chinese projects. Effectively,  $1.cat\_future_{it}$  now marks the untreated treatment group individuals, whereas  $1.cat\_present_{it}$  and  $2.cat\_present_{it}$  designate two treated treatment groups for which the average treatment effect is likely to vary due to the length of time that has passed after the completion of the project. The  $2.cat\_future_{it}$  variable is added as a control variable should there be any concerns that these locations are still different from the pure control group and therefore bias the estimated effects. This specification is not chosen as the baseline specification to begin with since a huge drawback of this subcategorization is evidently that both groups of interest, the untreated treatment group in particular, lose an important part of their observations, thus allowing for a less precise estimation of those coefficients. It does, however, allow for a more valid and more differentiated identification of a causal relationship between Chinese OFF and regime preferences.

The following table presents summary statistics of the outcome variables and main observables by groups of interest. Since neither year nor region fixed effects are taken into account, the table

merely serves descriptive purposes and to provide an overview of the distribution of different variables. Ideally, it would be possible to test for a difference in the mean of variables that are not expected to be affected by Chinese development finance in order to provide some evidence for the validity of the identification strategy. Such variables, however, are difficult to identify. More importantly, these means do not take into account the different distribution of years for each group.

In fact, the table shows that the average of years in the treated treatment group is 2009.71 in the short and 2012.67 in the long term compared to 2003.99 for the untreated treatment group. The observable control variables such as age, gender, urban location and educational level seem to have quite similar means for both groups, but are controlled for in any case. At first sight, one can notice a seemingly large difference in the mean of the dictator rejection dummy variable between the untreated treatment group and both treatment groups. A similarly large difference is not found for the approval of one-party-rule variable. As can be seen, the  $1.cat\_present_{it}$  group takes up roughly 18% of the whole sample compared to roughly 11% for both the  $1.cat\_future_{it}$  and the  $2.cat\_present_{it}$  group. These shares are 29% and 23% for  $present_{it}$  and  $future_{it}$  in the baseline specification, where the length of time passed is not taken into account.

Table 3.2: Summary Statistics by Treatment Status

	(1)		(2)		(3)		(4)	
	1.cat_future		1.cat_present		2.cat_present		Total	
	mean/sd	count	mean/sd	count	mean/sd	count	mean/sd	count
year	2003.9858	6403	2009.7125	10551	2012.6738	6147	2007.1119	58212
	2.8587		3.7614		1.9270		5.0307	
age	36.1770	6322	35.9653	10497	36.9109	6119	36.5722	57604
	14.5857		14.6278		14.8946		14.8703	
male	0.4976	6397	0.4987	10551	0.4981	6147	0.5000	58145
	0.5000		0.5000		0.5000		0.5000	
urban	0.6756	6335	0.6780	10175	0.6569	5923	0.5121	57021
	0.4682		0.4673		0.4748		0.4999	
educ	1.9651	6391	1.8155	10542	1.7432	6141	1.7240	58125
	0.8938		0.8781		0.8444		0.9407	
race	1.1648	6027	1.0797	10212	1.0858	6140	1.0833	55995
	0.4252		0.3109		0.3110		0.3104	
supdem_dummy	0.7031	5841	0.7641	9954	0.7462	5725	0.7423	54195
	0.4569		0.4246		0.4352		0.4374	
rejone_dummy	0.2710	6244	0.2258	10388	0.1887	6078	0.2401	56973
	0.4445		0.4182		0.3913		0.4271	
rejone	2.1228	6244	1.9682	10388	1.8565	6078	2.0331	56973
	1.3180		1.3026		1.2334		1.3087	
rejdic_dummy	0.2343	6207	0.1313	10367	0.1242	6054	0.1655	56665
	0.4236		0.3377		0.3299		0.3716	
rejdic	1.9360	6207	1.6571	10367	1.6283	6054	1.7569	56665
	1.1844		1.0155		0.9632		1.0732	

### 3.4.3 Linear probability vs. latent-variable model

Given the binary nature of my dependent variables, a brief discussion about the choice of the linear probability model over a latent-variable model is appropriate here. Faced with limited dependent variables instead of continuous ones, many scholars and econometrics textbooks deem the use of

OLS inadequate and argue for the use of nonlinear models such as probit or logit models instead (Angrist and Pischke, 2008). In particular, there are two major concerns that arise when assuming a linear relationship between dependent and independent variables in the binary case.

Firstly, there are combinations of independent variables that yield predictions that lie outside the possible range of zero to one. This is particularly the case when these independent variables are continuous and take on extreme values (Hellevik, 2009). Related to this issue, Wooldridge (2012) claims that it is conceptually impossible for a probability to be linearly associated with the independent variables for all values. As a result, average marginal effects that are given by OLS estimates do not take into account the variation in marginal effects that is especially likely to occur for values of the independent variables at the tails of their distribution. Hellevik (2009), however, argues that "impossible" predictions may not be of concern if the aim of the analysis is not to make predictions for certain individuals but rather to study the causal decomposition of the relationship between a regressor of interest and the outcome variable. Similarly, Angrist and Pischke (2008) argue that the causal interpretation of the underlying conditional expectation function still holds as long as the identifying assumption holds such that the coefficient provides a weighted average treatment effect of the regressor of interest. In fact, their OLS replication of a probit model show that not only are the estimated marginal effects similar for both models for combinations of regressors for which fitted values are close to 0.5 and where the nonlinear Conditional Expectation Function (CEF) is approximately linear anyway, but even for a subset of regressor values for which fitted values lie at 0.83.

The second concern regards the heteroskedasticity that is inherent in the linear probability model. Since the assumption of homoskedasticity is necessary to justify the usual test statistics, it is feared that linear significance tests cannot be trusted. With respect to this concern, Hellevik (2009) runs a set of parallel linear and logistic regression analyses on random samples and compares the estimated significance probabilities. He finds a correlation between both sets of p-values of 0.9998 and only one out of 320 out cases where the test conclusions differed at the five percent significance level.

Since the aim of my analysis is not to make predictions for specific individuals, but to identify the average marginal effect of my binary regressors of interest, I prioritize the straightforward interpretation of OLS estimates as average marginal effects on the probability of a success (outcome variable is one) and therefore opt for a linear probability model for my main specifications. The results will, however, also be replicated with a logistic regression model to check for the reliability of the significance test results and the extent to which average marginal effects on the probability of a success deviate in both models.

## 4. Results and Analysis

The following section presents and discusses the main results of my empirical analysis. The main analysis of the causal relationship between Chinese OFF and regime preferences is followed by a more detailed analysis that looks into factors that potentially explain the previously established relationships.

### 4.1 Main Results

#### 4.1.1 Baseline Specification

Table 4.1 shows the estimates of the baseline specification for the whole sample.  $F\_diff$  and  $p\_diff$  give the test statistic and the p-value of the hypothesis test that the difference between the coefficients on *present40* and *future40* is zero. Looking at the p-values of the F-tests for the first two columns, it can be seen that the probability for an individual to support democracy and disapprove of one-party rule is not significantly different between locations near a completed Chinese development project and those near a future project. Therefore, no effect of Chinese development projects on either of these outcomes is identified. By contrast, the p-value of 0.0280 indicates that the estimated change in probability of disapproving of presidential dictatorship is significantly different between the group of individuals that has been treated and the individuals from the untreated treatment group. It is estimated that completed Chinese development projects increase the probability of disapproving of presidential dictatorship by 2.66 percentage points on average. Individual control variables are discussed in more detail with the next table.

Table 4.1: Regime Preferences - Baseline Model

	(1)	(2)	(3)
	Democracy	One Party	Dictator
present40	-0.0146 (0.0079)	0.0022 (0.0075)	-0.0020 (0.0066)
future40	-0.0122 (0.0128)	-0.0145 (0.0120)	-0.0286 (0.0108)
region FE	Yes	Yes	Yes
year FE	Yes	Yes	Yes
$F\_diff$	0.0269	1.5385	4.8338
$p\_diff$	0.8696	0.2149	0.0280
$r2\_a$	0.0556	0.0692	0.0832
N	35110.0000	37080.0000	36798.0000

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables (age, age x age, level of education, urban, male, occupation and race) as well as region and year fixed effects.  $F\_diff$  and  $p\_diff$  give the F-test and p-value associated with the difference between present and future locations. All results are estimated on the baseline sample.

Table 4.2 reports the results of the baseline specification, but obtained for two subsamples

Table 4.2: Regime Preferences Baseline - by Regime

	Democracy		One Party		Dictator	
	(1)	(2)	(3)	(4)	(5)	(6)
	Hybrid	Democratic	Hybrid	Democratic	Hybrid	Democratic
present40	-0.0085 (0.0155)	-0.0179 (0.0091)	0.0308 (0.0137)	-0.0105 (0.0088)	0.0048 (0.0132)	-0.0044 (0.0075)
future40	-0.0513 (0.0285)	-0.0189 (0.0144)	-0.0093 (0.0279)	-0.0288 (0.0132)	0.0175 (0.0194)	-0.0454 (0.0127)
age	0.0026 (0.0015)	0.0042 (0.0009)	0.0015 (0.0014)	0.0041 (0.0009)	0.0018 (0.0011)	0.0030 (0.0008)
age $\times$ age	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)
educ	0.0282 (0.0060)	0.0370 (0.0039)	0.0500 (0.0053)	0.0547 (0.0036)	0.0199 (0.0047)	0.0317 (0.0033)
urban	0.0032 (0.0133)	0.0176 (0.0079)	0.0450 (0.0113)	0.0395 (0.0074)	0.0215 (0.0109)	0.0152 (0.0065)
male	0.0348 (0.0077)	0.0235 (0.0053)	0.0461 (0.0071)	0.0349 (0.0049)	0.0064 (0.0057)	0.0198 (0.0042)
race=2	0.0301 (0.0595)	-0.0695 (0.0146)	0.0677 (0.0621)	0.0397 (0.0137)	0.0351 (0.0355)	0.0080 (0.0142)
race=3	0.1938 (0.0321)	-0.0537 (0.0271)	0.0437 (0.1664)	0.0960 (0.0249)	-0.0934 (0.1297)	0.0652 (0.0262)
occup=1	-0.0116 (0.0337)	-0.0924 (0.0362)	-0.0121 (0.0349)	0.0129 (0.0329)	-0.0160 (0.0286)	-0.0415 (0.0325)
occup=2	0.0423 (0.0122)	-0.0002 (0.0080)	0.0190 (0.0115)	0.0208 (0.0078)	0.0373 (0.0097)	-0.0041 (0.0070)
occup=3	0.0128 (0.0248)	-0.0306 (0.0204)	0.0172 (0.0246)	-0.0023 (0.0195)	0.0022 (0.0194)	-0.0092 (0.0172)
region FE	Yes	Yes	Yes	Yes	Yes	Yes
year FE	Yes	Yes	Yes	Yes	Yes	Yes
F_diff	1.8927	0.0037	1.7705	1.4480	0.3184	8.4698
p_diff	0.1691	0.9517	0.1835	0.2289	0.5726	0.0036
r2_a	0.0541	0.0577	0.0940	0.0625	0.0629	0.0906
N	10883.0000	24227.0000	12008.0000	25072.0000	11938.0000	24860.0000

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year fixed effects. F\_diff and p\_diff give the F-test and p-value associated with the difference between present and future locations. All results are estimated on the two subsamples of the baseline sample denoted as hybrid and democratic.



in order to distinguish between differential effects for countries under either hybrid or democratic regimes. Looking at the F-statistics of the hypothesis tests, one result stands out: In countries with a democratic regime, Chinese OFF are estimated to increase the probability for an individual to disapprove of presidential dictatorship by 4.10 percentage points. This estimated marginal effect has a p-value of 0.0036 and is therefore significant at the 1%-significance level. A similar positive effect on the probability of disapproving of presidential dictatorship is not identified for countries with hybrid regimes.

It is to note that the significant difference is driven by the estimated coefficient for the *future40* group being significantly different from zero at the 5%-significance level. It can therefore be concluded that the choice of locations for Chinese development projects in democratic countries is motivated by factors that are negatively correlated with disapproval of presidential dictatorship. This might be in line with the finding of Dreher, Fuchs, Hodler, Parks, P. A. Raschky, et al. (2019) that Chinese official financing is allocated to birth regions of incumbent political leaders, which is where people, in general, might be less critical of autocratic leadership of their president. Once projects are implemented, the probability of disapproving of presidential dictatorship does not differ significantly between individuals near the projects and those from other locations not chosen for OFF allocation anymore.

By contrast, for neither one-party disapproval nor support for democracy, can the null hypothesis of no causal effect of Chinese OFF be rejected at the 10%-significance level for either of the subsamples. Recalling the established theoretical links, an increased probability of support for democracy would have been expected for both subsamples. Despite the estimated changes on disapproval of presidential dictatorship being in line with the theory, similar results would have been expected for one-party rule as another form of autocratic ruling. Although this should be the variable that can directly be associated with the Chinese form of political system, simple correlations generally indicate that presidential dictatorship are more negatively correlated with democratic support than one-party rule is. Therefore, presidential dictatorship might be more associated with a form of ruling that is different from the democratic one and particularly authoritarian as the Chinese political system is. Moreover, despite the insignificant result for disapproval of one-party rule, the hypothesis that the probability of disapproving of autocratic forms of ruling in countries with democratic regimes is increased by Chinese development projects can be rejected at the 5% significance level, given that the Bonferroni-correction requires one of the two tests to yield a p-value smaller than 0.025.

The estimates for the individual control variables shall also be presented briefly. The probability of supporting democracy increases and that of disapproving of autocratic forms of leadership decreases both with age and the level of education. The non-significance of a quadratic age term reveals that the estimated partial correlation between age and the probability of one of the outcomes does not diminish nor change signs at a certain age. The sign of the partial correlation between the level of education and the probability of one of the outcomes is not surprising given that existing literature has studied this relation between education and support for democracy

(Evans and P. Rose, 2007; Mattes and Bratton, 2007). Interestingly, the probability of support for democracy is lower and that of disapproval for autocratic forms of leadership higher for individuals living in urban areas compared to rural and for females compared to males. Any explanation for these associations would be too speculative. Another surprising result is that the occupation of a respondent, in effect whether she is unemployed, a student, works in politics, or does any other job, does not seem to determine regime preferences in any systematic way across subsamples and outcome. The results for race also vary in significance and sign, which is why no systematic association between the probability of one of the outcomes and different ethnicities can be identified.

#### 4.1.2 Second specification

During the presentation of the empirical strategy, it had been noted that the treatment variables *present40* and *future40* do not take into account the length of time that lies between the interview and the date of completion. For this reason, the analysis is again conducted using the second specification, where both treatment group indicator variables are transformed into categorical variables, that in fact enter as indicator variables, as described in subsection 3.4. Accordingly, the variable *1.cat\_present<sub>it</sub>* assumes the value one for all respondents for which the most recent project was completed within three years prior the interview and *2.cat\_present<sub>it</sub>* assumes the value one for all respondents for which the most recent project was completed more than three years before the interview. Similarly, the *1.cat\_future<sub>it</sub>* variable assumes one for respondents for which the future project will have been completed within seven years after the interview and *2.cat\_future<sub>it</sub>* is one for any time gap larger than that.

Table 4.3 reports the estimates for this specification, where the differences of interest are those between the estimated coefficients on *1.cat\_future<sub>it</sub>* and primarily *1.cat\_present<sub>it</sub>* as a measure of the immediate effect of Chinese OFF. The test statistics for the difference between *1.cat\_future<sub>it</sub>* and *2.cat\_present<sub>it</sub>* are also reported below as a measure of the long-run effect of Chinese OFF. In order to ease the description of the results, terms like the untreated treatment group, or individuals nearby a future project will always refer to those respondents for whom the interviews took place within seven years before the completion of a nearby project. The *2.cat\_future<sub>it</sub>* variable merely acts as a control variable.

The results reported in Table 4.3 confirm previous result with respect to disapproval of presidential dictatorship in democracies. In the short term, Chinese OFF seem to increase disapproval of presidential dictatorship by 5.31 percentage points with a p-value of 0.0006. The difference is almost similar for respondents interviewed more than three years after a nearby project completion: 4.73 percentage points with a p-value of 0.0036. The marginal effect of Chinese OFF on disapproval of presidential dictatorship can thus be claimed to be persistent.

Looking at support for democracy in countries under hybrid regimes, it can be noticed that the difference in estimates between respondents near projects completed three or less years ago and those near projects completed within the following seven years is statistically significant and larger in size as compared to the estimated difference in the baseline specification. The immediate

Table 4.3: Regime Preferences by Regime - Second Specification

	Democracy		One Party		Dictator	
	(1) Hybrid	(2) Democratic	(3) Hybrid	(4) Democratic	(5) Hybrid	(6) Democratic
cat_present40=1	0.0067 (0.0156)	-0.0168 (0.0099)	0.0343 (0.0153)	-0.0207 (0.0097)	0.0038 (0.0142)	-0.0025 (0.0087)
cat_present40=2	-0.0338 (0.0195)	-0.0198 (0.0120)	0.0253 (0.0159)	0.0087 (0.0114)	0.0062 (0.0145)	-0.0083 (0.0094)
cat_future40=1	-0.0570 (0.0292)	-0.0152 (0.0154)	-0.0067 (0.0290)	-0.0344 (0.0143)	0.0179 (0.0203)	-0.0556 (0.0137)
cat_future40=2	0.0083 (0.0457)	-0.0371 (0.0327)	-0.0309 (0.0305)	-0.0107 (0.0267)	0.0136 (0.0345)	0.0141 (0.0267)
region FE	Yes	Yes	Yes	Yes	Yes	Yes
year FE	Yes	Yes	Yes	Yes	Yes	Yes
F_diff1	3.9981	0.0089	1.6378	0.6946	0.3522	11.7577
F_diff2	0.4695	0.0579	1.0008	5.7370	0.2371	8.4662
p_diff1	0.0457	0.9248	0.2008	0.4046	0.5529	0.0006
p_diff2	0.4933	0.8098	0.3173	0.0167	0.6263	0.0036
r2_a	0.0548	0.0576	0.0939	0.0628	0.0627	0.0908
N	10883.0000	24227.0000	12008.0000	25072.0000	11938.0000	24860.0000

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year fixed effects. F\_diff1,2 and p\_diff1,2 give the F-tests and p-values associated with the differences between present and future locations inside and outside the five years range. All results are estimated on the two subsamples of the baseline sample denoted as hybrid and democratic.

marginal effect of OFF on the probability to support democracy in countries with hybrid regimes is +6.37 percentage points. Similar to the results for disapproval of presidential dictatorship, the difference is driven by "future" individuals being less likely to support democracy than the respondents whose locations were not chosen for OFF at all. No significant difference is found between "future" respondents and those individuals interviewed more than three years after project completion. In effect, the positive effect of OFF on the probability of support for democracy in countries with hybrid regimes seems to die out more than three years after the project is completed.

In summary, Chinese official finance flows are found to positively affect the likelihood of respondents to disapprove of presidential dictatorship, but only in democratic countries. The estimated marginal effect of Chinese development projects on the probability to support democracy, is statistically significantly positive in anocracies only in the second specification that takes into account the amount of time lying between the survey interview and the completion of the project.

## 4.2 Further Analysis

### 4.2.1 Potential channels

Now that the main results have been established, the theoretical "framework" should be revisited to gain a better understanding of a range of intermediary outcomes whose changes are presumed to be

able to partly explain the change in regime preferences. The theoretical predictions were based on the findings of the literature that Chinese development projects positively affect economic conditions and development outcomes in their vicinity, whereas political goods such as political liberty and low levels of corruption would be negatively affected. The given specification and data will allow for testing these results only to a limited extent, given that the Afrobarometer with its focus on public opinion, provides an only limited range of variables that cover development outcomes related to nutrition or health and other potentially required control variables. Being aware of the limitations of this analysis, this section will nonetheless look into several of the available variables to gain a better understanding of the underlying reasons for the significant marginal changes in probabilities for some of the regime preference outcomes.

Variables that measure poverty outcomes in terms of lack of food, water and cash income are included in all survey rounds of the Afrobarometer. For each variable, an indicator variable takes the value of zero if the respective lack was never faced as opposed to one if the lack was faced one time or more often in the previous year.<sup>1</sup> Table A.4 in Appendix A shows the results for regressions using the second specification with the poverty outcomes as dependent variables. In stable democracies, lack of either of the three does not seem to be affected by Chinese development projects. Likewise, the probability to describe present living conditions as fairly or very good as opposed to fairly or very bad is not affected by Chinese development projects. The theoretical prediction had relied on negative effects of Chinese development projects on political goods to lead citizens to increase support for democracy and disapproval of autocratic ruling. In this empirical analysis, it is unfortunately not clear, whether the respondents' ratings of living conditions take into account changes with respect to political goods additionally to material welfare.

In countries with a hybrid regime, lack of either water or food does not seem to be affected by Chinese development projects. As for lack of cash income, Chinese OFF seem to significantly reduce the probability of having faced lack of cash income only in the long term. Same as for stable democracies, the perceived present living conditions seem not to be affected by a Chinese project. Again, it is not clear whether this is due to the effect of reduced lack of income being too small or any increased negative experiences with respect to corruption or other political liberties being incorporated into the living conditions assessment.

Other factors of interest that the survey provides data for include trust in the president, satisfaction with the performance of the president and satisfaction with how democracy works. The exact survey questions and response options can be found in Table A.1 in Appendix A. Table A.5 shows that Chinese development projects increase the probability of distrusting the president, but statistically significant at the ten percent level only for those interviewed more than three years after a project completion. There is no significant change for other political satisfaction outcomes.

In democratic countries, the effects of Chinese OFF on respondents' political satisfaction seem to be more pronounced. Similar to the other subsample, respondents affected by Chinese development projects are significantly more likely to distrust the president both directly after the

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<sup>1</sup>Summary statistics are provided by table A.3 in Appendix A.

completion of the projects and more than three years after. In addition, those citizens where the last project was completed more than three years ago are also more likely to disapprove of the performance of the president, only at a ten percent significance level, however. It does not affect whether citizens are satisfied with the way democracy works in their country.

Overall, comparing the results for intermediary outcomes with the theoretically expected changes from the theoretical table yields the following conclusions. To make comparison easier, table 2.1 is presented here again.

Table 4.4: Expected Effects of Chinese Development Projects on Democracy Support by Channel

	Support for Democracy		Disapproval Autocratic Rule	
	Democratic	Hybrid	Democratic	Hybrid
Economic Conditions	0	+	0	-
Political goods	+	+	+	+
Specific support	0	0	0	0
Total	+	++	+	0

First of all, Chinese development projects do not seem to have the immediate positive effect on poverty indicators that had been expected based on existing literature. In countries with stable democratic regimes, this does not change the "prediction" on regime preferences, however, based on the argumentation that regime preferences in democratic countries are not susceptible to these kind of short-term economic fluctuations. For countries with hybrid regimes, this unidentified effect on poverty outcomes does matter since the plus and minus in the table for economic conditions would have to be changed into zeros.

No analysis was made with respect to political goods as variables for these are hard to identify and define. As for specific support, decreased trust in the president in countries with a democratic regime points at a decrease in specific support for the government, which, as had been argued, does not translate into diffuse support for the regime in stable democratic societies. The zero is therefore confirmed. No significant effect on trust for the president nor satisfaction with his performance had been identified for the hybrid subsample, which confirms the expected zero. The empirical findings for the probability of democratic support in countries with hybrid regimes and disapproval of presidential dictatorship in democracies and their intermediary outcomes are in line with the theoretical framework if the effects on political goods found in the literature are assumed to hold. Based on the empirical findings for the intermediary outcomes, however, the same effect should have been found for the respective other subsample.

As was stated in the beginning of the analysis, the variables at disposal to capture the various potential channels were limited and likely not able to identify the actual effects. Most probably, other factors that are not observed by the theory also play their role. In addition, it has to be noted at this point that my research question aims to find the impact of all Chinese OFF on regime preferences and does therefore not distinguish between projects of different sizes, sectors, purpose etc. Estimating an average treatment effect of all the different projects is very likely to hide differences in the underlying links between projects and outcome variables. In fact, the difference in estimated effects between both stable democracies and unstable democracies might

be due to a difference in constellation of projects instead of due to a difference in mechanisms. For this reason, the following analysis seeks to gain more understanding about project heterogeneity and its consequences for the estimated effects of Chinese OFF.

#### 4.2.2 Project heterogeneity: Flow class

The most straightforward distinction that can be made is that between ODA and non-ODA flows (consisting of other official flows, vague flows or not classified). This distinction is motivated by two reasons. First of all, both theoretical and empirical literature has established that the drivers for the allocation of official financing differ between ODA and commercial flows. In that sense, ODA project sites might ex ante differ from other flows in characteristics that are correlated with regime preferences, thus posing a valid concern for my identification strategy. Secondly, the majority of Chinese development projects in Aiddata's Chinese OFF dataset are classified into four categories of intent, which are developmental, commercial, representational and mixed. Recalling the definition of ODA, only those flows with a developmental purpose can be classified as such. Accordingly, it might be expected that these projects affect the poverty outcomes and living conditions studied previously in a different manner than flows with a representational or commercial intent. Out of the 427 implemented projects with precision code one and two in countries with a hybrid regime, 66.0% are classified as ODA as compared to 68.6% out of 382 projects in democratic countries.

Table A.6 reports the results for a replication of Table 4.3 considering only ODA projects. This implies that for respondents that had several projects within 40km reach, the completion date of the most recent ODA project is considered. Respondents that only have non-ODA projects in their 40km vicinity fall into the control group with respondents outside 40km reach of any ODA project. The results are quite similar to the ones considering all flow classes. In countries with hybrid regimes, Chinese OFF increase the probability of supporting democracy by 6.34 percentage points in the short term. In stable democracies, OFF increase the likelihood to disapprove of presidential dictatorship by 6.31 and 4.97 percentage points in the short and long run respectively. These marginal changes in probability are significant at the one-percent level.

The results for intermediary outcomes shown in Table A.7 are only slightly different. Contrary to expectations, the probability of an individual in a democratic country to report having never lacked food, water or cash income is not affected by Chinese OFF. For countries with hybrid regimes, only the probability of reporting never to have lacked cash income in the previous year is now significantly affected by Chinese OFF both in the short and the long term: A decrease by roughly 6 percentage points for both.

As for political satisfaction, table A.8 shows that the previously found increased probability of distrusting the president more than three years after the completion of Chinese development projects in unstable democracies does not apply for ODA projects. For democratic countries, the previously negative effect of Chinese development projects on the probability to approve of the president's performance turns into a positive effect at a five percent significance level. It seems that the factors that lead citizens to feel their president does not rightfully serve his office or works

for the greater good of the people are related to OFF that are dominated by commercial interests rather than OFF in general. An interesting finding in itself, this change in specific support for the government does not and should not affect the relationship between Chinese OFF and regime preferences in stable democracies, according to theory.

### 4.2.3 Project heterogeneity: Others

Another form of project heterogeneity is given by the sector of a project. The share of projects per sector across the years has been shown in Figure 3.2, while the distribution of projects of different sectors across the countries was presented in Figure 3.3. Projects in some sectors are more effective in directly improving individual living conditions and development outcomes than others. In line with the theory, it is therefore to be expected that marginal effects on regime preferences differ accordingly - at least in countries with hybrid regimes. In particular, official financing of infrastructure projects related to transport, energy, communication, water and sanitation etc. are named as crucial enablers of economic development.

By contrast, official financing related to the government and civil society mostly consist of financing of office equipment to and the construction of parliamentary buildings for different political bodies such as the national assembly. Projects in the education sector predominantly consist of establishments of Confucius institutes at various universities and several book donations. Looking into the type of projects that fall into the "Other social infrastructure and service" category, these are mostly related to constructions of stadiums, youth centers, the establishment of culture programs and others. All of these are intuitively unlikely to affect economic development outcomes or living conditions the way infrastructure projects do.

Table A.9 shows the representation of different sectors in both pre and post treatment groups by type of regime. It is remarkable that the three sectors that both *1.cat\_present* and *1.cat\_future* individuals in stable democracies are most matched to are "Other social infrastructure and service", education and health, with shares of 25%, 21% and 18%. For individuals in countries with hybrid regimes, by contrast, respondents within 40km reach are most commonly matched to projects in the transport and storage, education, and communications sector with around 18% shares each. The failure to establish any treatment effect on poverty indicators in stable democracies as opposed to the reduction in lack of income reported for ODA flows in countries with hybrid regimes might therefore be related to the constellation of sectors.

Other forms of heterogeneity exist with respect to the contractor or the size of the project measured by the volume of commitments. Due to all these forms of project heterogeneity and related expected differences in treatment effects, the average treatment effect estimated in my specification has to be seen as the average of these different treatment effects. It does not identify any disaggregated treatment effects for specific types of projects. These could be smaller or larger in size or even of the opposite sign. Nonetheless, it does not become problematic unless this heterogeneity leads to a violation of the identifying assumption as will be discussed in the next section.

## 5. Robustness and Discussion

The following section serves to probe the robustness of the results in several ways and discuss the validity of the results as well as practical implications and recommendations for future research.

### 5.1 Robustness Checks

#### 5.1.1 Binary logistic regression

In choosing my empirical strategy, I have motivated my choice of a linear probability model over a latent-variable one. As had been discussed in section 3.4, two drawbacks of this choice are related to the size of marginal effects for fitted values at the tails of the distribution and the reliability of the significance tests. To account for these drawbacks, I replicate the results of the second specification using a binary logistic regression model. In effect, the estimated equation is given by

$$\begin{aligned} \Pr(Y_{it} = 1 \mid present_{it}, future_{it}, \dots, X_{it}) &= \\ &= \frac{\exp(\beta_0 + \beta_1 present_{it} + \beta_2 future_{it} + \dots + \gamma X_{it})}{1 + \exp(\beta_0 + \beta_1 present_{it} + \beta_2 future_{it} + \dots + \gamma X_{it})} \end{aligned} \quad (5.1)$$

While the linear probability model is based on the assumption that the probability of a success is a linear function of the explanatory variables, the logistic regression model assumes that the natural log of the odds  $\frac{\Pr(Y_{it}=1)}{1-\Pr(Y_{it}=1)}$  is a linear function of the explanatory variables.

Table B.1. in the appendix shows that the results have barely changed. The significant marginal increase in probability of supporting democracy induced by Chinese development projects in non-democracies is statistically significant with a p-value of 0.0404 instead of 0.0457. The marginal change in probability of disapproving of one-man rule is also significantly different from 0 with a p-value of 0.0028 compared to 0.0006. Since the estimated coefficients in the regression are estimates of the average marginal changes in the hardly interpretable natural log of the odds, marginal changes in probability have to be calculated separately, using the margins command in Stata which gives the marginal effect at the average values of the independent variables. These are presented in Table B.2. The average marginal effects of Chinese OFF on support for democracy in anocracies and rejection of presidential dictatorship in democracies is estimated to differ from the OLS estimates by roughly 0.5 pp in both cases.

#### 5.1.2 Cutoff distance

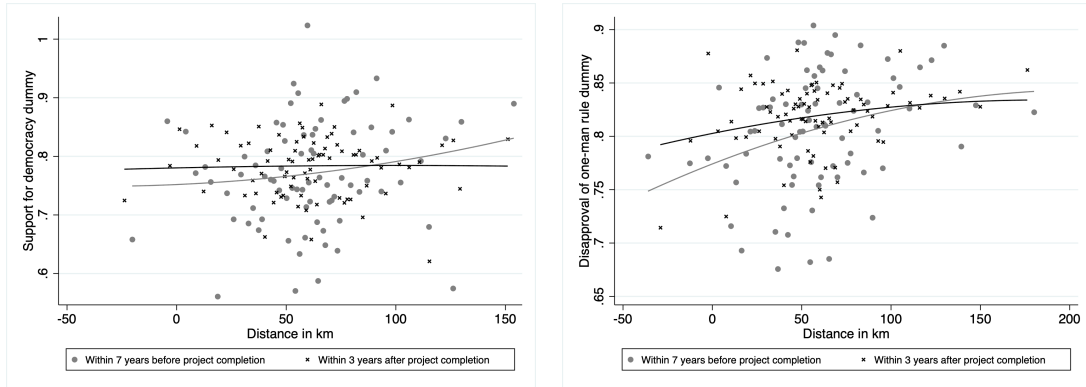
As has been argued in the empirical strategy part, several considerations play into the definition of a cutoff-distance based on which the individuals affected by the projects are determined. Despite having reasonably argued for a 40km cut-off distance, the results are to be treated with caution should they hold only for this exact cut-off. In particular, the case was already made for a strong



heterogeneity in projects along the lines of size, sector, flow class and others. For this reason, table B.3. in Appendix B tests for changes in cut-off distances. With a cut-off distance of 25km, the fraction of observations with  $1.cat\_future_{it}=1$  is now reduced to 11.37 percent of the whole sample compared to 14.54 percent for  $1.cat\_present_{it}=1$ . The result for democracy support in non-democracies becomes statistically significant at the one-percent level and double the size of the difference estimated using the baseline specification with the 40km cut-off. The significant increase in disapproval of one-man rule is similar in size, but estimated with greater standard errors due to the smaller number of observations. With a cut-off distance of 50km, the fraction of observations with  $1.cat\_future_{it}=1$  is 16.15 percent of the whole sample compared to 20.29 percent for  $1.cat\_present_{it}=1$ . Results are similar to those using the 40km cut-off, only that the p-value is much lower for the estimated difference in probability of democratic support in non-democracies.

Figure 5.1 plots the levels of the democracy support indicator variable and the one-man rule disapproval indicator variable as a function of the distance to the closest Chinese development project for the non-democratic and democratic subsample respectively. According to their distance, all observations are ordered into 80 equal-sized bins for the within-seven-years-before-project and the within-three-years-after-project group separately such that each point represents the local average level of the dependent variable for each such distance bin. All individual control variables as well as region and year fixed effects are taken into account when creating the plot which is why some distances enter negatively although there are no negative distances.

Figure 5.1: Regime Preferences and Distance to the Closest Present or Future Project Site  
(a) Democracy Support in Non-democracies      (b) One-man Rule Disapproval in Democracies



The figures illustrate how the difference between respondents interviewed within seven years before the nearest project was completed and those interviewed within three years after the nearest project was completed becomes smaller in distance and converges to zero. Without considering statistical significance, the distance at which this convergence is reached seems to lie around 50km.

### 5.1.3 Project precision

For the choice of the precision level for which projects should be included into the sample, it had been argued that this empirical strategy relies on accurate information about the locations as even small ranges of uncertainty might lead to wrongfully identifying individuals as being treated or not.

In opting for the more precise solution of not considering any projects coded at the third precision level, however, the risk is that individuals that are in fact very close to these projects do not end up neither in the *present<sub>it</sub>* nor in the *future<sub>it</sub>* group, thus distorting the real differences in marginal changes. When the analysis is run taking into account projects at the third precision level, the share of observations in the *present<sub>it</sub>* and *future<sub>it</sub>* group increases by less than one percentage point each. Therefore the results differ neither in size nor in significance, as shown in Table B.5.

#### 5.1.4 Country-Year fixed effects

A further concern for which there is strong theoretical evidence is the level at which year-fixed effects are included. The baseline specification includes spatially invariant year-fixed effects in order to control for a general time trend in the evolution of regime preferences from less support for democracy to more support over the years. Despite evidence for regional democratization waves and strong spill-overs across countries, one can think of many factors for which the time trend can differ for various countries. Political shocks such as a corruption scandal, for instance, that are limited to one country are not controlled for by the year-fixed effects as specified so far. Another example might be the death of a strong president and questions over the succession or also economic shocks. At the same time, however, including the country-year-fixed effects might take away some variation attributable to Chinese development projects if there are few of them in a country and mostly completed in the same years.

Table B.6 tests for changes in the results when year-fixed effects are included on a country level, thus adding twelve times six dummy variables instead of the previous six dummies. Some of the interacted country and year fixed effects enter significantly. The marginal change in probability of support for democracy for a respondent in a non-democracy is now not significantly different from zero. But the marginal change in probability of disapproval of presidential dictatorship for a respondent in a democracy remains statistically significant at the five-percent level with a reduced economic significance at 3.83 pp.

#### 5.1.5 Sample variation

By construction, the distribution of *present<sub>it</sub>* and *future<sub>it</sub>* individuals is not balanced equally across all survey rounds. Individuals indicated as  $1.cat\_present_{it}=1$  are more highly concentrated in later survey rounds given that a higher number of projects has already been completed in these years, whereas the opposite holds true for individuals indicated as  $1.cat\_future_{it}=1$ . In fact, only 1.6% of the  $cat\_present_{it}=1$  observations stem from the first survey round as compared to a roughly equal distribution across the following rounds. Similarly, only 0.5% of the  $cat\_future_{it}=1$  observations are to be found in the last survey round. Or formulated differently, 1.6% of all first survey round observations are indicated as  $1.cat\_present_{it}$  compared to 25.3 percent being indicated as  $1.cat\_future_{it}=1$ . This comparison is 30.2% against 2.0% for the last survey round.

To see if the unbalanced distribution affects the results in any way, the sample is reduced to

include only the second to fifth survey round for which the distribution is more balanced. Again, the results do not change as shown in Table B.7. The marginal change in probability of support for democracy for a respondent in a non-democracy due to a completed Chinese project (within three years) is +6.55 pp with a p-value of 0.0430. Similarly, the marginal change in probability of disapproval of one-man rule for a respondent in a democracy due to a completed project within three years and longer than three years ago is statistically significant with a p-value of 0.0026 and 0.0178 respectively.

### 5.1.6 RCT-type specification

As has been discussed in the 3.4, the empirical strategy is based on comparing the untreated and treated treatment group directly, assuming that, absent treatment and conditional on fixed effects and observable covariates, the expected outcome for both groups is the same. The inclusion of the "pure" control group observations was argued to allow for a more precise estimation of year and region fixed effects. Otherwise it could be argued that, conditional on individual observables and fixed effects, these two groups can be compared directly in a set-up more comparable to a Randomized Controlled Trial (RCT). The sample would only include treated and untreated treatment group where the untreated treatment group serves as the control group. Table B.8 tests for changes in results using the "RCT-type" specification. The estimated coefficient on the  $present_{it}$  variable can directly be interpreted as the marginal effect of Chinese OFF. This estimated average treatment effect on democratic support in hybrid regimes is statistically significantly different from zero with a magnitude of 12.94 percentage points, whereas the estimated change in probability for a citizen affected by a Chinese development project to disapprove of presidential dictatorship increases by 11.95 percentage points with a standard error of 0.0222.

## 5.2 Discussion

The empirical analysis of the research question in the previous two sections has yielded the following results: Chinese official finance flows increase citizens' propensity to disapprove of presidential dictatorship in Sub-Saharan African countries with democratic regimes. This effect is statistically significant and robust to all of the robustness checks. Moreover, the same effect is found limiting the analysis to ODA flows. No significant effect of Chinese official finance flows on disapproval of one-party rule is found. As for support for democracy, a positive effect of Chinese development project has been identified in countries with hybrid regimes using the second specification. This identified effect, however, is sensitive to a few of the variations to the specification. With these results in mind, the validity of the empirical strategy and implications of the results in practice and for future research shall be discussed in the following.

### 5.2.1 Internal validity

My empirical strategy relies on defining a cut-off distance up to which individuals are assumed to be affected by a Chinese development project. The identification strategy is based on the identification of two groups of survey respondents that, conditional on year and region fixed effects and individual observable covariates, are assumed to be similar in terms of characteristics that are potentially correlated with the main outcomes absent treatment. Possibilities to provide evidence for this identifying assumption to hold are limited. Despite the plausibility of the identifying assumption in theory, several threats to it have been identified and addressed either in the second specification or in various robustness checks. These include the length of time that lies between the interviews and the project completion, in particular, or the unbalanced distribution of both groups within some of the survey rounds. Other concerns, however, remain unaddressed and should be discussed in order to be able to evaluate to which extent they impose limitations on the validity of the results.

One potential threat to the validity of the identifying assumption has briefly been introduced in the analysis of project heterogeneity. The previously introduced Table A.9 shows that for the hybrid subsample, half of the "future" individuals as opposed to 18% of the *1.cat\_present* individuals are near projects in the Transport sector and 18% of the "future" individuals as opposed to 2% of the *1.cat\_present* individuals are near projects in the health sector. Let us now assume that the choice of location of different types of projects is driven by diverging motives that are differently correlated with the outcome variables. For instance, in countries with hybrid regimes, infrastructure projects might be allocated to locations where citizens generally view the government more favorably and who are therefore more supportive of democracy. Meanwhile, health projects are assumed to be allocated to those locations most in need, where people are assumed to be generally less satisfied with the government and therefore less supportive of the democratic regime. Based on the diverging shares of individuals treated by projects of infrastructure and health sectors between the *1.cat\_present* and *1.cat\_future* group, the selection bias is now likely to be different between the untreated and treated treatment group, which would represent a violation of the identifying strategy. This risk, however, should not be high since no valid reason to suspect that the motives for the allocation of Chinese OFF should be differentiated by sectors. Moreover, the share of different sectors in countries with democratic regimes, at least, is quite similar between untreated and treated treatment group.

Another potential threat to the identifying assumption stems from a strategic change in China's aid allocation policy. Such change might, for instance, have taken place after the Beijing FOCAC summit in 2006, when China made commitments to increase its official financing to Africa and introduce a new form of partnership. The reasoning is similar to the one related to the sectors. Comparing individuals near a project completed in 2006, surveyed in 2008, to individuals near projects for which the allocation decision is going to be made in 2010 and who are similarly interviewed in 2008, the latter might not necessarily exhibit the same characteristics as the former if the locations for OFF in 2010 were chosen for differing strategic reasons that are, above all, correlated with regime preferences. Testing for such differences by reducing the sample size to only

two survey rounds at once does, unfortunately, not provide enough observations to allow for precise estimates. Nonetheless, the combination of factors seems to be very unlikely, since changes in aid allocation policy would mostly be related to a readjustment of priorities or a change in committed volumes, both of which are not expected to systematically change the selection bias of the treatment group.

Still, alternative identification strategies had been evaluated. In particular, a difference-in-differences approach similar to the one by Currie et al. (2015) or Hjort and Poulsen (2019), but with multiple treatment years was considered. The main difference in comparison to my current baseline specification is the inclusion of time-invariant fixed effects not at the region level, but at the cohort level, where all respondents matched to projects completed in the same year would belong to the same cohort. Under the assumption that the individuals within 40km of a project would have evolved on parallel trends with the ones outside 40km absent treatment, the estimated difference between the coefficient on  $present_{it}$  and  $future_{it}$  would give an unbiased estimator of the average marginal effect of Chinese OFF.<sup>1</sup> Next to several small shortcomings of the two-way fixed effect approach in the context of my data, the most important issue is that revealed by Athey and Imbens (2018). According to their analyses, the actually estimated parameter in this set-up is a variance-weighted average of treatment-effects in all cross-cohort combinations. When treatment effects change over time, which is most probably the case in my research context, they are weighted negatively, so that the single binary treatment variable cannot be interpreted as the average treatment effect. This and other explored difference-in-differences approaches are therefore not appropriate for this set of data.

### 5.2.2 Further limitations

Besides the potential violations of the identifying assumption, there are further limitations that have to be considered when interpreting the results. In particular, one important factor that is not accounted for is the potential correlation of the presence of Chinese OFF with the presence of Chinese small traders and private direct investments. As data on private investments and Chinese-owned businesses are not available on such a localized level, it is not possible to study this relation in more detail in order to account for it in the specification. Intuitively, there are plausible reasons for either positive or negative correlations between official development financing and private investments. They might complement each other in close vicinity or be allocated away from each other if their purposes rather substitute each other. Meanwhile, the presence of Chinese small traders and small shop-owners might be correlated with both of them. Given the impossibility for us to know of the exact links, the identified effect of Chinese OFF on regime preferences has to be interpreted bearing in mind that the estimated effect might encompass the effects of an increased presence of Chinese shop-owners and private investments.

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<sup>1</sup>This comparison is not obvious, but it can easily be shown that having a specification where  $near_{it}$  takes the value of one for all respondents within the cut-off distance of a present or future project and  $near_{it} \times post_{it}$  indicates whether a respondent lives within the cut-off distance of a completed project, yields exactly the same estimate and test- statistic as given by the difference between  $present_{it}$  and  $future_{it}$  in our specification.

Another limitation to the interpretation of the identified causal relationship is posed by the presence of development projects of other official donors such as the US development agency USAID or of multilateral institutions such as the World Bank coinciding with the allocation of Chinese OFF. Depending on how much their allocations coincide, are motivated by one another and differ in time, the identified average treatment effect might partially consist of combined effects of both Chinese development projects and the others. Although this limitation has to be taken into consideration, it remains questionable how systematically all these other projects can be located exactly within 40km and outside 40km of all of the Chinese project sites at the right timings. I therefore argue that this consideration, despite having to be borne in mind, does not pose a serious limitation to the interpretation of the estimated average treatment effects as average marginal effects of Chinese OFF.

### **5.2.3 Policy implications**

Assuming the empirical strategy is internally valid, the findings point at the opposite direction of what would have been expected at first thought. Despite the presupposed aim of the Chinese government to export a positive view of its state model and legitimize its autocratic form of ruling internationally, these efforts do not seem to yield the desired results on an individual level. This, however, is mostly in line with theoretical predictions that are based on existing literature. Given China's large investments into public diplomacy aimed at projecting a positive image of their political system, it is recommendable for them to make better assessments of how their projects are actually received. Evidently, other factors of motivation for the allocation of both ODA and other official flows are likely to weigh heavier than how local perceptions of government and donor are affected. Nonetheless, my empirical findings show that the latter effects are not to be neglected and that more commitment towards generating an understanding about these perceptions as well as incorporating them into the allocation decision might be in the interest of not only China, but also the recipient government.

Similar reasoning applies to official financing and foreign aid flows, in general. Allocation decisions are complex and already take into account a multitude of political, economic and other factors. But given that my findings provide evidence that development projects are influential in changing individuals' political attitudes, a failure to generate a better understanding of these effects risks to offer only fractured pictures of the effects of foreign aid or development projects on a local level. Accounting for these and their implications on an aggregate level can especially contribute to making better-informed decisions for projects and funds targeted at governance and civil society related issues.

### **5.2.4 Future research**

This thesis is, to my knowledge, one of the first ones to investigate the impact of official financing on individual regime preferences. Given the identified relationship, further research could try to

explore how the identified changes in general support for a regime will affect citizens' attitudes towards related values and institutions, citizen's political participation and political accountability mechanism. Such research would additionally contribute to an understanding of how the identified changes in support for regimes will affect the political and institutional environment on a more aggregate level.

Moreover, for data availability reasons, my research was limited to countries that are all officially democracies. Conducting similar research with data from autocratic countries and different donors would yield findings that are even more relevant from a policy implication perspective. In particular, if results were to indicate that foreign aid or official financing for specific donors increased popular support for the autocratic regime, this should have fundamental consequences on the allocation of the funds.

This thesis also adds to existing literature that investigates the effect of Chinese OFF using geocoded development project data. Future research should make use of the granular availability of data to identify more differentiated relationships. If the objective of foreign aid is to improve local development outcomes, it is important to evaluate how projects in different sectors are effective in doing so. Similar reasoning applies to any other objective. Reliably identifying the channels through which different official development projects affect individual political preferences will help to derive conclusions about how these individual changes translate into changes on more aggregate levels that eventually have important impacts on social and economic development.

## 6. Conclusion

This thesis' aim was to study to which extent Chinese official financing affects citizens' support of democracy as opposed to an autocratic form of ruling similar to the political system in China. The research question was motivated by the recent emergence of China as one of the most important and increasingly influential provider of official development finance to the African continent and the long-existing controversial debate about the wanted and unwanted effects of foreign aid on recipient countries' development. Given that a central role has been attributed to the inclusiveness of economic and political institutions in enabling sustainable economic development, the effects of China's financing activities on citizens' favorable view on either regime should be followed attentively from a global development perspective.

Based on existing literature, three factors have been found to shape individual regime preferences and likewise to be affected by Chinese development projects. The relevance of each of the factors was assumed to differ between countries with democratic regimes and those with hybrid ones. Comparing binary measures of support for democracy, disapproval of one-party rule and disapproval of presidential dictatorship between individuals near completed projects and those near projects that are going to be implemented in the future, the analysis has provided two main results. Chinese official finance flows persistently increase citizens' propensity to disapprove of presidential dictatorship in Sub-Saharan African countries with democratic regimes. They increase the likelihood to support democracy in countries with hybrid regimes in the short term only. The same effects hold if only flows that qualify as Official Development Assistance are considered.

These results provide evidence for Chinese official financing being able to change citizens' perceptions of regimes, although not in a way envisaged by the Chinese government. In finding explanations for the direction of these changes, an analysis of effects on intermediary outcomes offered limited insights. It is presumed that the results are driven by a deterioration in corruption and political liberties and improved economic conditions for ODA flows, in particular.

Despite several potential limitations to the validity of the results that have been discussed in detail, the thesis makes two contributions to existing literature. Firstly, it adds to the literature on Chinese Official financing and its impact on a range of economic and political outcomes. Secondly, it establishes a link between official financing and foreign aid and individual political preferences in the recipient country. In practice, such individual perceptions should be incorporated better into the evaluations of foreign aid and official investments. Future research should further explore in how far the identified changes in general support for a regime will affect political values, institutions and accountability mechanisms with ultimate implications on more aggregate levels.



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## A. Appendix

### A.0.1 More Detailed Information on Data Collection and Geocoding Methodology

#### Aiddata's Chinese OFF data

Relying on information available through public media outlets, the data collection strategy underlying the Aiddata's dataset is naturally exposed to several challenges concerning data completeness, accuracy and credibility (Woolley, 2000; Reeves et al., 2006). These challenges, however, are discussed in great detail by Strange, Parks, et al. (2015) along with various measures that were taken to account for these issues and ensure the reliability of the data. For instance, the risk of human coding errors was mediated by subjecting each project to several rounds of arbitration and reviews by at least two researchers. Moreover, the methodology permits information from conflicting media reports to be supplemented by information from government and NGO reports or journal articles. In general, a triangulation system makes sure that information for one project is pulled from multiple sources, thereby helping to minimize data deficiencies. Likewise, the risk of bias caused by the unavoidable subjective nature of media reporting, the "detection bias", is minimized using a two stage project identification process.<sup>1</sup> Despite remaining concerns about the completeness and accuracy of the data, the sophisticated and regularly updated collection methodology and the overtly transparent and detailed presentation of the collection process convinces me to trust this dataset to be able to provide reliable and accurate information on aspects of Chinese official finance flows that this thesis is interested in, once given limitations are accounted for.

The AidData's geocoding process typically follows four steps that are detailed in AidData (2017). Coders first review all project information and the most up-to-date documentation and may then add additional sources to the documentation. As a third step, they identify the correct location using name and location type and assign precision codes. Coordinates for these coded locations can then be derived through the geonames online service. Following a double-blind approach, two separate geocoded versions of one project record including written notes with justification and references are provided by two independent coders and are then reconciled by a trained arbitrator. The precision level that is assigned to each project record is reported on a scale ranging from one to eight and permits data users to select different subsets of the data depending on the level of granularity at which information is needed. Precision level one and two are assigned when coordinates correspond to or are less than 25 km away from an exact location such as a populated place (village, city) or a physical structure such as a health center or road. Level three and four designate projects where the coordinates is analogous to a second- and first-order administrative division respectively. Higher levels include those locations that can only be estimated roughly, those that are disbursed locally, but can only related to an independent political entity and those where

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<sup>1</sup>Detailed information on the methodology can be found in Strange, ODonnell, et al. (2014).

the central government is expected to be the only direct beneficiary such as with budget support or capacity building.

### **Afrobarometer data**

With the aim to generate a representative cross-section of all citizens older than 17 years, the sampling procedure applies random selection methods at each stage of sampling while taking into account different population sizes within geographic units. People living in institutionalized settings such as hospitals or dormitories are excluded as are areas that are inaccessible for security reasons. The sample is first stratified according to the principal unit of subnational government such as a state or province and by rural and urban location. Following a multi-stage sampling process, primary sampling units (PSU) are then randomly selected, followed by sampling start points. In the last two states, the interviewer then randomly selects households and within the household individual respondents, alternating between men and women. Within each selected PSU, eight interviews are clustered. For the national samples of 1200 respondents, the margin of sampling error at which inferences to the respective national populations can be made is within plus or minus 2.8 percent with a 95 percent confidence level, compared to plus or minus 2.0 percent for a sample with 2400 respondents.



Table A.1: Afrobarometer - Dependent Variables

	Question	Indicator Variable
Support Democracy	With which one of these statements are you most in agreement?	1 Democracy is preferable to any other form of government 0 To people like me, it doesn't matter what government 0 In certain situations, non-democratic government can be preferable
Disapproval One-Party Rule	Would you disapprove or approve of following alternatives: Only 1 political party allowed to stand for election and hold office.	1 Strongly disapprove 1 Disapprove 0 Neither disapprove nor approve 0 Approve 0 Strongly Approve
Disapproval One-Man Rule	Elections and Parliament are abolished so that president can decide everything.	1 Strongly disapprove, 1 Disapprove 0 Neither disapprove nor approve 0 Approve, 0 Strongly Approve
Lack of Water; Food; Income	Over the past year, how often, if ever, have you or anyone in your family gone without: Cash income; Enough food to eat.	0 Never 1 Just once or twice 1 Several times 1 Always
Present Living Conditions	In general, how would you rate your own present living conditions?	0 Very bad 0 Fairly bad 1 Neither disapprove nor approve 1 Fairly good 1 Very good
Trust President/ Prime Minister	How much do you trust the President/ Prime Minister?	0 Not at all, 0 Just a little 1 Somewhat, 1 A lot
Performance President/PM; Members of Parliament	Do you approve or disapprove of the way the following people have performed their jobs over the past year: President/PM; MP	0 Strongly disapprove 0 Disapprove 1 Approve 1 Strongly Approve
Satisfaction w/ how democracy works	Overall, how satisfied are you with the way democracy works in your country?	0 My country is not a democracy 0 Not at all, not very satisfied 1 Fairly, very satisfied

Taken from Afrobarometer survey round codebooks

Table A.2: List of Countries

Number of Observations		Polity2						
		1990	1994	1999	2001	2005	2009	2014
Democratic Regimes								
Botswana	6114	7	7	8	8	8	8	8
Ghana	6330	-7	-1	2	6	8	8	8
Lesotho	2143	-7	8	2	6	8	8	8
Malawi	3603	-9	6	6	4	6	6	6
Mali	4437	-7	7	6	6	7	7	5
Namibia	4200	6	6	6	6	6	6	6
South Africa	9327	5	9	9	9	9	9	9
Zambia	2918	-9	6	1	5	7	7	7
Hybrid Regimes								
Tanzania	3744	-6	-5	-1	-1	-1	-1	-1
Uganda	3641	-7	-4	-4	-4	-1	-1	3
Nigeria	7662	-5	-7	4	4	4	4	4
Zimbabwe	4093	-6	-6	-3	-4	-4	1	4

Based on data from Marshall et al. (2017)

Table A.3: Summary Statistics Intermediary Outcomes

	Dummy Variable			Ordinal Variable		
	obs	mean	sd	mean	sd	median
Lack Water	57382	0.43	0.49	0.60	0.82	0.00
Lack Food	57379	0.47	0.50	0.60	0.74	0.00
Lack Cash Income	53955	0.72	0.45	1.12	0.94	1.00
Living Conditions	47284	0.50	0.50	2.66	1.23	2.00
Trust President	45586	0.58	0.49	1.74	1.12	2.00
Performance President	51574	0.66	0.47	2.77	0.99	3.00
Satisfaction Democracy	54209	0.57	0.50	2.55	1.04	3.00

Table A.4: Poverty Outcomes - Second Specification

	Lack Water		Lack Food		Lack Income		Living	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Hybrid	Democratic	Hybrid	Democratic	Hybrid	Democratic	Hybrid	Democratic
catpresent40=1	0.0130 (0.0218)	-0.0030 (0.0133)	0.0042 (0.0192)	-0.0076 (0.0116)	0.0196 (0.0156)	0.0056 (0.0107)	-0.0176 (0.0199)	0.0091 (0.0118)
catpresent40=2	-0.0249 (0.0231)	-0.0029 (0.0143)	0.0234 (0.0216)	-0.0027 (0.0130)	-0.0093 (0.0171)	-0.0196 (0.0133)	0.0065 (0.0216)	-0.0196 (0.0139)
catfuture40=1	0.0402 (0.0433)	-0.0053 (0.0189)	0.0469 (0.0334)	-0.0013 (0.0171)	0.0463 (0.0211)	-0.0203 (0.0158)	0.0215 (0.0331)	-0.0029 (0.0164)
catfuture40=2	0.0335 (0.0659)	-0.0832 (0.0405)	0.0664 (0.0562)	-0.0249 (0.0381)	0.0850 (0.0462)	0.0244 (0.0356)	0.0390 (0.0435)	0.0492 (0.0342)
age	0.0052 (0.0016)	0.0021 (0.0010)	0.0054 (0.0016)	0.0055 (0.0010)	0.0031 (0.0013)	0.0036 (0.0009)	-0.0091 (0.0015)	-0.0104 (0.0010)
age $\times$ age	-0.0001 (0.0000)	-0.0000 (0.0000)	-0.0001 (0.0000)	-0.0001 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	0.0001 (0.0000)	0.0001 (0.0000)
educ	-0.0318 (0.0067)	-0.0518 (0.0043)	-0.0797 (0.0062)	-0.1078 (0.0042)	-0.0513 (0.0054)	-0.0724 (0.0041)	0.0759 (0.0064)	0.0838 (0.0044)
urban	-0.0417 (0.0168)	-0.1137 (0.0104)	-0.0440 (0.0153)	-0.0656 (0.0090)	-0.0381 (0.0121)	-0.0815 (0.0085)	0.0316 (0.0137)	0.0380 (0.0091)
male	0.0272 (0.0075)	0.0012 (0.0048)	0.0124 (0.0083)	0.0023 (0.0055)	0.0216 (0.0066)	0.0086 (0.0048)	-0.0239 (0.0082)	0.0043 (0.0057)
occup=1	-0.0133 (0.0371)	-0.0094 (0.0346)	-0.0337 (0.0317)	-0.0292 (0.0354)	-0.0221 (0.0295)	-0.0370 (0.0317)	0.0115 (0.0338)	0.0931 (0.0361)
occup=2	-0.0447 (0.0151)	-0.0441 (0.0088)	-0.0608 (0.0141)	-0.0949 (0.0088)	-0.0222 (0.0112)	-0.0864 (0.0083)	0.0361 (0.0133)	0.0778 (0.0092)
occup=3	-0.0006 (0.0296)	0.0240 (0.0219)	-0.0284 (0.0282)	0.0029 (0.0213)	0.0043 (0.0246)	-0.0068 (0.0184)	-0.0484 (0.0286)	0.0449 (0.0223)
race=2	-0.0832 (0.0885)	-0.1738 (0.0122)	-0.1152 (0.0751)	-0.1614 (0.0136)	-0.2158 (0.0917)	-0.2389 (0.0156)	0.1465 (0.0827)	0.0918 (0.0145)
race=3	-0.2235 (0.1755)	-0.2008 (0.0206)	-0.0734 (0.2674)	-0.2397 (0.0214)	-0.0339 (0.1927)	-0.2830 (0.0286)	-0.0922 (0.2513)	0.1038 (0.0265)
region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F_diff1	0.3385	0.0106	1.3055	0.1042	1.1036	2.0334	1.1167	0.3790
F_diff2	1.8665	0.0106	0.3711	0.0042	4.4805	0.0012	0.1552	0.6273
p_diff1	0.5608	0.9181	0.2534	0.7469	0.2936	0.1540	0.2908	0.5382
p_diff2	0.1721	0.9179	0.5425	0.9486	0.0345	0.9718	0.6937	0.4284
r2_a	0.0825	0.1258	0.0985	0.1374	0.0891	0.1933	0.1074	0.1270
N	12191	25432	12193	25429	12159	25370	12172	25352

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year fixed effects. F\_diff1,2 and p\_diff1,2 give the F-tests and p-values associated with the differences between present and future locations inside and outside the five years range. All results are estimated on the two subsamples of the baseline sample denoted as hybrid and democratic.

Table A.5: Political Satisfaction - Second Specification

	Trust President		Perform President		Satisfaction Democracy	
	(1)	(2)	(3)	(4)	(5)	(6)
	Hybrid	Democratic	Hybrid	Democratic	Hybrid	Democratic
cat_present40=1	-0.0317 (0.0185)	-0.0347 (0.0130)	-0.0122 (0.0213)	-0.0272 (0.0127)	-0.0081 (0.0171)	-0.0218 (0.0118)
cat_present40=2	-0.0476 (0.0205)	-0.0630 (0.0151)	0.0019 (0.0247)	-0.0520 (0.0161)	-0.0292 (0.0194)	-0.0351 (0.0144)
cat_future40=1	0.0243 (0.0333)	0.0074 (0.0164)	-0.0290 (0.0349)	-0.0214 (0.0165)	-0.0309 (0.0337)	-0.0201 (0.0171)
cat_future40=2	0.0154 (0.0426)	0.1453 (0.0355)	0.0286 (0.0432)	0.1196 (0.0362)	0.0114 (0.0442)	-0.0105 (0.0303)
age	-0.0009 (0.0015)	0.0034 (0.0010)	-0.0036 (0.0016)	-0.0003 (0.0009)	-0.0017 (0.0016)	0.0001 (0.0010)
age $\times$ age	0.0000 (0.0000)	-0.0000 (0.0000)	0.0001 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)
educ	-0.0156 (0.0062)	-0.0272 (0.0044)	-0.0074 (0.0063)	-0.0143 (0.0043)	-0.0029 (0.0067)	0.0044 (0.0044)
urban	-0.0302 (0.0148)	-0.0315 (0.0098)	-0.0443 (0.0157)	-0.0103 (0.0096)	-0.0266 (0.0140)	0.0074 (0.0091)
male	-0.0255 (0.0077)	0.0081 (0.0055)	-0.0288 (0.0075)	0.0006 (0.0051)	-0.0240 (0.0082)	0.0100 (0.0056)
occup=1	-0.0212 (0.0341)	-0.0049 (0.0388)	-0.0121 (0.0369)	0.0003 (0.0402)	-0.0284 (0.0355)	0.0197 (0.0334)
occup=2	0.0291 (0.0143)	0.0284 (0.0090)	0.0180 (0.0155)	0.0188 (0.0087)	0.0482 (0.0148)	0.0111 (0.0090)
occup=3	0.0204 (0.0310)	0.0369 (0.0218)	0.0414 (0.0280)	-0.0154 (0.0223)	0.0187 (0.0264)	-0.0139 (0.0228)
race=2	-0.0393 (0.0923)	-0.1095 (0.0157)	-0.0980 (0.0891)	-0.1383 (0.0158)	0.0022 (0.0886)	-0.1158 (0.0154)
race=3	0.0396 (0.1669)	-0.2284 (0.0328)	-0.0187 (0.2145)	-0.2728 (0.0341)	-0.1260 (0.0756)	-0.1404 (0.0317)
region FE	Yes	Yes	Yes	Yes	Yes	Yes
year FE	Yes	Yes	Yes	Yes	Yes	Yes
p_diff1	0.1300	0.0333	0.6665	0.7714	0.5296	0.9332
p_diff2	0.0581	0.0012	0.4470	0.1785	0.9639	0.4995
r2_a	0.2193	0.1311	0.1990	0.1548	0.1943	0.0904
N	11951.0000	24290.0000	11853.0000	23740.0000	10890.0000	24322.0000

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year fixed effects. F\_diff1,2 and p\_diff1,2 give the F-tests and p-values associated with the differences between present and future locations inside and outside the five years range. All results are estimated on the two subsamples of the baseline sample denoted as hybrid and democratic.

Table A.6: Regime Preferences Second Specification - ODA only

	Democracy		One-Party		Dictator	
	(1) Hybrid	(2) Democratic	(3) Hybrid	(4) Democratic	(5) Hybrid	(6) Democratic
ODApresent=1	-0.0033 (0.0175)	-0.0143 (0.0109)	0.0093 (0.0171)	-0.0199 (0.0103)	-0.0025 (0.0161)	-0.0000 (0.0092)
ODApresent=2	-0.0254 (0.0206)	-0.0164 (0.0121)	0.0119 (0.0179)	0.0110 (0.0103)	0.0068 (0.0153)	-0.0134 (0.0089)
ODAfuture=1	-0.0667 (0.0337)	-0.0430 (0.0168)	-0.0244 (0.0318)	-0.0302 (0.0157)	0.0168 (0.0251)	-0.0631 (0.0143)
ODAfuture=2	-0.0448 (0.0461)	-0.0302 (0.0599)	-0.0071 (0.0368)	-0.0759 (0.0471)	-0.0409 (0.0355)	0.0214 (0.0414)
age	0.0026 (0.0015)	0.0043 (0.0009)	0.0014 (0.0014)	0.0041 (0.0009)	0.0018 (0.0011)	0.0030 (0.0008)
age × age	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)
educ	0.0282 (0.0060)	0.0370 (0.0039)	0.0504 (0.0053)	0.0547 (0.0036)	0.0200 (0.0047)	0.0317 (0.0033)
urban	0.0031 (0.0133)	0.0180 (0.0078)	0.0469 (0.0114)	0.0376 (0.0074)	0.0223 (0.0109)	0.0153 (0.0065)
male	0.0350 (0.0077)	0.0235 (0.0053)	0.0460 (0.0071)	0.0349 (0.0049)	0.0063 (0.0057)	0.0198 (0.0042)
race=2	0.0286 (0.0594)	-0.0696 (0.0146)	0.0676 (0.0622)	0.0392 (0.0137)	0.0360 (0.0355)	0.0076 (0.0141)
race=3	0.1985 (0.0349)	-0.0576 (0.0271)	0.0391 (0.1708)	0.0935 (0.0247)	-0.0960 (0.1297)	0.0620 (0.0261)
occup=1	-0.0130 (0.0336)	-0.0930 (0.0362)	-0.0130 (0.0349)	0.0124 (0.0328)	-0.0155 (0.0286)	-0.0430 (0.0324)
occup=2	0.0421 (0.0122)	-0.0006 (0.0081)	0.0191 (0.0116)	0.0208 (0.0078)	0.0375 (0.0097)	-0.0043 (0.0070)
occup=3	0.0125 (0.0248)	-0.0310 (0.0204)	0.0179 (0.0246)	-0.0020 (0.0195)	0.0026 (0.0194)	-0.0093 (0.0172)
region FE	Yes	Yes	Yes	Yes	Yes	Yes
year FE	Yes	Yes	Yes	Yes	Yes	Yes
F_diff1	2.9235	2.1543	0.9168	0.3122	0.4264	14.8806
F_diff2	1.1468	1.6597	1.0399	4.7852	0.1175	8.7831
p_diff1	0.0875	0.1423	0.3385	0.5763	0.5139	0.0001
p_diff2	0.2844	0.1977	0.3080	0.0288	0.7318	0.0031
r2_a	0.0541	0.0578	0.0934	0.0627	0.0628	0.0909
N	10883.0000	24227.0000	12008.0000	25072.0000	11938.0000	24860.0000

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year fixed effects. F\_diff1,2 and p\_diff1,2 give the F-tests and p-values associated with the differences between present and future locations inside and outside the five years range. All results are estimated on the two subsamples of the baseline sample denoted as hybrid and democratic. Only Projects classified as ODA are considered for this analysis.

Table A.7: Living Conditions Second Specification - ODA only

	Lack Water		Lack Food		Lack Income		Living	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Hybrid	Democratic	Hybrid	Democratic	Hybrid	Democratic	Hybrid	Democratic
ODApresent=1	0.0050 (0.0248)	-0.0055 (0.0152)	-0.0115 (0.0218)	-0.0122 (0.0129)	-0.0125 (0.0174)	0.0029 (0.0114)	-0.0061 (0.0221)	0.0041 (0.0130)
ODApresent=2	-0.0242 (0.0247)	-0.0090 (0.0148)	0.0335 (0.0244)	-0.0084 (0.0130)	-0.0082 (0.0179)	-0.0239 (0.0133)	0.0323 (0.0245)	-0.0357 (0.0144)
ODAfuture=1	0.0185 (0.0561)	0.0044 (0.0222)	0.0521 (0.0387)	-0.0021 (0.0199)	0.0481 (0.0188)	-0.0171 (0.0171)	-0.0056 (0.0402)	0.0037 (0.0179)
ODAfuture=2	0.0079 (0.0826)	-0.1122 (0.0602)	0.1043 (0.0530)	0.0306 (0.0611)	0.1632 (0.0434)	0.1415 (0.0626)	-0.0149 (0.0448)	0.0811 (0.0541)
age	0.0052 (0.0016)	0.0021 (0.0010)	0.0054 (0.0016)	0.0055 (0.0010)	0.0031 (0.0013)	0.0036 (0.0009)	-0.0090 (0.0015)	-0.0104 (0.0010)
age × age	-0.0001 (0.0000)	-0.0000 (0.0000)	-0.0001 (0.0000)	-0.0001 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	0.0001 (0.0000)	0.0001 (0.0000)
educ	-0.0316 (0.0067)	-0.0518 (0.0043)	-0.0794 (0.0063)	-0.1078 (0.0042)	-0.0507 (0.0054)	-0.0724 (0.0041)	0.0758 (0.0064)	0.0840 (0.0044)
urban	-0.0402 (0.0169)	-0.1151 (0.0102)	-0.0436 (0.0152)	-0.0653 (0.0089)	-0.0357 (0.0121)	-0.0807 (0.0084)	0.0304 (0.0137)	0.0397 (0.0090)
male	0.0271 (0.0075)	0.0012 (0.0048)	0.0123 (0.0083)	0.0022 (0.0055)	0.0214 (0.0066)	0.0086 (0.0048)	-0.0239 (0.0082)	0.0042 (0.0057)
race=2	-0.0838 (0.0887)	-0.1739 (0.0122)	-0.1124 (0.0752)	-0.1616 (0.0136)	-0.2141 (0.0926)	-0.2392 (0.0156)	0.1483 (0.0829)	0.0919 (0.0145)
race=3	-0.2268 (0.1760)	-0.2025 (0.0205)	-0.0792 (0.2660)	-0.2416 (0.0214)	-0.0445 (0.1893)	-0.2832 (0.0284)	-0.0933 (0.2506)	0.1047 (0.0265)
occup=1	-0.0127 (0.0371)	-0.0091 (0.0346)	-0.0327 (0.0318)	-0.0292 (0.0354)	-0.0211 (0.0296)	-0.0370 (0.0316)	0.0123 (0.0338)	0.0939 (0.0361)
occup=2	-0.0442 (0.0151)	-0.0439 (0.0088)	-0.0605 (0.0141)	-0.0946 (0.0088)	-0.0213 (0.0112)	-0.0859 (0.0083)	0.0359 (0.0133)	0.0781 (0.0092)
occup=3	-0.0002 (0.0296)	0.0243 (0.0219)	-0.0277 (0.0281)	0.0031 (0.0213)	0.0055 (0.0246)	-0.0060 (0.0184)	-0.0485 (0.0286)	0.0454 (0.0223)
region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F_diff1	0.0495	0.1409	2.1397	0.1868	5.9892	1.0273	0.0001	0.0004
F_diff2	0.5010	0.2553	0.1715	0.0701	5.0114	0.0987	0.6931	2.9412
p_diff1	0.8239	0.7074	0.1437	0.6656	0.0145	0.3109	0.9925	0.9843
p_diff2	0.4792	0.6134	0.6788	0.7912	0.0253	0.7534	0.4052	0.0864
r2_a	0.0822	0.1257	0.0989	0.1374	0.0892	0.1936	0.1076	0.1271
N	12191	25432	12193	25429	12159	25370	12172	25352

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year fixed effects. F\_diff1,2 and p\_diff1,2 give the F-tests and p-values associated with the differences between present and future locations inside and outside the five years range. All results are estimated on the two subsamples of the baseline sample denoted as hybrid and democratic. Only Projects classified as ODA are considered for this analysis.

Table A.8: Political Satisfaction Second Specification - ODA only

	Trust President		Perform President		Satisfaction Democracy	
	(1)	(2)	(3)	(4)	(5)	(6)
	Hybrid	Democratic	Hybrid	Democratic	Hybrid	Democratic
ODApresent=1	-0.0091 (0.0213)	-0.0240 (0.0142)	-0.0033 (0.0245)	-0.0041 (0.0141)	-0.0214 (0.0191)	-0.0056 (0.0134)
ODApresent=2	-0.0307 (0.0229)	-0.0785 (0.0152)	-0.0008 (0.0282)	-0.0554 (0.0166)	-0.0350 (0.0221)	-0.0301 (0.0145)
ODAfuture=1	-0.0258 (0.0426)	-0.0126 (0.0177)	-0.0746 (0.0459)	-0.0535 (0.0175)	-0.0756 (0.0385)	-0.0441 (0.0188)
ODAfuture=2	-0.0377 (0.0477)	0.1064 (0.0624)	-0.0061 (0.0520)	0.1805 (0.0590)	-0.0465 (0.0479)	-0.0807 (0.0467)
age	-0.0008 (0.0015)	0.0034 (0.0010)	-0.0036 (0.0016)	-0.0002 (0.0009)	-0.0017 (0.0016)	0.0001 (0.0010)
age × age	0.0000 (0.0000)	-0.0000 (0.0000)	0.0001 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)
educ	-0.0160 (0.0062)	-0.0270 (0.0044)	-0.0075 (0.0063)	-0.0145 (0.0043)	-0.0026 (0.0067)	0.0043 (0.0044)
urban	-0.0312 (0.0148)	-0.0284 (0.0096)	-0.0447 (0.0157)	-0.0080 (0.0095)	-0.0246 (0.0140)	0.0069 (0.0091)
male	-0.0254 (0.0077)	0.0079 (0.0055)	-0.0287 (0.0075)	0.0006 (0.0051)	-0.0242 (0.0082)	0.0100 (0.0056)
race=2	-0.0405 (0.0925)	-0.1084 (0.0157)	-0.0992 (0.0894)	-0.1376 (0.0157)	0.0022 (0.0886)	-0.1154 (0.0154)
race=3	0.0443 (0.1648)	-0.2330 (0.0333)	-0.0156 (0.2137)	-0.2770 (0.0343)	-0.1317 (0.0756)	-0.1446 (0.0318)
occup=1	-0.0206 (0.0341)	-0.0030 (0.0388)	-0.0130 (0.0369)	0.0006 (0.0402)	-0.0292 (0.0356)	0.0197 (0.0334)
occup=2	0.0291 (0.0143)	0.0277 (0.0090)	0.0176 (0.0155)	0.0181 (0.0087)	0.0486 (0.0148)	0.0103 (0.0090)
occup=3	0.0198 (0.0311)	0.0367 (0.0218)	0.0411 (0.0280)	-0.0158 (0.0224)	0.0194 (0.0264)	-0.0146 (0.0228)
region FE	Yes	Yes	Yes	Yes	Yes	Yes
year FE	Yes	Yes	Yes	Yes	Yes	Yes
F_diff1	0.1250	0.2676	1.9824	5.0952	1.7081	2.9661
F_diff2	0.0105	8.0445	1.9898	0.0061	0.8909	0.3454
p_diff1	0.7237	0.6050	0.1593	0.0240	0.1914	0.0851
p_diff2	0.9182	0.0046	0.1586	0.9380	0.3454	0.5567
r2_a	0.2189	0.1309	0.1992	0.1552	0.1945	0.0906
N	11951.0000	24290.0000	11853.0000	23740.0000	10890.0000	24322.0000

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year fixed effects. F\_diff1,2 and p\_diff1,2 give the F-tests and p-values associated with the differences between present and future locations inside and outside the five years range. All results are estimated on the two subsamples of the baseline sample denoted as hybrid and democratic. Only Projects classified as ODA are considered for this analysis.

Table A.9: Share of Respondents Matched to Projects of each Sector by Treatment Status and Regime Type

	Present 3yrs			(2) Future 7yrs		
	Dem	Hybrid	Total	Dem	Hyb	Total
Action Relating to Debt	0.00	1.33	0.45	0.00	0.94	0.28
Agriculture, Forestry and Fishing	0.46	0.89	0.61	0.27	0.00	0.19
Communications	3.92	16.84	8.34	7.31	18.65	10.71
Food Security Assistance	1.82	0.00	1.19			
Education	20.62	18.31	19.83	24.41	15.62	21.77
Emergency Response	0.48	0.00	0.31			
Energy Generation and Supply	2.31	4.40	3.02	1.62	3.70	2.24
Government and Civil Society	12.75	13.74	13.09	8.78	3.78	7.28
Health	17.88	17.98	17.91	11.78	2.28	8.93
Industry, Mining, Construction	1.74	0.00	1.15	0.84	0.00	0.59
Other Social infrastructure and services	25.01	1.55	16.98	29.86	0.39	21.02
Support to (N)GOs	0.00	0.22	0.08			
Transport and Storage	10.83	18.31	13.39	11.77	53.68	24.35
Unallocated / Unspecified				2.14	0.00	1.50
Water Supply and Sanitation	2.19	6.20	3.56	0.00	0.94	0.28
Women in Development	0.00	0.22	0.08	1.22	0.00	0.85
Total	100.00	100.00	100.00	100.00	100.00	100.00
<i>N</i>		10551			13335	



## B. Appendix

Table B.1: Regime Preferences by Regime - Binary Logit Model

	Democracy		One Party		Dictator	
	(1) Hybrid	(2) Democratic	(3) Hybrid	(4) Democratic	(5) Hybrid	(6) Democratic
main						
cat_present40=1	0.0513 (0.0991)	-0.0966 (0.0549)	0.1698 (0.0925)	-0.1274 (0.0577)	0.0475 (0.1386)	-0.0169 (0.0705)
cat_present40=2	-0.2045 (0.1160)	-0.1151 (0.0679)	0.1445 (0.0962)	0.0723 (0.0761)	0.0684 (0.1423)	-0.0684 (0.0835)
cat_future40=1	-0.3357 (0.1731)	-0.0872 (0.0841)	-0.0286 (0.1642)	-0.1882 (0.0777)	0.2036 (0.2193)	-0.3253 (0.0857)
cat_future40=2	0.0667 (0.3122)	-0.1624 (0.1666)	-0.1686 (0.2535)	-0.0573 (0.1448)	0.2261 (0.4110)	0.0975 (0.1663)
age	0.0146 (0.0091)	0.0232 (0.0049)	0.0084 (0.0082)	0.0252 (0.0051)	0.0154 (0.0099)	0.0222 (0.0058)
age $\times$ age	-0.0001 (0.0001)	-0.0002 (0.0001)	-0.0001 (0.0001)	-0.0002 (0.0001)	-0.0002 (0.0001)	-0.0002 (0.0001)
educ	0.1670 (0.0353)	0.2110 (0.0223)	0.3151 (0.0343)	0.3550 (0.0231)	0.1755 (0.0410)	0.2569 (0.0265)
urban	0.0077 (0.0787)	0.0919 (0.0446)	0.2831 (0.0737)	0.2306 (0.0445)	0.1825 (0.0938)	0.0959 (0.0511)
male	0.2096 (0.0465)	0.1314 (0.0290)	0.2904 (0.0455)	0.2151 (0.0297)	0.0538 (0.0538)	0.1536 (0.0319)
race=2	0.2212 (0.5337)	-0.3554 (0.0709)	0.5583 (0.5802)	0.1775 (0.0753)	0.8280 (1.0518)	0.0164 (0.0807)
race=3	0.0000 (.)	-0.2799 (0.1309)	0.2167 (1.0273)	0.5208 (0.1561)	-0.7525 (0.7769)	0.3518 (0.1635)
occup=1	-0.0799 (0.1895)	-0.4650 (0.1688)	-0.0777 (0.1909)	0.0820 (0.1788)	-0.1281 (0.2177)	-0.2163 (0.1818)
occup=2	0.2470 (0.0724)	0.0004 (0.0454)	0.1150 (0.0746)	0.1282 (0.0479)	0.3492 (0.0897)	-0.0356 (0.0542)
occup=3	0.0608 (0.1435)	-0.1727 (0.1087)	0.0798 (0.1519)	-0.0149 (0.1104)	0.0177 (0.1680)	-0.0539 (0.1134)
region FE	Yes	Yes	Yes	Yes	Yes	Yes
year FE	Yes	Yes	Yes	Yes	Yes	Yes
chi2_diff1	4.2019	0.0099	1.1518	0.4412	0.3755	8.9338
chi2_diff2	0.4368	0.0709	0.8931	5.8823	0.2774	4.8846
p_diff1	0.0404	0.9206	0.2832	0.5066	0.5400	0.0028
p_diff2	0.5086	0.7901	0.3446	0.0153	0.5984	0.0271
r2_p	0.0593	0.0571	0.0959	0.0655	0.0832	0.0986
N	10732.0000	24182.0000	11882.0000	25064.0000	11830.0000	24745.0000

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year fixed effects. F\_diff1,2 and p\_diff1,2 give the F-tests and p-values associated with the differences between present and future locations inside and outside the five years range. All results are estimated on the two subsamples of the baseline sample denoted as hybrid and democratic.

Table B.2: Regime Preferences Logit - Average Marginal Effects on the Probability of Success

	Democracy		One Party		Dictator	
	(1) Hybrid	(2) Democratic	(3) Hybrid	(4) Democratic	(5) Hybrid	(6) Democratic
cat_present40=1	0.0083 (0.0160)	-0.0175 (0.0100)	0.0267 (0.0144)	-0.0215 (0.0098)	0.0051 (0.0148)	-0.0022 (0.0092)
cat_present40=2	-0.0353 (0.0203)	-0.0210 (0.0125)	0.0229 (0.0150)	0.0116 (0.0121)	0.0073 (0.0150)	-0.0091 (0.0112)
cat_future40=1	-0.0597 (0.0327)	-0.0160 (0.0156)	-0.0045 (0.0263)	-0.0322 (0.0137)	0.0206 (0.0209)	-0.0460 (0.0129)
cat_future40=2	0.0108 (0.0498)	-0.0302 (0.0320)	-0.0277 (0.0430)	-0.0095 (0.0244)	0.0228 (0.0385)	0.0123 (0.0204)
age	0.0017 (0.0004)	0.0017 (0.0002)	-0.0000 (0.0004)	0.0012 (0.0002)	0.0002 (0.0003)	0.0009 (0.0002)
educ	0.0277 (0.0059)	0.0382 (0.0040)	0.0499 (0.0053)	0.0587 (0.0038)	0.0188 (0.0044)	0.0337 (0.0035)
urban	0.0013 (0.0131)	0.0166 (0.0081)	0.0449 (0.0116)	0.0381 (0.0074)	0.0196 (0.0101)	0.0126 (0.0067)
male	0.0348 (0.0077)	0.0238 (0.0052)	0.0460 (0.0072)	0.0356 (0.0049)	0.0058 (0.0058)	0.0202 (0.0042)
race=2	0.0348 (0.0791)	-0.0679 (0.0142)	0.0773 (0.0687)	0.0285 (0.0117)	0.0676 (0.0622)	0.0022 (0.0106)
race=3	0.0000 (.)	-0.0527 (0.0259)	0.0327 (0.1469)	0.0766 (0.0199)	-0.1013 (0.1263)	0.0420 (0.0176)
occup=1	-0.0143 (0.0344)	-0.0902 (0.0352)	-0.0129 (0.0321)	0.0136 (0.0291)	-0.0158 (0.0277)	-0.0296 (0.0262)
occup=2	0.0410 (0.0120)	0.0001 (0.0081)	0.0183 (0.0119)	0.0210 (0.0078)	0.0371 (0.0096)	-0.0046 (0.0071)
occup=3	0.0105 (0.0247)	-0.0318 (0.0203)	0.0128 (0.0242)	-0.0025 (0.0187)	0.0021 (0.0197)	-0.0071 (0.0150)
region FE	Yes	Yes	Yes	Yes	Yes	Yes
year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	10732	24182	11882	25064	11830	24745

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year fixed effects.

All results are estimated on the two subsamples of the baseline sample denoted as hybrid and democratic.

Table B.3: Regime Preferences by Regime - 25km Cutoff

	Democracy		One Party		Dictator	
	(1) Hybrid	(2) Democratic	(3) Hybrid	(4) Democratic	(5) Hybrid	(6) Democratic
cat_present25=1	0.0116 (0.0160)	-0.0220 (0.0108)	0.0142 (0.0154)	-0.0333 (0.0101)	-0.0059 (0.0125)	-0.0053 (0.0093)
cat_present25=2	-0.0354 (0.0206)	-0.0089 (0.0124)	-0.0036 (0.0163)	-0.0047 (0.0113)	-0.0170 (0.0132)	-0.0205 (0.0098)
cat_future25=1	-0.0960 (0.0318)	-0.0233 (0.0166)	-0.0243 (0.0320)	-0.0252 (0.0155)	-0.0035 (0.0228)	-0.0457 (0.0153)
cat_future25=2	-0.0093 (0.0454)	-0.0068 (0.0399)	-0.0273 (0.0360)	-0.0111 (0.0327)	-0.0268 (0.0360)	-0.0251 (0.0329)
age	0.0026 (0.0015)	0.0042 (0.0009)	0.0015 (0.0014)	0.0041 (0.0009)	0.0018 (0.0011)	0.0030 (0.0008)
age $\times$ age	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)
educ	0.0282 (0.0060)	0.0370 (0.0039)	0.0505 (0.0053)	0.0549 (0.0036)	0.0203 (0.0047)	0.0316 (0.0033)
urban	0.0017 (0.0134)	0.0183 (0.0081)	0.0464 (0.0113)	0.0412 (0.0074)	0.0228 (0.0108)	0.0162 (0.0067)
male	0.0350 (0.0077)	0.0235 (0.0053)	0.0460 (0.0071)	0.0348 (0.0049)	0.0063 (0.0057)	0.0197 (0.0042)
race=2	0.0250 (0.0599)	-0.0689 (0.0146)	0.0658 (0.0623)	0.0400 (0.0137)	0.0343 (0.0355)	0.0088 (0.0142)
race=3	0.2052 (0.0377)	-0.0524 (0.0271)	0.0412 (0.1733)	0.0991 (0.0249)	-0.0933 (0.1327)	0.0660 (0.0264)
occup=1	-0.0128 (0.0337)	-0.0919 (0.0362)	-0.0132 (0.0349)	0.0136 (0.0328)	-0.0161 (0.0286)	-0.0414 (0.0325)
occup=2	0.0417 (0.0122)	0.0000 (0.0081)	0.0187 (0.0115)	0.0215 (0.0078)	0.0373 (0.0097)	-0.0035 (0.0070)
occup=3	0.0118 (0.0249)	-0.0304 (0.0204)	0.0178 (0.0246)	-0.0016 (0.0195)	0.0022 (0.0194)	-0.0089 (0.0173)
region FE	Yes	Yes	Yes	Yes	Yes	Yes
year FE	Yes	Yes	Yes	Yes	Yes	Yes
F_diff1	9.4865	0.0044	1.2026	0.2084	0.0087	5.5577
F_diff2	2.6493	0.5055	0.3516	1.1620	0.2669	1.9887
p_diff1	0.0021	0.9473	0.2730	0.6480	0.9255	0.0185
p_diff2	0.1038	0.4772	0.5533	0.2811	0.6055	0.1586
r2_a	0.0554	0.0576	0.0935	0.0628	0.0628	0.0906
N	10883.0000	24227.0000	12008.0000	25072.0000	11938.0000	24860.0000

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year fixed effects. F\_diff1,2 and p\_diff1,2 give the F-tests and p-values associated with the differences between present and future locations inside and outside the five years range. All results are estimated on the two subsamples of the baseline sample denoted as hybrid and democratic.

Table B.4: Regime Preferences by Regime - 50km Cutoff

	Democracy		One Party		Dictator	
	(1) Hybrid	(2) Democratic	(3) Hybrid	(4) Democratic	(5) Hybrid	(6) Democratic
cat_present50=1	0.0028 (0.0165)	-0.0140 (0.0101)	0.0335 (0.0158)	-0.0159 (0.0098)	0.0048 (0.0143)	-0.0029 (0.0087)
cat_present50=2	-0.0310 (0.0192)	-0.0180 (0.0122)	0.0355 (0.0165)	0.0095 (0.0117)	0.0128 (0.0145)	-0.0035 (0.0099)
cat_future50=1	-0.0700 (0.0289)	-0.0075 (0.0147)	-0.0111 (0.0289)	-0.0434 (0.0138)	0.0111 (0.0204)	-0.0630 (0.0131)
cat_future50=2	-0.0001 (0.0441)	-0.0247 (0.0316)	-0.0390 (0.0324)	-0.0156 (0.0259)	0.0125 (0.0341)	0.0052 (0.0262)
age	0.0026 (0.0015)	0.0042 (0.0009)	0.0014 (0.0014)	0.0041 (0.0009)	0.0018 (0.0011)	0.0030 (0.0008)
age $\times$ age	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)
educ	0.0282 (0.0060)	0.0370 (0.0039)	0.0501 (0.0053)	0.0547 (0.0036)	0.0198 (0.0047)	0.0317 (0.0033)
urban	0.0028 (0.0132)	0.0159 (0.0078)	0.0454 (0.0114)	0.0396 (0.0074)	0.0215 (0.0109)	0.0153 (0.0065)
male	0.0349 (0.0077)	0.0235 (0.0053)	0.0461 (0.0071)	0.0349 (0.0049)	0.0064 (0.0057)	0.0197 (0.0042)
race=2	0.0282 (0.0599)	-0.0697 (0.0146)	0.0679 (0.0622)	0.0392 (0.0137)	0.0357 (0.0355)	0.0076 (0.0142)
race=3	0.2094 (0.0360)	-0.0541 (0.0272)	0.0321 (0.1736)	0.0966 (0.0249)	-0.0990 (0.1310)	0.0648 (0.0263)
occup=1	-0.0129 (0.0338)	-0.0930 (0.0362)	-0.0114 (0.0349)	0.0133 (0.0329)	-0.0155 (0.0286)	-0.0421 (0.0326)
occup=2	0.0418 (0.0122)	-0.0003 (0.0080)	0.0192 (0.0115)	0.0209 (0.0078)	0.0375 (0.0097)	-0.0044 (0.0070)
occup=3	0.0114 (0.0248)	-0.0304 (0.0204)	0.0165 (0.0245)	-0.0020 (0.0195)	0.0023 (0.0195)	-0.0099 (0.0172)
region FE	Yes	Yes	Yes	Yes	Yes	Yes
year FE	Yes	Yes	Yes	Yes	Yes	Yes
F_diff1	5.3497	0.1499	1.9870	3.0938	0.0713	16.6150
F_diff2	1.3982	0.3276	2.1575	9.0624	0.0050	14.0201
p_diff1	0.0209	0.6987	0.1589	0.0787	0.7895	0.0000
p_diff2	0.2372	0.5671	0.1421	0.0026	0.9438	0.0002
r2_a	0.0548	0.0575	0.0940	0.0629	0.0627	0.0911
N	10883.0000	24227.0000	12008.0000	25072.0000	11938.0000	24860.0000

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year fixed effects. F\_diff1,2 and p\_diff1,2 give the F-tests and p-values associated with the differences between present and future locations inside and outside the five years range. All results are estimated on the two subsamples of the baseline sample denoted as hybrid and democratic.

Table B.5: Regime Preferences by Regime - Including Project Precision 3

	Democracy		One Party		Dictator	
	(1) Hybrid	(2) Democratic	(3) Hybrid	(4) Democratic	(5) Hybrid	(6) Democratic
cat_present40b=1	0.0174 (0.0157)	-0.0143 (0.0098)	0.0397 (0.0152)	-0.0189 (0.0096)	0.0114 (0.0139)	-0.0018 (0.0085)
cat_present40b=2	-0.0432 (0.0191)	-0.0208 (0.0119)	0.0238 (0.0163)	0.0072 (0.0113)	0.0053 (0.0147)	-0.0083 (0.0094)
cat_future40b=1	-0.0491 (0.0285)	-0.0148 (0.0149)	0.0148 (0.0261)	-0.0305 (0.0139)	0.0305 (0.0179)	-0.0513 (0.0134)
cat_future40b=2	0.0110 (0.0418)	-0.0214 (0.0304)	-0.0053 (0.0311)	-0.0256 (0.0258)	0.0169 (0.0309)	0.0079 (0.0251)
age	0.0026 (0.0015)	0.0042 (0.0009)	0.0014 (0.0014)	0.0041 (0.0009)	0.0018 (0.0011)	0.0030 (0.0008)
age × age	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)
educ	0.0280 (0.0060)	0.0370 (0.0039)	0.0500 (0.0053)	0.0547 (0.0036)	0.0198 (0.0047)	0.0316 (0.0033)
urban	0.0001 (0.0132)	0.0171 (0.0079)	0.0441 (0.0114)	0.0394 (0.0074)	0.0206 (0.0109)	0.0150 (0.0065)
male	0.0351 (0.0077)	0.0235 (0.0053)	0.0461 (0.0071)	0.0349 (0.0049)	0.0064 (0.0057)	0.0198 (0.0042)
race=2	0.0306 (0.0591)	-0.0694 (0.0146)	0.0673 (0.0621)	0.0394 (0.0137)	0.0344 (0.0355)	0.0079 (0.0142)
race=3	0.2194 (0.0392)	-0.0540 (0.0271)	0.0389 (0.1731)	0.0971 (0.0249)	-0.0932 (0.1307)	0.0645 (0.0263)
occup=1	-0.0112 (0.0339)	-0.0925 (0.0362)	-0.0116 (0.0349)	0.0137 (0.0329)	-0.0164 (0.0286)	-0.0414 (0.0325)
occup=2	0.0418 (0.0122)	-0.0002 (0.0081)	0.0187 (0.0115)	0.0211 (0.0078)	0.0372 (0.0097)	-0.0040 (0.0070)
occup=3	0.0103 (0.0248)	-0.0306 (0.0204)	0.0166 (0.0246)	-0.0019 (0.0195)	0.0022 (0.0195)	-0.0091 (0.0172)
region FE	Yes	Yes	Yes	Yes	Yes	Yes
year FE	Yes	Yes	Yes	Yes	Yes	Yes
F_diff1	4.6497	0.0009	0.7466	0.5179	0.8038	10.6288
F_diff2	0.0325	0.1054	0.0960	4.5710	1.3198	7.2042
p_diff1	0.0312	0.9766	0.3877	0.4718	0.3701	0.0011
p_diff2	0.8570	0.7454	0.7567	0.0326	0.2508	0.0073
r2_a	0.0558	0.0576	0.0940	0.0627	0.0629	0.0907
N	10883.0000	24227.0000	12008.0000	25072.0000	11938.0000	24860.0000

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year fixed effects. F\_diff1,2 and p\_diff1,2 give the F-tests and p-values associated with the differences between present and future locations inside and outside the five years range. All results are estimated on the two subsamples of the baseline sample denoted as hybrid and democratic. Projects with precision code three are considered for the analysis.

Table B.6: Regime Preferences by Regime - Year-Country FE

	Democracy		One Party		Dictator	
	(1) Hybrid	(2) Democratic	(3) Hybrid	(4) Democratic	(5) Hybrid	(6) Democratic
cat_present40=1	-0.0061 (0.0160)	-0.0141 (0.0098)	0.0299 (0.0156)	-0.0193 (0.0095)	0.0101 (0.0143)	-0.0011 (0.0087)
cat_present40=2	-0.0302 (0.0189)	-0.0132 (0.0118)	0.0207 (0.0161)	0.0056 (0.0113)	0.0017 (0.0146)	-0.0130 (0.0096)
cat_future40=1	-0.0379 (0.0292)	-0.0244 (0.0164)	0.0015 (0.0287)	-0.0178 (0.0148)	0.0138 (0.0199)	-0.0394 (0.0144)
cat_future40=2	0.0190 (0.0461)	-0.0284 (0.0334)	-0.0296 (0.0302)	0.0302 (0.0278)	0.0130 (0.0340)	0.0339 (0.0291)
age	0.0027 (0.0015)	0.0044 (0.0009)	0.0015 (0.0014)	0.0042 (0.0009)	0.0018 (0.0011)	0.0030 (0.0008)
age × age	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)
educ	0.0277 (0.0059)	0.0389 (0.0039)	0.0508 (0.0053)	0.0560 (0.0036)	0.0207 (0.0047)	0.0323 (0.0033)
urban	-0.0001 (0.0132)	0.0157 (0.0080)	0.0436 (0.0114)	0.0313 (0.0074)	0.0208 (0.0108)	0.0090 (0.0066)
male	0.0350 (0.0077)	0.0237 (0.0053)	0.0459 (0.0071)	0.0353 (0.0049)	0.0062 (0.0057)	0.0200 (0.0042)
occup=1	-0.0214 (0.0340)	-0.0965 (0.0362)	-0.0047 (0.0347)	0.0077 (0.0329)	-0.0079 (0.0286)	-0.0309 (0.0329)
occup=2	0.0435 (0.0121)	-0.0055 (0.0081)	0.0208 (0.0115)	0.0129 (0.0079)	0.0373 (0.0098)	-0.0071 (0.0071)
occup=3	-0.0019 (0.0251)	-0.0338 (0.0205)	0.0191 (0.0244)	-0.0076 (0.0196)	0.0123 (0.0196)	-0.0074 (0.0173)
race=2	0.0370 (0.0583)	-0.0720 (0.0145)	0.0688 (0.0633)	0.0429 (0.0137)	0.0314 (0.0353)	0.0118 (0.0142)
race=3	0.2169 (0.0591)	-0.0491 (0.0268)	0.0395 (0.1555)	0.0971 (0.0248)	-0.1175 (0.1229)	0.0644 (0.0262)
region FE	Yes	Yes	Yes	Yes	Yes	Yes
year x country FE	Yes	Yes	Yes	Yes	Yes	Yes
F_diff1	0.9750	0.3044	0.7816	0.0076	0.0243	5.3785
F_diff2	0.0520	0.3182	0.3573	1.6310	0.2542	2.4398
p_diff1	0.3236	0.5812	0.3768	0.9305	0.8761	0.0204
p_diff2	0.8196	0.5727	0.5501	0.2016	0.6142	0.1184
r2_a	0.0614	0.0627	0.0956	0.0672	0.0640	0.0941
N	10883.0000	24227.0000	12008.0000	25072.0000	11938.0000	24860.0000

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year-country fixed effects. F\_diff1,2 and p\_diff1,2 give the F-tests and p-values associated with the differences between present and future locations inside and outside the five years range. All results are estimated on the two subsamples of the baseline sample denoted as hybrid and democratic.

Table B.7: Regime Preferences by Regime - Middle Years

	Democracy		One Party		Dictator	
	(1) Hybrid	(2) Democratic	(3) Hybrid	(4) Democratic	(5) Hybrid	(6) Democratic
cat_present40=1	0.0009 (0.0205)	-0.0289 (0.0116)	0.0199 (0.0191)	-0.0236 (0.0120)	0.0160 (0.0179)	0.0056 (0.0103)
cat_present40=2	-0.0319 (0.0232)	-0.0229 (0.0166)	0.0476 (0.0224)	0.0089 (0.0162)	0.0257 (0.0203)	-0.0002 (0.0131)
cat_future40=1	-0.0664 (0.0294)	-0.0194 (0.0161)	-0.0057 (0.0290)	-0.0310 (0.0153)	0.0087 (0.0199)	-0.0456 (0.0142)
cat_future40=2	0.0075 (0.0462)	-0.0418 (0.0328)	-0.0269 (0.0309)	-0.0095 (0.0263)	0.0133 (0.0339)	0.0213 (0.0271)
age	0.0020 (0.0018)	0.0053 (0.0010)	0.0008 (0.0016)	0.0053 (0.0010)	0.0013 (0.0014)	0.0032 (0.0009)
age $\times$ age	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0001 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)
educ	0.0217 (0.0072)	0.0452 (0.0045)	0.0498 (0.0064)	0.0580 (0.0042)	0.0181 (0.0056)	0.0327 (0.0039)
urban	0.0091 (0.0144)	0.0179 (0.0090)	0.0198 (0.0133)	0.0461 (0.0087)	0.0044 (0.0134)	0.0121 (0.0075)
male	0.0330 (0.0094)	0.0285 (0.0059)	0.0463 (0.0087)	0.0405 (0.0057)	0.0127 (0.0068)	0.0202 (0.0049)
occup=1	-0.0214 (0.0344)	-0.0989 (0.0357)	-0.0074 (0.0354)	0.0155 (0.0328)	-0.0121 (0.0286)	-0.0337 (0.0328)
occup=2	0.0229 (0.0139)	-0.0122 (0.0090)	0.0150 (0.0131)	0.0195 (0.0088)	0.0237 (0.0107)	0.0035 (0.0080)
occup=3	0.0030 (0.0247)	-0.0346 (0.0206)	0.0190 (0.0247)	-0.0041 (0.0198)	-0.0033 (0.0193)	-0.0014 (0.0175)
race=2	0.0786 (0.0641)	-0.0591 (0.0167)	0.0769 (0.0764)	0.0336 (0.0163)	0.0219 (0.0539)	0.0212 (0.0171)
race=3	0.2801 (0.0731)	-0.0294 (0.0317)	0.2950 (0.0378)	0.0993 (0.0320)	0.0907 (0.0144)	0.0809 (0.0342)
region FE	Yes	Yes	Yes	Yes	Yes	Yes
year FE	Yes	Yes	Yes	Yes	Yes	Yes
F_diff1	4.1067	0.2479	0.5716	0.1556	0.0802	9.0972
F_diff2	0.9342	0.0227	2.1716	3.2142	0.3773	5.6228
p_diff1	0.0430	0.6186	0.4498	0.6933	0.7771	0.0026
p_diff2	0.3340	0.8803	0.1409	0.0731	0.5392	0.0178
r2_a	0.0531	0.0684	0.1057	0.0652	0.0690	0.1042
N	7433.0000	18779.0000	8041.0000	19347.0000	7989.0000	19160.0000

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year fixed effects. F\_diff1,2 and p\_diff1,2 give the F-tests and p-values associated with the differences between present and future locations inside and outside the five years range. All results are estimated on a subsample that includes only the second to fifth survey rounds further divided into the two samples denoted as hybrid and democratic.



Table B.8: Regime Preferences by Regime - RCT style

	Democracy		One Party		Dictator	
	(1)	(2)	(3)	(4)	(5)	(6)
	Hybrid	Democratic	Hybrid	Democratic	Hybrid	Democratic
present40	0.1294 (0.0523)	0.0118 (0.0293)	0.1525 (0.0607)	0.0520 (0.0265)	0.0774 (0.0450)	0.1381 (0.0238)
age	0.0051 (0.0027)	0.0051 (0.0016)	0.0049 (0.0029)	0.0058 (0.0016)	0.0014 (0.0020)	0.0043 (0.0015)
age $\times$ age	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0001 (0.0000)	-0.0001 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)
educ	0.0323 (0.0095)	0.0421 (0.0067)	0.0572 (0.0094)	0.0602 (0.0060)	0.0186 (0.0067)	0.0333 (0.0057)
urban	-0.0240 (0.0235)	0.0244 (0.0151)	0.0380 (0.0260)	0.0233 (0.0143)	0.0345 (0.0169)	0.0148 (0.0124)
male	0.0397 (0.0137)	0.0167 (0.0091)	0.0656 (0.0126)	0.0268 (0.0087)	0.0142 (0.0092)	0.0163 (0.0072)
race=2	-0.0037 (0.0802)	-0.1025 (0.0267)	0.0116 (0.0765)	0.0291 (0.0256)	-0.0094 (0.0534)	0.0204 (0.0280)
race=3	0.1125 (0.0325)	-0.1024 (0.0422)	0.3124 (0.0279)	0.1744 (0.0361)	0.0609 (0.0217)	0.1136 (0.0441)
occup=1	0.0229 (0.0570)	-0.0785 (0.0559)	0.0384 (0.0583)	0.0385 (0.0481)	0.0002 (0.0467)	-0.0252 (0.0511)
occup=2	0.0360 (0.0227)	0.0022 (0.0137)	0.0248 (0.0208)	0.0396 (0.0132)	-0.0005 (0.0163)	0.0027 (0.0118)
occup=3	-0.0063 (0.0428)	0.0148 (0.0304)	0.0138 (0.0447)	0.0077 (0.0304)	0.0197 (0.0340)	0.0052 (0.0276)
region FE	Yes	Yes	Yes	Yes	Yes	Yes
year FE	Yes	Yes	Yes	Yes	Yes	Yes
r2_a	0.0577	0.0559	0.1016	0.0660	0.0685	0.1109
N	3286.0000	8117.0000	3591.0000	8372.0000	3579.0000	8337.0000

Robust standard errors clustered by enumeration area clusters in parentheses; All estimations include baseline individual control variables as well as region and year-country fixed effects. All results are estimated on a subsample that only includes observations within 40km of a project completed before and within eight years after the survey date divided into the two samples denoted as hybrid and democratic.