



Universiteit
Leiden
The Netherlands

Economic Development Aid and Conflict Intensity in Minor Civil Conflicts

Schmal, Nina

Citation

Schmal, N. (2024). *Economic Development Aid and Conflict Intensity in Minor Civil Conflicts*.

Version: Not Applicable (or Unknown)

License: [License to inclusion and publication of a Bachelor or Master Thesis, 2023](#)

Downloaded from: <https://hdl.handle.net/1887/3765602>

Note: To cite this publication please use the final published version (if applicable).

Leiden University

Faculty of Social and Behavioral Sciences, Institute of Political Science

MSc Political Science, International Politics

***Economic Development Aid and
Conflict Intensity in Minor Civil Conflicts***

Master's Thesis

Nina Schmal, s20505487

Supervisor: Dr Christina Luise Toenshoff

Second Reader: Dr Stefan Četković

10th June 2024

Abstract

How does economic development aid affect conflict intensity in minor civil conflicts? Previous research has found that economic development aid in civil wars can effectively reduce conflict intensity. It does so either directly by incentivising the population to cooperate with the government or indirectly by raising the opportunity costs of joining an insurgency. I propose that the same holds for minor civil conflicts. Due to insurgent groups' weakness vis-à-vis the government, I argue that development aid in minor conflicts will have a greater substantive effect than in civil wars. Using data on 59 aid projects in federal states across Ethiopia, Mali, and Nigeria, I show that regions receiving development aid experience less violence than those without aid projects in regions under government control. However, an increase in development projects within these regions is associated with an increase in conflict intensity. In regions under insurgent territorial control, development aid substantially increases conflict intensity.

Acknowledgements

First of all, I would like to express my deepest gratitude to my supervisor, Dr Christina Luise Toenshoff, and all my fellow students for their encouraging feedback on earlier drafts of this thesis. Without them, this thesis would not exist in its current form.

In addition, I would also like to thank my friends and family for their emotional support throughout my research process.

I am particularly grateful to my parents for their unwavering support throughout my academic journey and beyond. Their daily updates on my dearly missed cats, Quitschie and Funny, always cheered me up on days when my computer screen displayed nothing but error messages.

Thank you!

Introduction

If we fail to meet the development needs of our time, we fail to secure peace for our future.

– UN Deputy Secretary-General Amina Mohammed

The World Bank (2023) estimates that by 2030, 59 per cent of the global extreme poor will live in fragile countries affected by conflict or other forms of violence. To address this issue, foreign donors, such as the members of the Development Assistance Committee (DAC), currently devote USD 17,1 billion of economic development aid (hereafter development aid) to the promotion of peace and prevention of armed conflict (Organisation for Economic Co-Operation and Development [OECD], 2023). *Armed conflict* in this context refers to a “contested incompatibility that concerns government or territory or both where the use of armed force between two parties results in at least 25 annual battle-related deaths” (Gleditsch et al., 2002, p. 619).

Studies analysing the impact of development aid on conflict intensity show that development aid has a positive effect on the reduction of violence (Beath et al., 2017; Berman et al., 2013; Crost et al., 2016; Dasgupta et al., 2017). In regions under government control, development aid has been found to directly reduce conflict intensity by “winning the hearts and minds” of the population (Beath et al., 2017; Berman et al., 2011, 2013; Crost et al., 2016; Sexton, 2016). According to the “hearts-and-minds” literature, offering public goods to the population can incentivise civilians to share intelligence about insurgent activities with counterinsurgent forces, thereby strengthening their operations (Beath et al., 2017; Berman et al., 2011, 2013; Crost et al., 2016; Sexton, 2016). Furthermore, development aid can indirectly reduce conflict intensity by increasing the opportunity costs for joining an insurgency (Dasgupta et al., 2017).

This literature primarily examines civil wars, which cause more than 1,000 battle-related deaths per year. However, most armed conflicts today are less intense minor civil conflicts (hereafter minor conflicts) (Davies et al., 2023). *Minor conflicts* are defined as armed conflicts between the government of a state and one or more organised actors, such as insurgent groups, that result in at least 25 but fewer than 1,000 annual battle-related deaths (Gleditsch et al., 2002, p. 619; Pettersson, 2023, p. 1). To date, only Bluhm et al. (2021) explicitly include minor

conflicts in their analysis. Their study compares the impact of Official Development Assistance (ODA) on conflict (de) escalation in peaceful countries and civil conflicts with different levels of intensity (Bluhm et al., 2021). When disbursed in states that experience minor conflicts, Bluhm et al. (2021) find that ODA has a positive but statistically insignificant effect on conflict intensity (Bluhm et al., 2021). This is puzzling because research on the development aid-conflict nexus in civil wars has found that development aid has a significantly negative effect on conflict intensity. In contrast to these studies, Bluhm et al. (2021) use country-level data, running the risk of committing an ecological fallacy by drawing conclusions on a sub-country phenomenon using higher-level data. Due to the failure to control for within-country characteristics that affect the relationship between conflict intensity and development aid distribution, the effect of development aid on conflict intensity in minor conflicts remains understudied. I aim to fill this gap by asking: *How does development aid influence conflict intensity in minor conflicts?*

I theorise that the effect of development aid on conflict intensity in minor conflicts is similar to the one found in civil wars. In fact, I contend that development aid in minor conflicts is likely to have a greater substantive effect because insurgent groups are typically weak and cannot offer many benefits to gain the population's support. In this context, development aid is more likely to win the "hearts and minds" of the population, encouraging civilians to share intelligence about insurgent activities with government- and other counterinsurgent forces. Furthermore, weaker insurgent groups often struggle to pay their recruits adequately, so civilians are likely to choose income opportunities offered by development programmes over joining an insurgency. Despite the relative weakness of insurgent groups in minor conflicts, some are nevertheless able to establish territorial strongholds with substantial popular support. In order to prevent the loss of their crucial support base, insurgent groups will increase violence in these regions when the government attempts to gain civilian support through development aid. Therefore, I argue that the violence-dampening effect of development aid is likely to be conditioned on the extent of government control over a region.

I test this argument using time-series cross-sectional (TSCS) Poisson regressions with regional data on 59 development aid projects and conflict events in Ethiopia, Mali, and Nigeria between 2009 and 2013. I show that government-controlled regions that received at least one development aid project experienced less violence compared to those that did not. However, each additional project in these regions either has no effect or a violence-increasing effect. For regions under insurgent control, I find that development aid has a profound impact on the

increase in the expected number conflict intensity, with an increase of over 100 per cent in the expected number of fatalities.

The remainder of this thesis is structured as follows. The first section discusses previous findings on the development aid-conflict intensity nexus. The second section introduces the theory linking development aid and conflict intensity in minor conflicts. The third section presents an overview of the data, empirical tests and measurements used in this thesis. The fourth section then tests how development aid affects conflict intensity in minor conflicts, showing that development aid has a violence-increasing effect in regions under insurgent control, and either a violence-decreasing effect or no effect in regions under government control. A final section concludes.

Literature review

As most civil conflicts occur in developing states, academic scholars have expressed strong interest in the relationship between the provision of development aid and conflict intensity. The literature defines *development aid* as bilateral or multilateral government transfers to promote long-term economic development and welfare in recipient countries (Tarp, 2006). Development aid can be categorised into four types: conditional cash transfer (CCT), community-driven development (CDD), and employment programmes. Although not aimed at reducing violence, all types have been found to have a violence-dampening effect (Beath et al., 2017; Crost et al., 2016; Dasgupta et al., 2017). In addition to these traditional types of aid¹, counterinsurgency aid is specifically designed to mitigate violence and foster economic growth in conflict zones. As such, it provides humanitarian and military aid alongside traditional development assistance.

CCTs aim to foster economic development by reducing poverty. The programmes provide grants to poor households based on certain conditions, such as child school attendance (Crost et al., 2016). CCTs are assumed to reduce conflict intensity by decreasing poverty, which is strongly associated with insurgent violence (OECD, 2023). Testing this relationship, Crost et al. (2016) show that CCTs in the Philippines decreased violence in villages that received CCTs compared to villages that did not. They explain this effect with the heart-and-minds framework,

¹ Development aid and aid will be used interchangeably.

which argues that aid increases trust in the government, making people less likely to join an insurgency (Crost et al., 2016). In contrast, Weintraub (2016) finds that a Colombian CCT programme increased violence against civilians because insurgents wanted to deter the local population from cooperating with counterinsurgent forces (Weintraub, 2016). A potential explanation for these findings is that security forces could protect the CTT villages in the Philippines, which was not the case in Colombia (Zürcher, 2017). Therefore, it can be argued that aid is likely to have a violence-reducing effect when disbursed in relatively secure areas.

Berman et al. (2011, 2013) question this assumption and claim that security is endogenous to aid. They examine the effect of counterinsurgency aid on conflict intensity in Iraq and find that especially small, well-conceived aid programmes can incentivise civilians to share crucial information about insurgent activities with counterinsurgent forces (Berman et al., 2011, 2013). This information then allows counterinsurgent forces to fight the insurgency more effectively, which reduces overall violence. It is important to note that this mechanism will only be successful if civilians hold information about insurgent activities. Moreover, Sexton (2016) contends that the mechanism only works when aid is disbursed in areas under pro-government control. In places under insurgent control, insurgent groups try to sabotage aid projects to prevent a shift in allegiance by increasing violence (Sexton, 2016).

In addition, Beath et al. (2017) stress the importance of local community embeddedness in the project. They estimate the effect of Afghanistan's largest CDD programme, the National Solidarity Programme (NSP), on insurgent violence (Beath et al., 2017). CDD aid typically requires steady participation of the community, which then should increase the positive attitudes towards the government. In line with the hearts-and-minds framework, these changes may lead to a shift in allegiance from the insurgency towards the government. The findings show that programmes implemented in areas where insurgents were embedded within their local community effectively reduced insurgent violence (Beath et al., 2017). However, Crost et al. (2014) show that a CDD programme in the Philippines increased insurgent violence even before the programme was implemented because insurgents feared that the success of the programme "would weaken their support in the population" (Crost et al., 2014, p. 1833).

Lastly, employment programmes may indirectly reduce violence by increasing the opportunity costs of joining an insurgency. Dasgupta et al. (2017) investigate whether districts in India that adopted the National Rural Employment Guarantee Scheme (NREGS) experience less violence than districts that did not. They find that violence decreased in districts where the

NEGRA was implemented (Dasgupta et al., 2017). The violence-dampening effect was strongest in areas with low rainfall, which suggests that the NEGRA may have functioned as a substitute for forgone agricultural income (Zürcher, 2017, p. 513). However, the positive effects were mainly concentrated in districts with sufficient state capacity (Dasgupta et al., 2017). Therefore, employment programmes alone might not be sufficient to reduce insurgent violence.

A limitation of this literature is its exclusive focus on states experiencing civil wars, with little attention given to minor conflicts. A notable exception is the empirical study by Bluhm et al. (2021), which examines the impact of development aid on conflict (de) escalation during different stages of conflict. The authors conclude that aid has a conflict-escalating effect in small conflicts with less than 25 annual battle-related deaths but has no statistically significant effect on conflict (de) escalation of minor conflicts, civil wars, or conflict onset (Bluhm et al., 2021). This is puzzling, given that previous research indicates that development aid is associated with conflict de-escalation. One potential explanation for these findings is that Bluhm et al. (2021). However, research on civil conflict suggests that minor conflicts are spatially concentrated, often impacting only small parts of the population (Minhas & Radford, 2017; Raleigh et al., 2010). Additionally, economic development aid is not uniformly distributed within countries (Findley et al., 2011). Some relatively well-developed regions might receive more aid than others. It may be the case that Country A receives development aid in its well-accessible urban areas, where there is less conflict. In contrast, in Country B, development aid is allocated more uniformly, including regions with and without conflict. By failing to control for sub-national characteristics that influence the relationship between development aid and conflict intensity, Bluhm et al. (2021) committed an ecological fallacy by drawing conclusions from country-level analyses to a phenomenon that happens on a lower level. Consequently, the question of how economic development aid influences conflict intensity in minor conflicts remains understudied.

Development aid and conflict intensity in minor conflicts

I claim that development aid can reduce conflict intensity by increasing popular support for the government, following the same logic as in civil wars. In fact, I argue that the provision of development aid may have a greater substantive effect on conflict de-escalation in minor conflicts than in civil wars.

Minor conflicts are usually considered asymmetric conflicts, where the government enjoys a military advantage over an insurgent group. This power asymmetry allows the government to easily capture and destroy the group if identified (Berman et al., 2018). To avoid this, insurgents hide among the population, from where they can attack and “slip back into and circulate without detection” (Berman et al., 2018, p. 62). However, this strategy will only be effective as long as the civilian population supports the insurgent group and does not disclose any information about the identity and location of its members (Berman et al., 2018). For the government, this implies that to combat the insurgency, it is crucial to gain popular support in order to obtain intelligence about the insurgents.

Therefore, asymmetric conflicts are, first and foremost, conflicts over popular support, where both the government and insurgents offer competing incentives to attract civilian loyalty and allegiance (Wood, 2010). Incentives include the provision of public goods and services, such as employment, healthcare, justice, and socioeconomic infrastructure, which are valued by the local population.

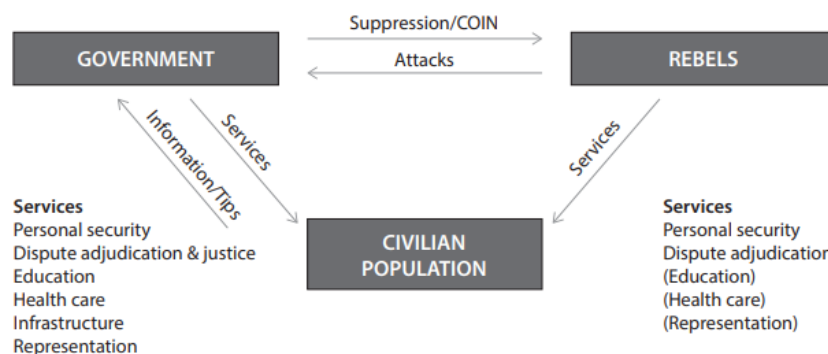


Figure 1: Actors and interactions in asymmetric conflicts (Berman et al., 2018, p. 64)

For insurgents, this means that they must possess sufficient income and resources they can use to provide these goods and services. In civil wars, insurgent groups are often able to attract external (financial) support or control large territories where they can extract resources and generate income to buy civilian support (Berman et al., 2018). In contrast, insurgent groups in minor conflicts often lack the capabilities to generate large incomes to offer sufficient benefits to the local population in exchange for their support (Wood, 2010). In such contexts, government-associated development aid aimed at winning the “hearts and minds” of the population may be particularly effective, as the government can outbid insurgent’s efforts for popular support at a relatively low cost (Wood, 2010).

Consider an unemployed civilian *C*, who has the option of joining an insurgent group or participating in an employment programme that is part of a development project. As the insurgent group might lack the financial means to pay *C* adequately, the opportunity costs associated with joining the employment programme will be relatively low. Consequently, *C* is likely to choose legal employment over the insurgent group (Collier & Hoeffler, 2004). By offering unemployed civilians the opportunity to participate in an employment programme, the government demonstrates a commitment to addressing civilian desires and needs, such as employment and income. As a result, civilians such as *C* will perceive the government as benevolent (Kumar & Roy Chowdhury, 2022), thereby increasing their trust in the government and the probability of sharing information about insurgent groups with government forces.

Similarly, social and economic infrastructure projects that improve the availability and access accessibility of essential public services, such as electricity, roads, medical facilities and water and sanitation infrastructure, are crucial for building government trust (Sacks & Levi, 2008 in Levi et al., 2009). Previous research supports this claim, showing that citizens are more likely to trust the government when they live in communities with access to these basic amenities (Sacks & Levi, 2008 in Levi et al., 2009; Watkins, 2022).

I claim that the provision of socio-economic infrastructure may help to reduce violence in minor conflicts since these conflicts tend to be clustered in space, leaving large parts of the country unaffected. This allows the government to implement a targeted development approach by spending resources on addressing potential root causes of violence in conflict-affected regions. By concentrating aid in these regions, the government can meet the population's needs more effectively, which fosters trust and encourages cooperation, thereby limiting overall violence (Beath et al., 2017).

States experiencing civil wars often lack sufficient state capacity to control territory and provide public goods and services throughout the country. For example, in Yemen, the Southern Transitional Council (STC), "formed by a faction of the al-Hirak (Southern Yemen Movement), claims to rule most of Southern Yemen" (Elayah & Fenttiman, 2021, p. 57). Although al-Hirak is not recognised as an insurgent movement, the group frequently steals aid to use it for themselves or sells it on the black market to finance its violent actions (Elayah & Fenttiman, 2021).

In minor conflict states, the state often retains control over most of its territory, making it harder for insurgents to steal aid. As a result, development aid reaches the population, providing

valuable goods and services so civilians may shift their support from the insurgency to the government. Without popular support, insurgent groups then struggle to continue fighting a guerilla war, reducing overall violence.

However, as mentioned above, most minor conflicts are concentrated in space, meaning that insurgents sometimes are able to control some parts of the country. For instance, Boko Haram was able to establish a “ministate” (Dorff et al., 2020, p. 481) in northern Nigeria, while the rest of the country remained under government control. By providing welfare services, mainly to the unemployed youth, Boko Haram was able to gain local support (Dorff et al., 2020; Olojo, 2013). I argue that under these circumstances, economic development aid provided by the government is likely to increase violence as insurgent groups try to prevent a shift in allegiance or regain popular support (Beath et al., 2017; Crost et al., 2014; Findley & Young, 2007; Sexton, 2016). This leads me to the following hypotheses:

H1a: *Development aid is likely to decrease conflict intensity in minor conflicts.*

H1b: *Development aid is likely to increase conflict intensity in minor conflicts when disbursed in territories under insurgent control.*

Research Design

Case Selection

According to my argument, development aid should decrease conflict intensity in minor conflicts by increasing popular support for the government. However, I claim that this effect depends on the actor exercising territorial control over a region. In regions under insurgent control, development aid is likely to increase conflict intensity because insurgents try to prevent civilians from shifting their allegiance towards the counterinsurgency.

I will test this argument by examining the effect of development aid on conflict intensity across 57 federal states in Ethiopia, Mali, and Nigeria. All three countries received a significant number of development aid projects yet exhibited varying levels of regional implementation, violence, and insurgent territorial control, thus presenting ideal cases to examine my theoretical arguments.

Ethiopia

After large-scale economic reforms in the 1990s, Ethiopia's economy began to grow, with an average 10 per cent growth of real Gross Domestic Product (GDP) between 2004 and 2014 (Ali, 2011; Shiferaw, 2017; World Bank, 2016). Yet, despite this remarkable economic growth, Ethiopia's population still faces several hardships (Teka, 2021). Between 2009 and 2013, on average, only 26.4 per cent of Ethiopians had access to electricity, while only 6.4 per cent of the population used at least basic sanitation services (Teka, 2021). This lack of basic public services has resulted in a decline in public trust in the government, particularly among younger citizens. In 2009, 53 per cent of Ethiopians aged 18 – 35 indicated that the country was headed in the “wrong direction”, raising concerns about the availability of electricity, infrastructure, water, and job opportunities (Okello & Teka, 2023). To address these and other developmental issues, DAC countries have steadily increased their ODA flows to Ethiopia over the past decade, financing projects addressing socioeconomic problems² (Ministry of Finance and Economic Development Federal Democratic Republic of Ethiopia, 2012).

Ethiopia is home to more than 80 ethnic groups (Ethiopian Statistical Service, 2007) which regularly clash with each other (Yusuf, 2019). In order to manage this inter-ethnic violence, the country has adopted an ethnic-federalist system, which grants each ethnic group some form of autonomy and political rights (Yusuf, 2019). However, this institutionalisation of ethnic federalism has also sparked several localised ethnic conflicts related to the restructuring of the country (Adegehe, 2009, p. 4). For example, insurgents of the Ogaden National Liberation Front (ONLF) have launched widespread offensives in the southeastern Somali region, taking control over several towns in the region ('Ethiopia- ONLF Offensive', 2009). Soon after, ONLF began to deliver basic services and medical care to civilians that have been wounded by Ethiopian military forces, resulting in high popular support among the local population ('Ethiopia- ONLF Offensive', 2009). I argue that under these circumstances, government-associated development projects will increase violence, as competing goods and services will undermine the legitimacy and power of the insurgents.

² For a full list of WB projects in Ethiopia 2009- 2013, see Appendix.

Nigeria

Similar to Ethiopia, Nigeria has experienced sustained economic growth over the past decade. In 2013, Nigeria's GDP was \$509, making it the largest economy in Africa (Patterson, 2014). Nevertheless, Nigeria still confronts high rates of poverty and inequality (Oxfam, 2017), which is predominantly evident in the north of Nigeria. For example, in the northern state of Sokoto, 81 per cent of the population lives in poverty, while only 34 per cent of the population in the southern Niger Delta do so (Agbiboa, 2013; Olojo, 2013; Oxfam, 2017; World Bank, 2013). This north-south divide also extends to the availability of basic infrastructure and employment opportunities, which are significantly lower in the north (Oxfam, 2017). As a result of these poor socio-economic conditions, citizens living in the north have increasingly lost trust in the government and its institutions (Afrobarometer, 2008). Instead of formal institutions, people often rely on informal institutions such as religious leaders to meet their demands for security, justice, and welfare (Agbiboa, 2013; Bratton & Gyimah-Boadi, 2016). This shift in behaviour among northern citizens also benefitted insurgent groups, such as the radical Islamist group Jam'atu Ahlis Sunna Lidda'awati wal-Jihad (JAS), commonly known as Boko Haram.

By claiming to eliminate poverty and corruption associated with the state, JAS was able to garner popular support from dissatisfied citizens (Dorff et al., 2020; Olojo, 2013; Ordu, 2017). In particular, JAS was able to recruit a significant number of unemployed and improvised youth by linking their plight to government-imposed Western education (Awortu, 2015; Hassan, 2015; Mickler et al., 2019; Olojo, 2013). Therefore, the increase in violence leading to a minor conflict can be primarily attributed to the prevalence of economic problems in northern Nigeria. I argue that under these circumstances, development projects such as the Nigerian Youth Employment & Social Support Operation³ (World Bank, n.d.) should reduce conflict intensity by increasing the opportunity cost of joining the insurgency.

Over the years, JAS has been successful in extending its territorial control from Borno State in northeastern Nigeria to Sokoto in the northwest of the country (UCDP, n.d.-a). This has resulted in the establishment of alternative state structures and the provision of public goods and services. Consequently, it is likely that competing government-associated public goods and services will increase the intensity of conflict in these regions.

³ For a full list of WB projects in Nigeria 2009-2013, see Appendix

Mali

In contrast to Ethiopia and Nigeria, Mali only experienced an average annual economic growth of 4.6 since the 1990s, which is below its target of 7 per cent (International Monetary Fund, 2011). Although Mali was able to achieve success in reducing poverty and inequality, it remains one of the poorest countries in the world (International Monetary Fund, 2013). In particular, poor rural farmers feel increasingly abandoned by the state (Bleck & Michelitch, 2015; Dembele, n.d.). I argue that, especially in these regions, development projects aimed at decreasing poverty, supporting farmers, diversifying the economy and reforming administrative structures will lead to an increase in government trust, thereby decreasing violence.

However, similar to the other two countries, the Malian government also experienced a significant loss of territories to insurgent groups. Dissatisfied with the lack of economic development and limited administrative structure, the Mouvement national de libération de l'Azawad (MNL) announced the establishment of the state of Azwad in April 2012, after successfully seizing large parts of Tombouctou, Kidal and Gao in the north of Mali (UCDP, n.d.-b). In this self-proclaimed state, MNL and allied insurgent groups have been able to gain increasing popular support by providing justice and basic services, filling the vacuum the government left behind (Lyammouri, 2021; Smith, 2016). According to my argument, development is likely to increase violence in these regions as insurgents aim to keep civilian.

Data and Variables

Data

I test my hypotheses using a TSCS dataset containing geo-coded information on 92 development projects and conflict intensity across 57 federal states in Ethiopia, Mali, and Nigeria from 2009 to 2013. During this period, all three countries experienced one or more conflicts that resulted in more than 25 but less than 1,000 annual battle-related deaths, classifying them as minor conflict states.

As mentioned above, minor conflicts tend to cluster in space, with some parts of the country remaining largely unaffected by violence, making it necessary to disaggregate the data to a regional level. My dataset, therefore, contains information on violence and development aid at

the largest subnational administrative unit, usually federal states, because most development projects are implemented at this level (Bomprezzi et al., 2024).

The effect of development aid on conflict intensity may not be immediately apparent following the implementation of a project. To capture these delayed effects, I examine and compare the regions over five years. Thus, my unit of analysis is region-year. The final dataset contains 278 total observations. To test the robustness of the findings, I disaggregated the data to the next lower level (counties or districts), which resulted in 4476 observations⁴.

Dependent Variable: Conflict Intensity

Figure 2 shows conflict intensity across regions, demonstrating that certain regions experience persistent violence over time, while others remain entirely peaceful. The data visualises the patterns of violence observed in minor conflicts, highlighting the importance of analysing these types of conflicts at the sub-country level.

Therefore, the dependent variable, *conflict intensity*, is derived from the UCDP Georeferenced Event Dataset (GED) Global version 23.1, which provides regional event data on various forms of organised violence (Högbladh, 2023; Sundberg & Melander, 2013). *Conflict intensity* is measured by counting the number of fatalities resulting from an event involving the use of armed force by the government against an insurgent group or vice versa (Högbladh, 2023, p. 4). In this context, an event refers to “an individual incident occurring in [a specific region] at a given time” (Högbladh, 2023, p. 4). If a region did not experience any conflict events in a given year, *conflict intensity* is coded as 0. In order to test whether the results are driven by these specific regions, I run a robustness check excluding regions without fatal violence.

Independent Variables: Development Aid

To measure development aid, I use data on the location and duration of aid projects by the World Bank (WB), taken from the Geocoded Official Assistance Dataset (GODAD) version 1.0 (Bomprezzi et al., 2024). Aid projects include assistance in regard to economic

⁴ For descriptive statistics, see Appendix

infrastructure and services (e.g., communications, energy, banking, and financial services), social infrastructure and services (e.g., education, health, water supply and sanitation services), as well as production sector services (e.g., agriculture, fishing, mining) (Bomprezzi et al., 2024)⁵. As theorised above, economic improvement in these sectors, facilitated through an increase in development aid, should increase trust in the government, making civilians more likely to share crucial intelligence about insurgent activities. In addition, like other Western donors, the WB imposes conditions “regarding [good] governance, equality, anti-discrimination” (Gehring et al., 2022, p. 3), [human rights], etc., on recipient countries. If left unaddressed, poverty, inequality, and discrimination can contribute to the increase in conflict intensity (OECD, 2023). Therefore, WB aid projects are particularly suited to examine the impact of development aid on conflict intensity in minor conflicts.

Figures 3 and 4 show that although all three countries received a significant number of development projects over the years, there have been regional differences in the presence and number of WB projects. The heterogeneity observed across regions and between years may significantly impact the effectiveness of conflict intensity in minor conflicts. This highlights the importance of accounting for these differences with an appropriate research design.

⁵ For a full list of WB projects and project sectors see Appendix

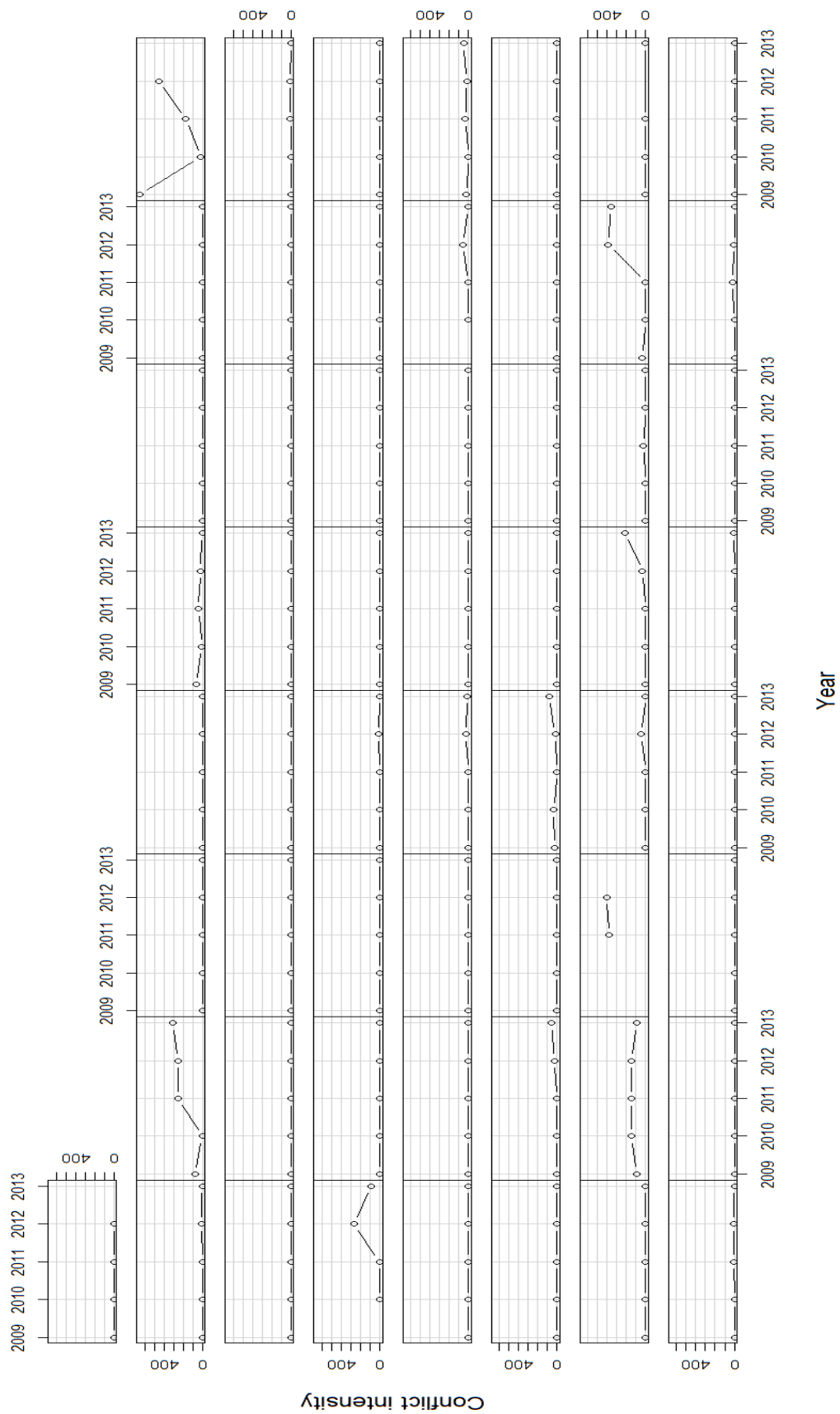


Figure 2: Conflict intensity across regions 2009- 2013

Moderator: Insurgent Territorial Control

Given that insurgent groups are dependent on popular support, I claim that the effect of development aid on conflict intensity is conditioned on the extent of government territorial control. Insurgent groups seek to prevent a shift of allegiance towards the government in regions under their control, and therefore, development aid might have a violence-increasing effect. In order to control for this moderating effect, I use data from the Armed Conflict Location and Event Data Project (ACLED), which contains violent and non-violent events at the regional level.

To construct the variable for insurgent control, I combine information on battles or agreements that result in territorial changes. *Insurgent control* is coded as 1, whenever a territorial change results in territorial gains for an insurgent and 0 if otherwise. For disputed regions that experienced several territorial changes over the year, I calculated the mean and coded *insurgent control* as 1, if it is closer to insurgent control, and 0 if it is closer to government control. If no territorial changes were recorded over the course of a year, the region is assumed to be under the control of the actor of the year at the time of its most recent territorial change.

As mentioned above, insurgent groups engaged in minor conflicts are typically weak and often unable to control large parts of territory and its local population. This is also evident in the present data, which shows that only 16.5 per cent of regions between 2009 and 2013 have been under insurgent control, which might lead to biased estimates. I will address this issue further below in the conclusion section.

Figure 4 illustrates the conflict intensity in regions under insurgent control, showing a relatively mixed picture. In some regions, such as Amhara Koulukouro or Cross River, an increase in aid projects was associated with the absence of violence, while in others, such as Bamako or Tombouctou or Kidal, a higher number of WB projects was associated with more violence.

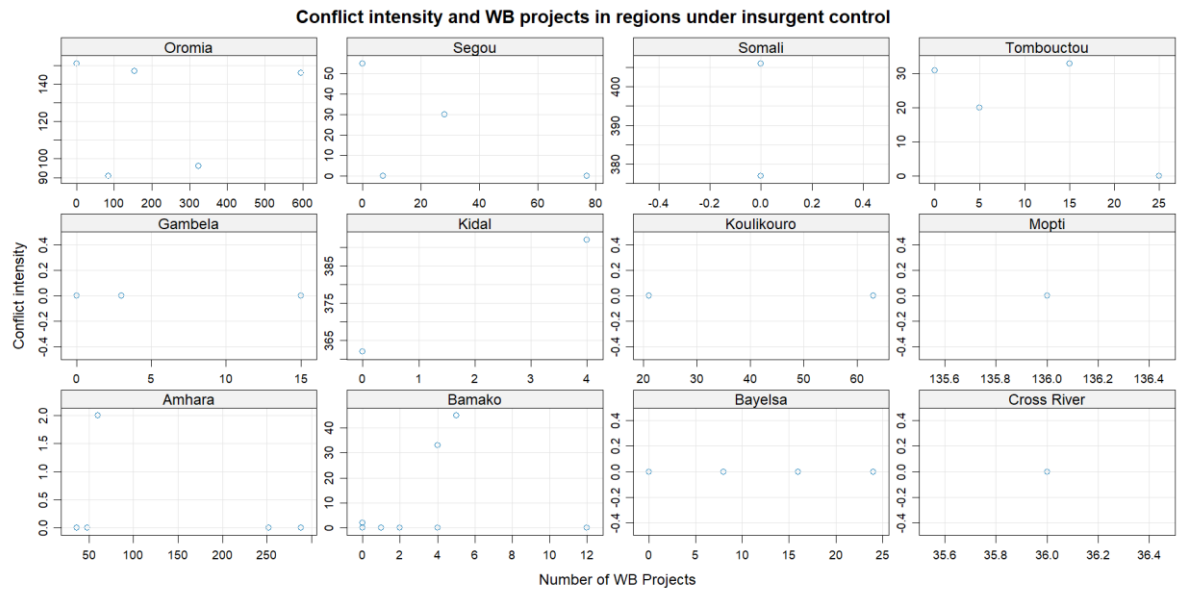


Figure 5: Development aid and conflict intensity in regions under insurgent control.

Controls

Previous research suggests that aid organisations may be more inclined to treat populated areas for reasons of impact and efficiency (Narang & Stanton, 2017). At the same time, a larger population will benefit more from increased socio-economic infrastructure projects, which will lead to more information sharing, thereby reducing overall violence (Weintraub, 2016). Therefore, I expect development aid to have a larger impact in more populated regions. However, this effect is likely to be moderated by the level of insurgent territorial control, since more information sharing will result in territorial losses and lower popular support for the group. *Population (log)* is retrieved from Aid Data (GeoQuery, n.d.; Goodman, S. et al., 2019) and indicates the log of the estimated total population for a region-year.

Table 1: Descriptive Statistics

Variable	Mean	SD	Min	Max	n	T	N
Conflict intensity	21.15	76.31	0	656	57	5	278
WB projects (dummy) <i>Ref.: No WB projects</i>	0.788	0.410	0	1	57	5	278
WB projects (count)	70.52	141.890	0	936	57	5	278
Insurgent control <i>Ref.: Government control</i>	0.166	0.372	0	1	57	5	278
Population (log)	14.91	1.040	11.13	17.29	57	5	278

Model

I conduct a Poisson regression analysis to examine how development aid affects conflict intensity in minor conflicts. Poisson regression is more appropriate than ordinary least squares regression (OLS) because *conflict intensity* is a count variable that can only take non-negative integer values. OLS regression models assume that the dependent variable follows a normal distribution where the variance is equal for each level of the independent variable (Roback & Legler, 2021; Wooldridge, 1999). However, count data usually follows a Poisson or negative binomial (NB) distribution, where the variance can be equal to or greater than the mean for each level of the independent variable, violating the homoscedasticity assumption outlined above (Gardner et al., 1995; Roback & Legler, 2021). To account for overdispersion, Poisson regression or NB models are used. These models relax the distributional assumption of OLS models by explicitly modelling overdispersion, as in the case of NB, or allowing for estimated dispersion factors to inflate the standard errors, often used with Poisson models. Although negative binomial models can better account for overdispersion associated with count variables, I will estimate Poisson regression maximum likelihood models since they are more consistent when analysing TSCS data (Hausman et al., 1984; Wooldridge, 1999).

TSCS regressions can mitigate omitted variable bias by controlling for variables on which there is no information but which might be correlated with both the independent and dependent variables (Hanck et al., 2024). For instance, Berlin et al. (2023) show that regions dominated by a country's leader's ethnic group receive significantly more WB projects than other regions. Additionally, civilians in multi-ethnic states, such as Ethiopia, Mali or Nigeria, may be less likely to shift their allegiance away from co-ethnic insurgents, as ethnic networks can easily identify and punish traitors (Fearon & Latin, 1996). To control for this and other omitted variables at the regional level, I include region-fixed effects that control for time-invariant confounders (Angrist & Pischke, 2009; Hanck et al., 2024). As my time frame only ranges from 2009 to 2014, I assume that variables, such as ethnic composition, remain relatively constant over the period of analysis.

Moreover, I estimate the models with time-fixed effects in order to control for time-varying confounders, such as macro-economic (e.g., inflation, economic policies) and political changes (e.g. elections) at the country level (Angrist & Pischke, 2009; Hanck et al., 2024). I estimate each of the following models with robust standard errors because they have proven to be the most reliable when estimating fixed effects Poisson models (Wooldridge, 1999).'

Empirical findings

Main findings

I argue that development aid has a negative effect on conflict intensity in minor civil conflicts, because it increases trust in the government and intelligence sharing with counterinsurgent forces. However, in territories under insurgent control, development aid is likely to increase conflict intensity, as insurgent try to prevent a shift in allegiance towards the government. *Table 2* presents the results of testing this argument, reporting the Incidence Ratio Rates (IRR) and 95 per cent confidence intervals for the TSCS Poisson regression of conflict intensity in minor conflicts. Models 1 and 2 test the effect of development aid on conflict intensity in minor conflicts in territories under government control (hypothesis 1a), while Models 3 and 4 do so for territories under insurgent control (hypothesis 1b).

Table 2: TSCS Poisson regression results of conflict intensity in minor conflicts (incidence rate ratios)

	Model 1	Model 2	Model 3	Model 4
WB projects (dummy) <i>Ref.:</i> <i>No WB projects</i>	0.436*** [0.41; 0.46]		0.748*** [0.69; 0.81]	
WB projects (count)		1.000 [1.00; 1.00]		0.998*** [1.00; 1.00]
Insurgent control <i>Ref.:Government control</i>			29.933*** [14.54; 61.62]	130.627*** [59.67; 285.96]
WB projects (dummy) x Insurgent control			31.064 *** [30.34; 31.79]	
WB projects (count) x Insurgent control				132.628 [131.09;134.11]

Table 2 continued

Population (log)	1.000	0.913***	1.128***	1.153***
	[0.98;1.02]	[0.89; 0.94]	[1.08; 1.17]	[1.10; 1.20]
Population (log) x Insurgent control			31.958***	132.549***
			[31.22; 32.70]	[128.30; 136.80]
Unit FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Log -Likelihood	12206.490	12570.036	11237.238	11612.229
AIC	24416.979	25144.073	22484.476	23234.457
N	278	278	278	278

Note: Incidence rate ratios (IRR) with 95 per cent confidence intervals in square brackets.

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Model 1 shows that the expected annual fatality rate in regions that received at least one WB project was about 0.44 times lower than in regions that did not receive any WB projects. The effect remains robust when disaggregating the data to the district level, where the IRR for *WB projects (dummy)* is 0.74⁶.

Model 2 reports an IRR of 1, indicating that each additional WB project has no effect on the expected count of conflict-related deaths. A robustness test with district-level data even finds that a one-unit increase in *WB projects (count)* is associated with a 1.51⁷ per cent increase in

⁶ See Appendix for the regression table.

⁷ Percentage of the multiplicative effect of a one-unit increase in the predictor variable on the incidence rate of conflict intensity, holding all other variables constant (see Hilbe(2014))

the incidence rate of conflict intensity (IRR = 0.985). Thus, hypothesis 1a, that development aid reduces conflict intensity, is only partially supported by the data.

One possible explanation for these findings might be that instead of increasing, foreign development aid might decrease civilians' trust in the government, as they might perceive it as unable or unwilling to provide public goods and services itself, undermining the social contract between the state and its citizens (Atitianti, 2023). Since more WB projects might be associated with a greater failure by the government to uphold its duties, civilians may be less willing to cooperate and share intelligence with counterinsurgent forces. Consequently, counterinsurgent efforts to combat insurgent groups and reduce conflict intensity will be less effective as they depend on civilian cooperation.

Models 3 and 4 test how development aid affects conflict intensity in regions under insurgent control, where insurgent groups provide public goods and services to the local population in exchange for their support. I argue that in these regions, development aid has a violence-increasing effect since insurgents try to sabotage aid projects to prevent civilians from shifting their allegiance from the insurgent group to the government (hypothesis 1b).

While the interaction effect between aid projects and *Insurgent control* is negative, both models show that development aid has an overall positive effect on conflict intensity. Model 3 finds that regions under insurgent control that received at least one WB project had a 31.06 higher fatality rate compared to regions under government control without development aid.

Taking the number of aid projects into account, Model 4 indicates that each additional aid project increases the IRR of the expected fatalities by 13139 per cent⁸ (IRR=132.39), supporting hypothesis 1b. Both findings remain robust when using district-level data, indicating that insurgent groups increase violence to prevent losing crucial popular support.

Except for Model 1, all models show a statistically significant effect of *Population (log)* on conflict intensity. In regions under government control, a one-unit increase in *Population (log)* is associated with a 10.8 per cent decrease in the IRR of conflict fatalities. However, when interacting the variable with *Insurgent control*, the effect of *Population (log)* becomes positive, indicating a 3095.3 per cent increase in regions under insurgent control in model 3 and a 13155

⁸ See footnote 4

per cent increase in IIR in model 4. Yet, again, the large confidence intervals suggest that the estimates are most likely biased and do not represent the true effect.

Robustness Checks

To test whether the above results are driven by regions that did not experience any violence for one or more years, I re-estimate the models excluding region-years without violence. Since removing these cases from the main dataset containing federal states would result in too few observations, I will use the dataset with district-level data.

Table 3: Descriptives (district level)

Variable	Mean	SD	Min.	Max.	n	T	N
Conflict intensity	19.81	29.422	1	166	104	5	265
WB projects (dummy)	0.744	0.438	0	1	104	5	265
<i>Ref.: No WB projects</i>							
WB projects (count)	2.66	5.924	0	35	104	5	265
Insurgent control	0.199	0.400	0	1	104	5	265
<i>Ref.: Government control</i>							
Population (log)	12.588	1.116	9.278	14.996	104	5	265

Removing peaceful dyads results in a highly unbalanced panel with 156 observations across 104 districts over a period of five years. In addition to the decrease in the number of total observations, the drastic reduction in the standard deviation of the dependent variable indicates that the results of the previous models might have been severely impacted by regions that remained unaffected by the conflict(s).

Table 4: TSCS Poisson regression results of conflict intensity in minor conflicts at the district level (incidence rate ratios)

Variable	Model 1b	Model 2b	Model 3b	Model 4b
WB projects (dummy) <i>Ref.: No WB project</i>	0.758*** [0.70; 0.82]		0.567*** [0.51; 0.63]	 [1.00; 1.01]
WB projects (count)		1.008* [1.00; 1.14]		1.005
Insurgent control <i>Ref.: Government control</i>			1.064 [0.45; 2.49]	1.430 [0.55; 3.70]
WB projects dummy x Insurgent control			4.367*** [1.18; 7.55]	
WB projects (count) x Insurgent control				3.446 [2.24; 4.69]

Table 4 continued

Population (log)	1.220	1.184***	1.226***	1.199***
	[1.18; 1.26]	[1.14; 1.23]	[1.18; 1.28]	[1.14; 1.26]
Population (log)			0.939	0.968
x Insurgent control			[-2.01;3.89]	[-0.17; 2.57]
Unit FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Log Likelihood	-2202.944	-2220.719	-2149.266	-2219.231
AIC	4409.888	4445.439	4308.532	4448.463
N	156	156	156	156

Note: Incidence rate ratios (IRR) with 95 per cent confidence intervals in square brackets.

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

While the effects of development aid on conflict intensity in regions under government control remain fairly the same in direction and size, the interaction effects differ substantially.

Model 3b shows that regions under insurgent control that received at least one WB project had an expected fatality rate that was only 4.37 times higher than in regions under government control without development aid. In comparison, the main analysis found that the rate was 31.06 higher.

Similarly, Model 4b finds that each additional WB project is associated with a 244.6 per cent increase in the expected count of battle-related deaths (IRR = 3.446) rather than the previously reported 13139 per cent. However, this effect is not statistically significant at conventional levels. Thus, I cannot conclude that more development aid in regions under insurgent control increases conflict intensity in minor conflicts.

In regard to the control variable *Population (log)*, all models, except model 1b, indicate an increase in the expected conflict fatalities in more populous regions. However, when interacting *Population (log)* with *Insurgent control*, the coefficients become statistically insignificant. This implies that the size of the support base does not matter for the increase in violence in insurgent-controlled districts.

These robustness checks support the findings of the main analysis, indicating that the presence of development aid in minor conflicts has a significant violence-decreasing effect in regions under government control. However, once we look at the number of development projects, an increase in development aid is associated with a slight increase in violence.

Concerning the robustness of the moderating variable, *Insurgent control*, the robustness tests indicate that while the presence of at least one WB project in a region leads to a large increase in the expected conflict intensity compared to regions without projects, the increase is not as high as suggested by the main results.

Conclusion

The academic discussion on development aid and its effect on conflict intensity so far has primarily focused on civil wars that result in more than 1,000 annual battle-related deaths. However, the majority of armed conflicts today are minor conflicts, counting less than 1,000 annual conflict fatalities (Davies et al., 2023). Although minor conflicts largely outnumber civil wars, the existing literature on economic development aid and conflict does not provide much empirical evidence. To fill this gap, this thesis has examined how development aid influences conflict intensity in minor conflicts. Based on geo-coded data on WB projects and conflict intensity across regions in minor conflict states between 2009 and 2013, I have analysed how development aid influences violence in regions under government and insurgent territorial control. My results demonstrate that when disbursed in regions under insurgent control, development aid is expected to increase conflict intensity substantially. However, when disbursed in regions under government control, development aid has either no effect or even a violence-dampening effect.

These mixed results partially contradict the dominant “hearts and minds” paradigm, which suggests that the provision of public goods and services tend to result in pro-government attitudes and cooperation with the counterinsurgency. Instead of increasing trust in the government, aid is likely that development projects decrease trust even further, since civilians associate foreign aid with government failure (Atitianti, 2023). Evidence from Afghanistan suggests that foreign aid projects might not only diminish support for the government but also increase sympathy for insurgents (Sexton & Zürcher, 2023, p. 13). In Afghanistan, many citizens distrusted their unaccountable and corrupt government, which could not be improved by short-term economic benefits (Sexton & Zürcher, 2023). Therefore, it is not surprising that

in conflict-affected regions in minor conflict states, the increase in development aid has no negative effect on violence, as they are often neglected by the government in regard to public socioeconomic investments. However, most development projects, such as large infrastructure projects, are long-term projects that might not change civilians' support for the government within five years. To really test the “hearts-and minds” mechanism, it is necessary to examine each region over a longer period. In addition, future research would benefit from disaggregated survey data or in-depth interviews with civilians in conflict regions, comparing their support for the government before and after the implementation of aid projects. Only in this way, we can make sure whether development aid changes the willingness to cooperate with the government.

While I aimed to shed some light on the relationship between development aid and conflict intensity in regions under territorial control, my results for this moderating effect should be treated with caution. First, ACLED data has been argued to show reporting biases, with many wrongly assigned events in regard to their location (Eck, 2012), causing problems with correctly assigning territorial control. Second, my measure of territorial control relies on a binary indicator of yearly-aggregated, which might not be appropriate for conflict, as territorial changes occur on a weekly or monthly basis. Especially in conflicts with many active insurgent and counterinsurgent groups, such as Nigeria, territories are often contested with neither actor exerting complete control (Anders, 2020). In this case, it would be more appropriate to rely on a categorical variable that takes these situations into account. Future research might address this issue by employing grid-cell analyses, which have been proven to be more appropriate for mapping territorial control (Anders, 2020).

Although my research design mitigates much of the omitted variable bias, it cannot account for time-varying heterogeneity at the regional level. For example, regions with higher levels of violence may have weak administrative capacities, which could be correlated with the number of projects they receive. In this context, administrative capacity is a confounding variable that affects the relationship between the independent and dependent variables. Administrative capacity can vary over time. A region can have a high administrative capacity at time t but a lower capacity at time $t+1$. To account for this heterogeneity, future research might employ more complex modelling techniques, which were beyond the scope of this thesis.

Despite these shortcomings, this thesis highlights the need for carefully designed and implemented aid projects. In this regard, my findings suggest that for development aid to be

truly successful in reducing conflict intensity in minor conflicts, policymakers would need to look beyond socioeconomic problems and consider citizens' personal desires for their own and their country's future. If civilians are left unheard, development aid might be more harmful than helpful in situations of violent armed conflict. Therefore, future aid projects need to be bottom-up projects, including local communities. – If we fail to listen to the people, we will fail to secure peace for our future.

References

- Adegehe, A. K. (2009). *Federalism and ethnic conflict in Ethiopia. A comparative study of the Somali and Benishangul-Gumuz regions* [Doctoral Thesis, Leiden University].
<https://hdl.handle.net/1887/13839>
- Afrobarometer. (2008). *Public Opinion and Local Government in Nigeria, 2008* (Briefing Paper 53; pp. 1–7).
- Agbiboa, D. (2013). The Ongoing Campaign of Terror in Nigeria: Boko Haram versus the State. *Stability: International Journal of Security & Development*, 2(3), 52.
- Ali, S. (2011). *Ethiopia's Imperfect Growth Miracle*. Carnegie Endowment for International Peace. <https://carnegieendowment.org/research/2011/10/ethiopias-imperfect-growth-miracle?lang=en>
- Anders, T. (2020). Territorial control in civil wars: Theory and measurement using machine learning. *Journal of Peace Research*, 57(6), 701–714.
- Angrist, J. D., & Pischke, J.-S. (2009). *Mostly harmless econometrics: An empiricist's companion*. Princeton University Press.
- Atitianti, P. A. (2023). The impact of Chinese aid on political trust. *Journal of International Development*, 35(2), 233–259.
- Awortu, B. E. (2015). Boko Haram Insurgency and the Underdevelopment of Nigeria. *Research on Humanities and Social Sciences*, 5(2), 213–2020.
- Beath, A., Christia, F., & Enikolopov, R. (2017). *Winning Hearts and Minds through Development: Evidence from a Field Experiment in Afghanistan*.
<https://doi.org/10.2139/ssrn.1809677>
- Berman, E., Felter, J. H., Shapiro, J. N., & McIntyre, V. (2018). *Small Wars, Big Data: The Information Revolution in Modern Conflict*. Princeton University Press.

- Berman, E., Felter, J. H., Shapiro, J. N., & Troland, E. (2013). Modest, Secure, and Informed: Successful Development in Conflict Zones. *The American Economic Review*, 103(3), 512–517.
- Berman, E., Shapiro, J. N., & Felter, J. H. (2011). Can Hearts and Minds Be Bought? The Economics of Counterinsurgency in Iraq. *Journal of Political Economy*, 119(4), 766–819.
- Bleck, M., & Michelitch, K. (2015). *On the primacy of weak public service provision in rural Africa: Malians redefine 'state breakdown' amidst 2012 political crisis* [Working Paper].
- Bluhm, R., Gassebner, M., Langlotz, S., & Schaudt, P. (2021). Fueling conflict? (De)escalation and bilateral aid. *Journal of Applied Econometrics (Chichester, England)*, 36(2), 244–261.
- Bomprezzi, P., Dreher, A., Fuchs, A., Hailer, T., Kammerlander, A., Kaplan, L., Marchesi, S., Masi, T., Robert, C., & Unfried, K. (2024). *Wedded to Prosperity? Informal Influence and Regional Favoritism*. CEPR.
- Bratton, M., & Gyimah-Boadi, E. (2016). *Do trustworthy institutions matter for development? Corruption, trust and government performance in Africa* (Afrobarometer Dispatch 112; pp. 1–17). Afrobarometer.
- Collier, P., & Hoeffler, A. (2004). Greed and grievance in civil war. *Oxford Economic Papers*, 56, 563–595.
- Crost, B., Felter, J. H., & Johnston, P. B. (2016). Conditional cash transfers, civil conflict and insurgent influence: Experimental evidence from the Philippines. *Journal of Development Economics*, pp. 118, 171–182.
<https://doi.org/10.1016/j.jdeveco.2015.08.005>

- Crost, B., Felter, J., & Johnston, P. (2014). Aid Under Fire: Development Projects and Civil Conflict. *The American Economic Review*, 104(6), 1833–1856.
- Dasgupta, A., Gawande, K., & Kapur, D. (2017). (When) Do Antipoverty Programs Reduce Violence? India's Rural Employment Guarantee and Maoist Conflict. *International Organization*, 71(3), 605–632. <https://doi.org/10.1017/S0020818317000236>
- Dembele, N. (n.d.). *Accelerating global action for a world without poverty: The experience of Mali*. United Nations. Retrieved 21 May 2024, from https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/03/Dembele-paper-WORLD-WITHOUT-POVERTY_Mali.pdf
- Dorff, C., Gallop, M., & Minhas, S. (2020). Networks of Violence: Predicting Conflict in Nigeria. *The Journal of Politics*, 82(2), 476–493.
- Eck, K. (2012). In data we trust? A comparison of UCDP GED and ACLED conflict events datasets. *Cooperation and Conflict*, 47(1), 124–141.
- Elayah, M., & Fentiman, M. (2021). Humanitarian Aid and War Economies: The Case of Yemen. *The Economics of Peace and Security Journal*, 16(1).
- Ethiopia- ONLF Offensive. (2009). *Africa Research Bulletin*, 18188.
- Fearon, J., & Latin, D. D. (1996). Explaining Interethnic Cooperation. *The American Political Science Review*, 90(4), 715–735.
- Findley, M. G., Powell, J., Strandow, D., & Tanner, J. (2011). The Localized Geography of Foreign Aid: A New Dataset and Application to Violent Armed Conflict. *World Development*, 39(11), 1995–2009. <https://doi.org/10.1016/j.worlddev.2011.07.022>
- Findley, M. G., & Young, J. K. (2007). Fighting Fire with Fire? How (Not) to Neutralize an Insurgency. *Civil Wars*, 9(4), 378–401. <https://doi.org/10.1080/13698240701699482>

- Gardner, W., Mulvey, E. P., & Shaw, E. C. (1995). Regression Analyses of Counts and Rates: Poisson, Overdispersed Poisson, and Negative Binomial Models. *Psychological Bulletin*, 118(3), 392–404.
- Gehring, K., Kaplan, L. C., & Wong, M. H. L. (2022). China and the World Bank—How contrasting development approaches affect the stability of African states. *Journal of Development Economics*, 158, 102902. <https://doi.org/10.1016/j.jdeveco.2022.102902>
- GeoQuery. (n.d.). Integrating HPC systems and public web-based geospatial data tools. *Computers & Geosciences*, 122.
- Gleditsch, N. P., Wallensteen, P., Eriksson, M., Sollenberg, M., & Strand, H. (2002). Armed Conflict 1946-2001: A New Dataset. *Journal of Peace Research*, 39(5), 615–637.
- Goodman, S., BenYishay, A., Lv, Z., & Runfola, D. (2019). *AidData* [dataset]. <https://www.aiddata.org/>
- Hanck, C., Arnold, M., Gerber, A., & Schmelzer, M. (2024). *Introduction to Econometrics with R*. <https://www.econometrics-with-r.org/>
- Hassan, O. (2015). Political security: From the 1990s to the Arab Spring. *Contemporary Politics*, 21(1), 86–99. <https://doi.org/10.1080/13569775.2014.993907>
- Hilbe, J. M. (2014). *Modeling Count Data* (1st ed.). Cambridge University Press.
- Högbladh, S. (2023). *UCDP GED Codebook version 23.1* (pp. 2–53). Department of Peace and Conflict Research, Uppsala University.
- International Monetary Fund. (2011). *Mali: Poverty Reduction Strategy paper—2009 Progress Report* (11/38; IMF Country Report, pp. 1–42). IMF.
- International Monetary Fund. (2013). Mali: Poverty Reduction Strategy Paper. *IMF Staff Country Reports*, 13(111), 1.
- Kumar, D., & Roy Chowdhury, P. (2022). Winning hearts and minds in conflict-ridden areas: Development as a signal of benevolence. *Economic Modelling*, 117, 106050.

- Levi, M., Sacks, A., & Tyler, T. (2009). Conceptualizing Legitimacy, Measuring Legitimizing Beliefs. *American Behavioral Scientist*, 53(3), 354–375.
- Lyammouri, R. (2021). *Literature Paper: Jihadist Armed Governance in Mali* (Policy Brief 21/40; pp. 1–6). Policy Center for the New South.
- Mickler, D., Suleiman, M. D., & Maiangwa, B. (2019). “Weak State”, Regional Power, Global Player: Nigeria and the Response to Boko Haram. *African Security*, 12(3–4), 272–299.
- Minhas, S., & Radford, B. J. (2017). Enemy at the Gates: Variation in Economic Growth from Civil Conflict. *Journal of Conflict Resolution*, 61(10), 2105–2129.
- Ministry of Finance and Economic Development Federal Democratic Republic of Ethiopia. (2012). *Assessing Progress Towards the Millenium Development Goals: Ethiopia MDGs Report 2012* (p. 62).
https://www.undp.org/sites/g/files/zskgke326/files/publications/Ethiopia%20MDG%20Report%202012_Final.pdf
- Narang, N., & Stanton, J. A. (2017). A Strategic Logic of Attacking Aid Workers: Evidence from Violence in Afghanistan. *International Studies Quarterly*, 61(1), 38–51.
- OECD. (2023). *Peace and Official Development Assistance*. OECD Publishing.
- Okello, A., & Teka, M. (2023). *Young Ethiopians prioritise management of the economy for government action* (741; Afrobarometer Dispatch, pp. 1–12). Afrobarometer.
- Olojo, A. (2013). Nigeria’s Troubled North: Interrogating the Drivers of Public Support for Boko Haram. *International Centre for Counterterrorism The Hague*, 4(7).
- Ordu, G. E.-O. (2017). Trends and patterns of Boko Haram terrorist and militants’ aggression in Nigeria. *Aggression and Violent Behavior*, 37, 35–41.
- Oxfam. (2017). *Inequality in Nigeria*. Oxfam International.

- Patterson, J. (2014, April 10). *Nigeria has become the largest economy in Africa with \$509.0 billion GDP*. African Development Bank Group. <https://www.afdb.org/en/news-and-events/nigeria-becomes-largest-economy-in-africa-with-509-9-billion-gdp-12981>
- Pettersson, T. (2023). *UCDP/PRIO Armed Conflict Dataset Codebook v 23.1*. <https://ucdp.uu.se/downloads/>
- Raleigh, C., Linke, R., Hegre, H., & Karlsen, J. (2010). Introducing ACLED: An Armed Conflict Location and Event Dataset. *Journal of Peace Research*, 47(5), 651–660.
- Roback, P., & Legler, J. (2021). *Beyond Multiple Linear Regression* (1st ed.). Chapman and Hall/CRC.
- Sexton, R. (2016). Aid as a Tool against Insurgency: Evidence from Contested and Controlled Territory in Afghanistan. *The American Political Science Review*, 110(4), 731–749.
- Sexton, R., & Zürcher, C. (2023). Aid, Attitudes, and Insurgency: Evidence from Development Projects in Northern Afghanistan. *American Journal of Political Science*.
- Shiferaw, A. (2017). *Productive Capacity and Economic Growth in Ethiopia* (34; CDP Background Paper, p. 20). United Nations Department of Economic and Social Affairs. content/uploads/sites/45/publication/CDP_BP34_April_2017.pdf
- Smith, D. R. (2016). Realpolitik and the Deceptive Use of Islamist Narratives in Armed Struggles: The case of Northern Mali Conflict. *Critique: A Worldwide Student Journal of Politics*, 29–49.
- Sundberg, R., & Melander, E. (2013). Introducing the UCDP Georeferenced Event Dataset. *Journal of Peace Research*, 50(4), 523–532.
- Tarp, F. (2006). Aid and development. *Swedish Economic Policy Review*, 13, 9–61.

- Teka, M. (2021). *With high prevalence of lived poverty, Ethiopians rate government's economic performance as poor* (426; Afrobarometer Dispatch, pp. 1–10). Afrobarometer.
- UCDP. (n.d.-a). *Government of Nigeria—JAS*. Uppsala Conflict Data Program Department of Peace and Conflict Research. Retrieved 8 June 2024, from <https://ucdp.uu.se/statebased/640>
- UCDP. (n.d.-b). *Mali: Azawad*. Uppsala Conflict Data Program Department of Peace and Conflict Research. Retrieved 8 June 2024, from <https://ucdp.uu.se/conflict/372>
- Watkins, M. (2022). Foreign aid projects and trust in political institutions. *Governance*, 35(3), 909–927.
- Weintraub, M. (2016). Do All Good Things Go Together? Development Assistance and Insurgent Violence in Civil War. *The Journal of Politics*, 78(4), 989–1002.
- Wood, R. M. (2010). Rebel capability and strategic violence against civilians. *Journal of Peace Research*, 47(5), 601–614.
- Wooldridge, J. M. (1999). Distribution-free estimation of some nonlinear data models. *Journal of Econometrics*, 90, 77–97.
- World Bank. (n.d.). *Nigeria Youth Employment & Social Support Operation*. Retrieved 8 June 2024, from <https://projects.worldbank.org/en/projects-operations/project-detail/P126964?lang=en>
- World Bank. (2013). *Nigeria Economic Report* (1; pp. 1–38).
- World Bank. (2016). *Ethiopia's Great Run: The Growth Acceleration and How to Pace it* (99399; p. 148). World Bank. <https://documents1.worldbank.org/curated/en/693561467988949839/pdf/99399-REVISED-PUBLIC-thiopia-Economic-Update-2-11-16-web.pdf>

World Bank. (2023). *Fragility, Conflict and Violence*. World Bank.

<https://www.worldbank.org/en/topic/fragilityconflictviolence/overview>

Yusuf, S. (2019). *Drivers of ethnic conflict in contemporary Ethiopia* (Monograph 202; p. 46). Institute for Security Studies.

Zürcher, C. (2017). What Do We (Not) Know About Development Aid and Violence? A Systematic Review. *World Development*, 98, 506–522.

Appendix

Table 5: Descriptive Statistics (district level data)

Variable	Mean	Std.Dev.	Min.	Max.	Obs.
Conflict intensity	0.318	3.748	0	101	4476
WB projects (dummy) <i>Ref.: No WB project</i>	0.844	0.363	0	1	4476
WB projects (count)	5.1574	9.234	0	83	4476
Insurgent control <i>Ref.: Government control</i>	0.007	0.0816	0	1	4476
Population (log)	12.245	0.750	6.2065	16.446	4476

Table 6: TSCS Poisson regression results for conflict intensity in minor conflicts (district level data)

Variable	Model 1	Model 2	Model 3	Model 4
WB projects (dummy) <i>Ref.: No WB projects</i>	-0.303 ***		0.166	
	(0.462)		(0.508)	
WB projects (count)		0.015 ***		0.015 *
		(0.012)		(0.013)
Insurgent control <i>Ref.: Government control</i>			14.917 ***	14.480 *
			(9.980)	(7.274)
WB projects (dummy) x Insurgent control			29.64*	
			(1.179)	
WB projects (count) x Insurgent control				14.474 *
				(0.110)
Population (log)	0.862 ***	0.859 ***	0.950 ***	0.933 *
	(4.744)	(4.793)	(5.945)	(5.284)
Population (log) x Insurgent control			16.59***	14.51 *
			(0.693)	(0.550)
Time FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
Log Likelihood	-6028.258	-6020.665	-5556.489	-5546.103
AIC	12060.515	12045.330	11122.979	11102.206
Obs.	4476	4476	4476	4476

*Note: Poisson regression coefficients with Poisson fixed effects standard errors in parentheses, *** p < 0.001; ** p < 0.01; * p < 0.05*

Wooldridge's test for serial correlation in FE panels

data: plm.model

F = 6.4356, df1 = 1, df2 = 56, p-value = 0.014

alternative hypothesis: serial correlation

Panel Unit Root Test

> purtest(DCAIMC.ur, test="levinlin", exo="intercept", lags="AIC", pmax=4)

Levin-Lin-Chu Unit-Root Test (ex. var.: Individual Intercepts)

data: DCAIMC.ur

z = 0.91865, p-value = 0.8209

alternative hypothesis: stationarity

Panel Stationarity Test

> purtest(DCAIMC.ur, test="hadri", exo="intercept", lags="AIC", pmax=4)

Hadri Test (ex. var.: Individual Intercepts) (Heterosked.
Consistent)

data: DCAIMC.ur

z = 62.734, p-value < 2.2e-16

alternative hypothesis: at least one series has a unit root

> summary(purtest(DCAIMC.ur, test="hadri", exo="intercept", lags="AIC", pmax=4))

Hadri Test

Exogenous variables: Individual Intercepts

statistic: 62.734

p-value: 0

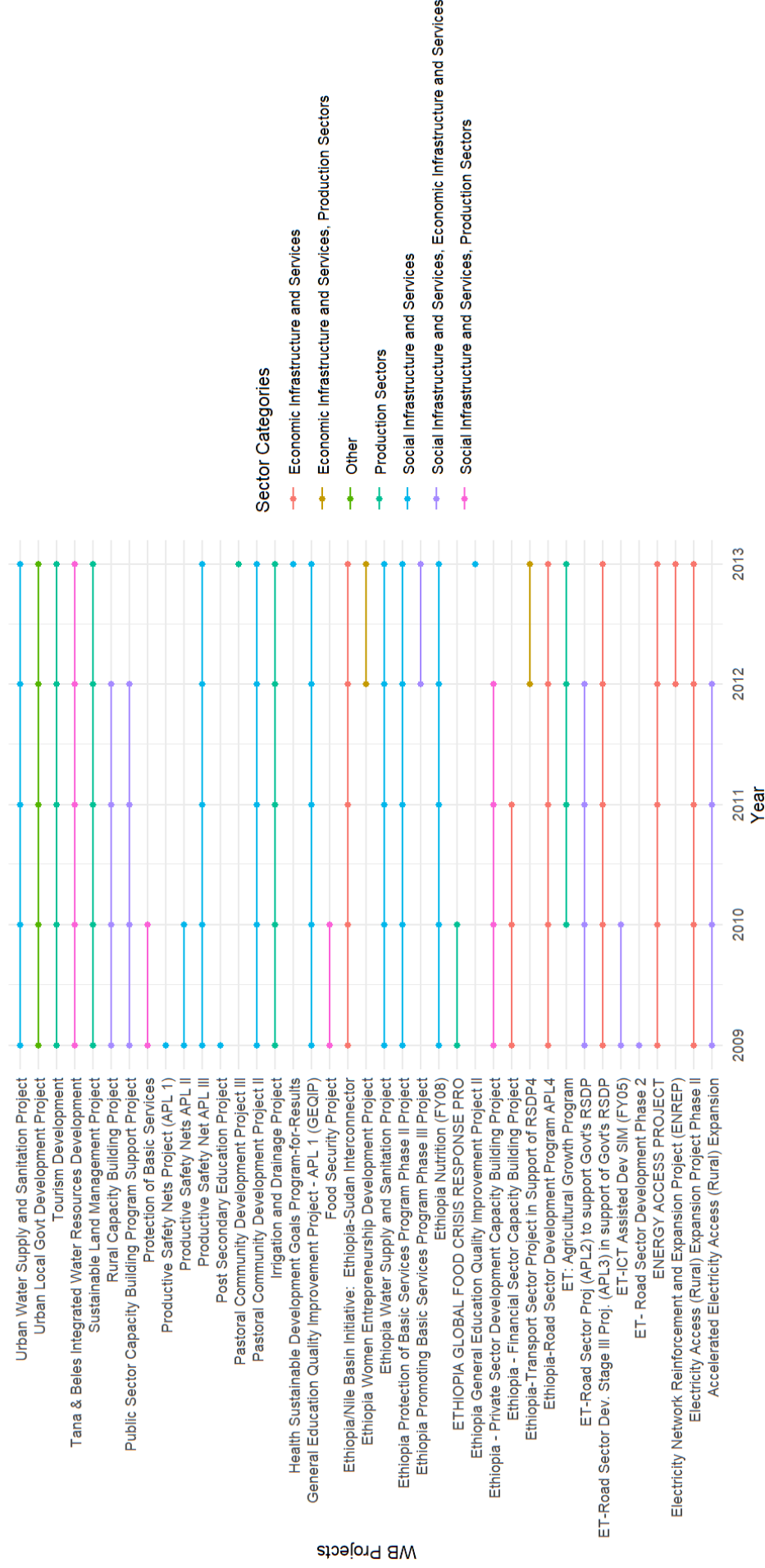
LM sigma2

[1,] 16.0167587 986.306713

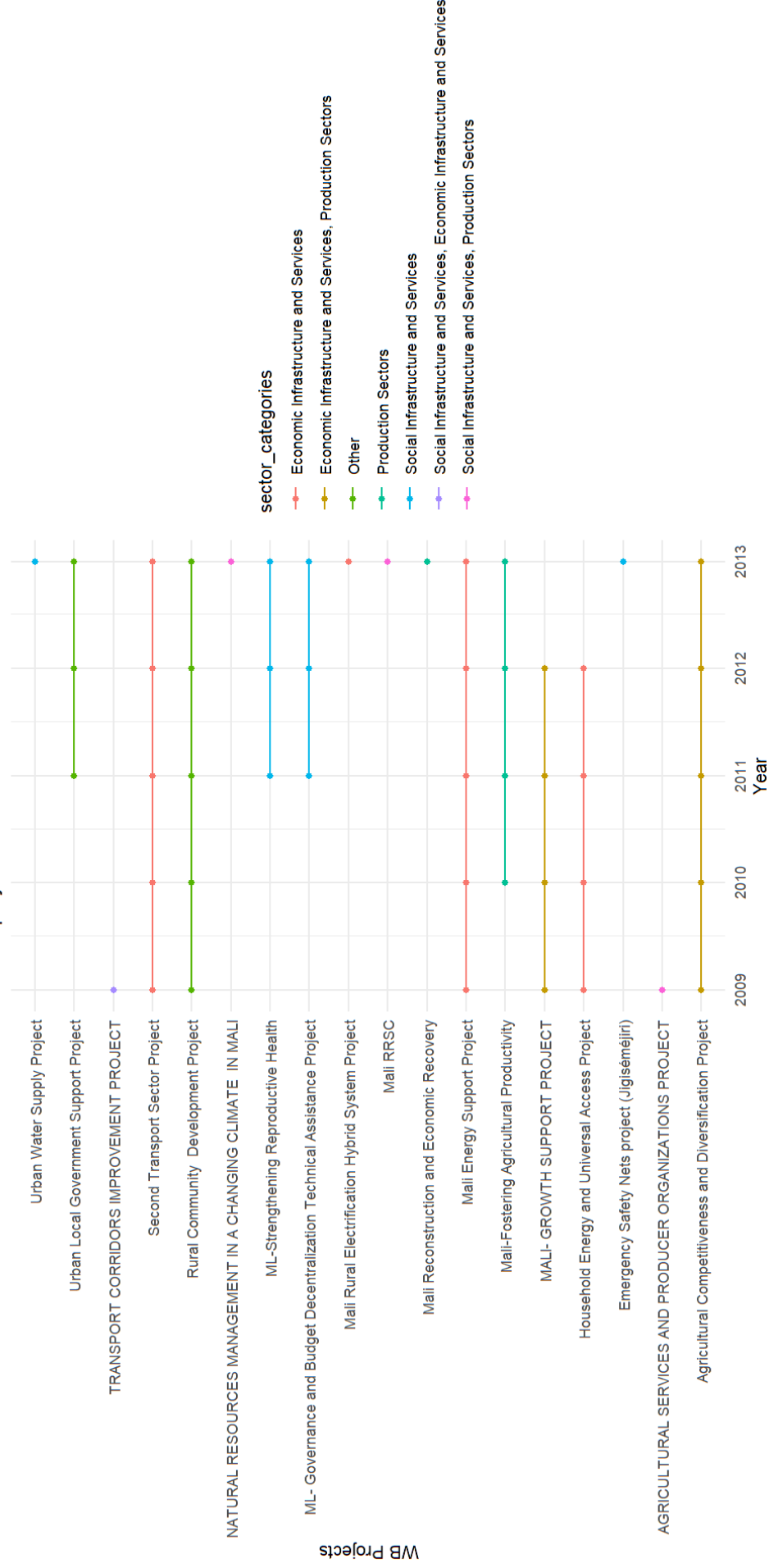
[2,] 0.4511795 1.385784

[3,] 0.2298002 2215.573830

Ethiopia WB projects 2009-2013



Mali WB projects 2009-2013



Nigeria WB projects 2009-2013

