Dangerous demographics? The effect of urbanisation and metropolisation on African Civil wars, 1961–2010

Dangerous Demographics?

The Effect of Urbanisation and Metropolisation on African Civil Wars, 1961-2010

Name: Nicolai Schulz

Affiliation: Department of International Development
London School of Economics

Address: Department of International Development
6-8th Floors, Connaught House
London School of Economics and Political Science
Houghton Street
London
WC2A 2AE

E-mail: d.nicolai.schulz@gmail.com

Phone: 0049 151 26325514

Abstract

Whether urbanisation promotes or inhibits the risk of civil war is disputed: while case studies usually support the former, quantitative investigations have found either the latter or no significant correlation at all. I argue that this contradiction is due to a conceptual and operational over-aggregation of urbanisation, ignoring its intrastate variation. I claim that a high relative concentration of the urban population and political, economic and social institutions in the largest city – so-called metropolisation – can increase both the motivation for and the feasibility of rebellion in a country. Triangulating case study evidence with a quantitative cross-national time-series design, I show that metropolisation significantly and robustly increases the risk of governmental conflict in particular and hence civil war in general.

Keywords – Africa; civil war; conflict incompatibility; metropolisation; urbanisation

Word count: 8,898

Introduction

For the first time in history more than half of the world's population lives in urban areas. By 2030, this number is predicted to rise to 60 per cent[1]. According to UN estimations[2] around 90 per cent of global urban growth will take place in developing countries and the urban population living in the least developed countries will increase fivefold over the next 40 years. Consequently, these massive shifts have caused and currently cause considerable economic, social, demographic, and environmental changes in the affected countries. While cities are engines of economic growth and social development, they 'can also be places of exploitation, disease, violent crime, unemployment, underemployment, and extreme poverty[3]. Correspondingly, over one billion people live in urban slums today and current predictions expect this number to double by 2030[4].

Recently, these rapid and profound urban developments have received increasing attention with regard to issues of conflict and civil war. A survey by UN-DESA[5] shows that many governments in developing countries seem to perceive urbanisation as harmful as they actively discourage its advancement: as many as 78 per cent of African and 71 per cent of Asian governments state that they have implemented measures to reduce migrant flows to large cities. In the scholarly literature, however, the question of whether urbanisation promotes or inhibits the risk of civil war is disputed. On the one hand, several case studies, e.g. on Kenya[6], Indonesia[7], or Turkey[8], have depicted urbanisation as a cause of violence. Yet on the other hand, empirical studies on population and armed conflict have questioned the justification for anti-urbanisation policies, as they found no significant correlation between urbanisation and armed conflict[9]. I argue that this contradiction is due mainly to the fact that most quantitative studies have defined and measured urbanisation too broadly, that is, as the percentage of a country's population living in cities (urban share) or as the growth of this

percentage (urban growth). This broad conceptualisation, however, ignores the intrastate variation of urbanisation and therefore fails to capture potential causal mechanisms between urbanisation and civil war. I claim that it is therefore indispensable to analyse how urbanisation is distributed within a country. Especially in African countries, urbanisation is often concentrated in the largest city (almost always the capital), the so-called primate city[10]. This condition – not process –, known as metropolisation or urban concentration, involves both the concentration of a country's urban population (demographic primacy) as well as that of political, economic, and social institutions (functional primacy) to the largest city.

In this paper, I suggest that metropolisation can increase both the motivation for and feasibility of rebellion and thus the risk of civil war onset. The underlying assumption in this paper is that social groups in a country compete both peacefully (via politics) and violently with each other for the control of sources of power and wealth in society, in order to improve or at least maintain their wellbeing. In Africa these social groups are usually defined along ethno-regional or religious-regional lines. Crucially, in metropolised countries almost all important institutions that allocate sources of power and wealth are located in the capital city. In contrast, social groups' home regions are likely to be scarcely urbanised and therefore tend to be poorer and economically unfeasible as independent regions. Hence, to ensure the group's and region's wellbeing, all social groups are highly motivated to control the capital and the state apparatus (the objective of governmental conflict) rather than seceding their region (the objective of territorial conflict). Using both case study and large-N methods I show that this tension makes civil war onset in general more likely. In addition to this motivational mechanism, metropolisation makes civil war both more militarily and financially feasible as only the primate city has to be conquered to control the state and recruitment costs are low due to the widespread poverty and unemployment that typically prevail in metropolised late devel-

oping countries. As a consequence, the collective action problem[11] of rebels to mobilise rebellion, also termed as 'Rebel's Dilemma' by Lichbach[12], is easier to overcome. Therefore, based on this assumed concurrence of motivation and feasibility in metropolised countries, I examine the following research question: does metropolisation increase the risk of civil war and particularly of governmental conflict onset?

In order to test this research question empirically, I apply two different methods. First, as part of explaining the paper's theoretical model, I present and analyse case study evidence from several African countries, with a special emphasis on the Republic of the Congo (hereafter Congo). From this I generate three main hypotheses and test them with a cross-national time-series design, comparing 51 African countries from 1961 to 2010.

In the following, the research question is analysed in five parts. First, I will provide a short overview of the above-mentioned urbanisation debate, thus summarizing previous arguments and results as well as identifying areas of controversy. Based on that, I will introduce the concept of metropolisation and explain in detail how it can help to gain new insights into the correlation of urbanisation and civil war. Part three then illustrates my research design, including the operationalisation of the units of analysis, dependent and independent variables, control variables, as well as the statistical model used for testing. Then, I present the results and check for their robustness and causality. Finally, I summarise the survey's findings, highlight limitations, and touch on future prospects.

The Urbanisation Debate

In the late 1960s, Paul Ehrlich's[13] neo-Malthusian[14] book 'The Population Bomb', which predicted mass starvations and major societal upheaval in the remaining twentieth century

due to overpopulation, raised awareness towards a possible connection of population growth and conflict. Twenty years later, scholars, above all Homer-Dixon[15], tested these ideas in large research programs. Homer-Dixon, as Goldstone[16] four years before, came to the conclusion that strong urban growth along with factors such as economic crisis, institutional breakdown, and ethnic cleavage – as seen recently in the Arabic Spring – could lead to an increased risk of violence and political unrest. Case studies on Southeast Asia[17], South Africa and Rwanda[18], Kenya[19] and a large qualitative comparison of Latin American, African, Caribbean, Asian and former Soviet Union countries by Moser et al.[20] confirmed these findings. Moreover, even Huntington[21] argued in his well-known book on the 'Clash of Civilizations' that throughout the 1970s and 1980s, urbanisation led to a strengthening of radical Islamic movements in the Islamic World. Sayari and Hoffman[22] exposed the close relationship between 'hyper urbanisation' and the growth of political terrorism in Turkey during the same period. While these case studies point towards the positive association between urbanisation and conflict, only a few studies have managed to retrace this outcome in a quantitative manner. Through a bivariate comparison, Cincotta et al.[23] concluded that countries with a high urban growth rate of four per cent or more per year are significantly twice as likely to face civil conflict as countries with an annual urban growth rate below one per cent. Furthermore, studies by Toft[24] and Weidmann[25] might support the conflict-promoting character of urbanisation. They found that groups with a high geographical concentration, especially population concentration, are more likely to fight the central government.

However, the majority of quantitative studies report opposite outcomes. Auvinen[26] found that the degree of urbanisation (or urban share) is positively correlated with political protest, but neither with regime change nor serious forms of violent conflict. In fact, Collier and Hoeffler's[27] comprehensive study on civil war indicates that urbanisation is low prior to civil

war. They explain this finding by suggesting that low urbanisation inhibits government control, since widely spread populations are harder to reach, provide with services, and potentially to fight. Since the mid-2000s, other scholars have intensively addressed different facets of urbanisation. In two time-series studies, one on a global level[28] and the other comparing Indian states[29], Urdal found no evidence for a connection between urban growth and armed conflict. Nevertheless, this work did not reject a relationship between rapid urban growth and violence prematurely. Rather, it argued that the negligence of conditional effects (such as economic shocks or levels of development), the high level of aggregation (on the country-level), and the use of only the most severe forms of conflict as dependent variables in previous studies were possible explanations for poor results[30]. Eventually, even the correction of these limitations – through a design disaggregating to the city level, focusing on urban violence and integrating conditional effects – did not change their result: high urbanisation rates do not affect conflict[31].

These contradictory findings – case studies supporting the conflict-enhancing effect of urbanisation, and quantitative studies concluding the opposite – raise the question of who is right. I argue that this contradiction is due mainly to the fact that most quantitative studies have analysed and measured urbanisation too broadly. In fact, these studies conceptualise urbanisation only as growth of cities somewhere in a country, without taking into account which ones grow, and where. However, ignoring the intrastate variation of urbanisation renders analysts unable to discover potential causal mechanisms between urbanisation and civil war. For example, scholars have argued that cities are the engines of economic, political, and social development and that urbanisation thus decreases grievances and herewith the risk of civil war. However, if this is correct, analyzing a country's general urban share does not tell

us whether the whole or just a small part of the country – such as the capital – profits from these developments.

Moreover, I argue that a possible reason for contradictory findings is the common perception, or at least usage of, civil war as a single phenomenon. Buhaug and Gleditsch[32], however, provide strong evidence for the argument that civil wars are in fact 'a heterogeneous class of events that encompasses both efforts by peripheral groups to gain territorial concessions, such as autonomy or independence [territorial conflicts], and various forms of conflict within the centre, including revolutionary movements and military coups [governmental conflicts].' As I will show in the following parts, combining this distinction between conflict incompatibilities with a countries pattern of urbanisation can be crucial in determining its likelihood of facing civil war.

Metropolisation and Civil War

One way to address this criticism is to focus on how urbanisation is concentrated to a country's largest city in contrast to the remaining parts. This condition, known as metropolisation or urban concentration, consists of two main aspects which generally concur in a country's capital. First, demographic primacy, defined as the relative concentration of the urban population in the largest city of the country[33] (the so-called primate city). Second, functional primacy, which describes the concentration of political, social, economic, and cultural institutions in the largest city. Both forms of primacy are rather pervasive in African countries: while Africa's average urban share of around 30 per cent over the last 50 years was the lowest worldwide, its average level of metropolisation of almost 38 per cent was the highest by far.

It should be emphasised at this point that the concept of metropolisation does not aim to measure the existence of metropolises, that is, cities which are large in *absolute* terms. Rather, metropolisation measures how populous a country's largest city is *relative* to other cities. I will try to illustrate this with the example of the USA. Although New York is obviously an enormous metropolis, it is not a primate city since the urban population of the USA is spread to thousands of other cities, with ten of them having more than one million inhabitants and about 34 of them having more than half a million inhabitants. Corresponding to this lack of demographic primacy, functional primacy is also non-existent in the USA: while the country's political capital is in Washington D.C., politics are highly decentralised to the state-level and the economic and social centres of the USA are spread all over the nation. Both is reflected in the USA's extremely low metropolisation level of 8 per cent. Similar or even lower levels of metropolisation can be found in other countries that are famous for their metropolises, such as China (2 per cent), India (6 per cent), or Indonesia (7 per cent). Thus, having metropolises does not mean that a country is demographically or functionally metropolised.

For further illustration, Figure 1 shows two opposite African cases of metropolisation. Cameroon, on the left, is a rather typical case of low metropolisation in Africa. In 2005, about 18 per cent of Cameroon's urban population lived in the largest city, Douala[34]. Compared to the USA's metropolisation level of 8 per cent, this level is still high, however compared to the African average of 37 per cent it is low. A look on the map explains this comparatively low metropolisation level of Cameroon: Yaoundé, the capital of Cameroon, is almost as populous as Douala, the largest city. Correspondingly, not only the majority of Cameroon's urban population is shared by these two cities but also the majority of its societal institutions: most political institutions are located in Yaoundé, while Douala is home to most of Cameroon's

economic and social sites. Further examples for African countries with very low levels of metropolisation are Nigeria and South Africa, where only 14 and 11 per cent, respectively, of the urban population live in the largest city. Not surprisingly, in both cases the largest city is not the capital.

Niger, on the other hand, is a country with a relatively high level of metropolisation. In 2011, around 41 per cent of the urban population lived in Niamey. Corresponding this figure, Niger's capital is over four times larger than the second largest city, Zinder, and is as populous as all other eight largest cities combined[35]. Matching this demographic primacy, the functional primacy of Niamey is very high: all relevant political, social, and economic institutions are assembled in the capital. Further countries with very high levels of metropolisation include among others Congo (54 per cent), Rwanda (57 per cent), Liberia (73 per cent) and Djibouti (78 per cent). A complete list of African countries' levels of metropolisation in the year of their last census can be found in the Annex.

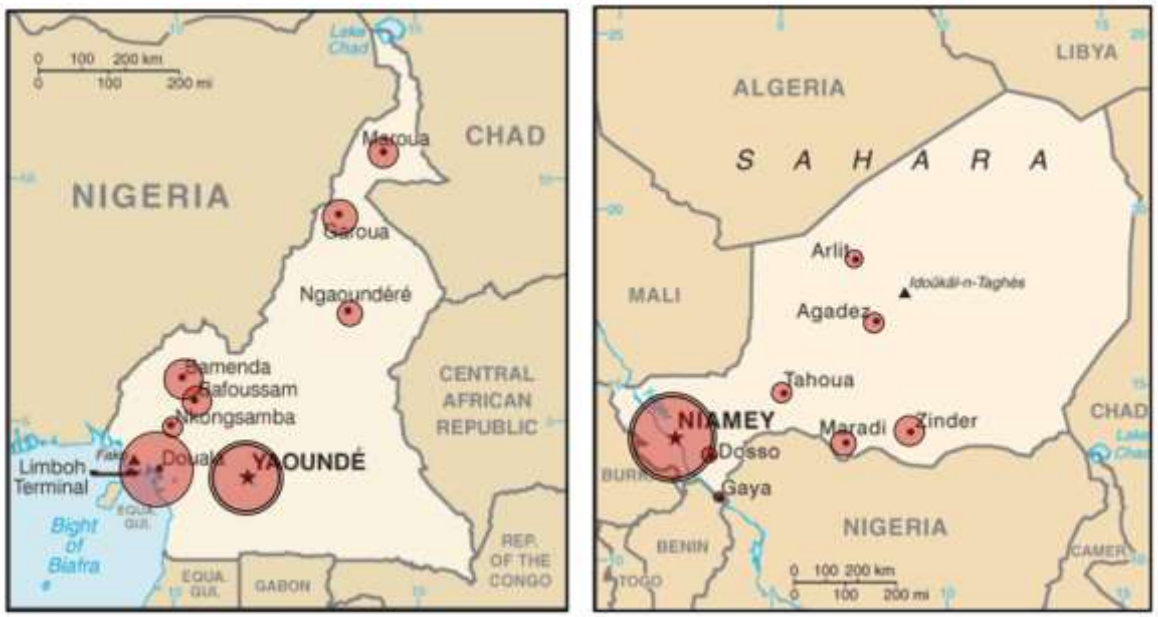

Figure 1: Relative population of largest cities in Cameroon (left) and Niger (right). Source: Own illustration. Based on country maps from CIA World Factbook (2014) and Population

numbers from Cameroonian and Nigerien censuses (Bureau Central du Recensement du Cameroun 2010; Institut National de la Statistique du Niger 2011).

Yet, how is metropolisation related to civil war? I argue that metropolisation affects both the motivation for and the feasibility of civil war. Motivation encompasses the concepts of greed and grievances, and describes what drives people to want to rebel against the state. Feasibility, on the other hand, depicts the circumstances that allow these motivations to ignite into actual rebellion. Although my conceptual use of motivation and feasibility is based on the differentiation employed by Collier et al.[36], neither do I agree with their previous claim that only greed, not also grievance, is the driving force in civil war[37], nor with their recent assertion that feasibility is more important than motivation[38]. Rather, I agree with Keen[39] that conflicts are in fact complex and – as stressed by many conflict scholars[40]– that greed and grievance are complementary explanations for conflict. In line with this, I argue that neither greed nor feasibility alone cause conflict, but only a concurrence of motivation and feasibility. In the following part, I will first expose the mechanisms through which high metropolisation can increase both the motivation and feasibility of civil war. Thereafter, I will provide substantial case study evidence to support these proposed mechanisms.

Metropolisation and the Motivation for Governmental Conflict

The key argument of this paper is that metropolisation increases the likelihood of civil war through increasing the motivation for governmental conflict. On the most fundamental level, this argument rests on conflict theory's basic assumption that social groups struggle over societal resources and compete for social advantages, in order to improve or at least maintain their wellbeing[41]. While the social lines or cleavages dividing these groups could run vertically between social classes (e.g. the poor versus the wealthy), in the African context they

run primarily horizontally between socio-regional groups, such as ethnicities or religious groups[42].

How is metropolisation relevant in this regard? In general, competition between socio-regional groups will take place independently of whether a country has high or low levels of metropolisation. Metropolisation, however, centralises and, hence, intensifies the competition. As described above, in highly metropolised countries all or almost all relevant institutions related to the allocation of sources of power and wealth are concentrated in the primate capital city. At the same time, the peripheral regions are – by definition – very likely to be scarcely urbanised[43] and, hence, likely to be poorer and highly dependent on support from the central government. This has several very important implications. Secession (the objective of territorial conflict) as a means to improving one's well-being is not a viable option for socio-regional groups in metropolised countries. Given the likely high levels of poverty, the lack of economic urban centres, and, hence, a potential capital, peripheral regions in metropolised countries are unlikely to be self-sufficient independently. Instead, in order to achieve betterment, socio-regional group have to control the government and its allocative institutions, so that they can favour themselves and their regions, also known as ethnic favouritism or regionalism[44]. Importantly, given that all socio-regional groups aim for the same goal – governmental control (through control of the capital) – and that this goal has especially high stakes in a metropolised country, it is very likely that this particularly fierce competition will be contended with violent rather than just peaceful means. Thus, while decreasing the risk for territorial conflict, metropolisation increases the motivation and hence the likelihood of governmental conflict in particular and therefore civil war in general.

Before moving to the next mechanism and supportive case study evidence, we have to address two factors that might trouble this particular theoretical mechanism. I assumed that

once regional groups conquer and control the capital, they have access to the country's main resources, or at least the institutions that allocate these resources. Yet, is this actually true? For one, foreign aid has been a vital resource for most African countries. However, international donors might not recognize governments that have gained or defended state control by force, hence, deny them aid and eventually make state control less attractive. Second, natural resources are often a key income for states in Africa, yet, are rarely located in the capital region.

I will first address the concern regarding foreign aid. For most part of the 20th century international recognition was arguably not a major issue for rebels. In fact, as Herbst[45] describes in some detail, both the Organisation of African Unity (OAU) and the international community kept the de facto rule that the legitimate government of country is the one that controls the capital – independent of whether they actually control the whole territory or were perceived as legitimate by their own people. Essentially, the attractiveness of controlling the capital was particular high during that time, thus, strengthening the proposed mechanism. Moreover, accession and clinging to power through means of force was the norm in Africa. Except for the initial independence presidents, regime changes almost never occurred through legal means before 1990. This, however, had never stopped donors to support them with substantive aid (Mobutu and Kabila in DRC are obvious examples).

A significant turning point, however, might be the establishment of the African Union (AU) in 2002. The AU has a clear stance that it does not accept coup d'états or any other violent deposition of a democratically elected regime[46]. While arguably this has not yet prevented many rebels from trying to ascertain governmental control – see the recent examples of Mali, the Central African Republic, or Guinea Bissau – the clear rejection of these regime changes by the AU is likely to discourage rebels in the future. Hence, the paper's key mechanism

might – and hopefully will – lose in importance in the future. Nevertheless, the AU's charter does not explicitly reject violent regime-change when the regime was not democratically legitimated. Particularly in Africa this might still leave some leeway for government control seeking rebels. Moreover, as this development is rather young, it does not inhibit the theoretical model's explanatory power for the time frame considered in this paper.

Now to the concerns regarding natural resources. One could argue that even though a country is metropolised, controlling the capital does not imply the control of all relevant resources, if there are resources located in regions not controlled by the state. In these cases, despite metropolisation, we could expect socio-regional groups to be a) less interested in the control of the capital as it might not give them control of the country's natural resources and b) more interested in seceding their territory if they are not in power and it has natural resources, since independence is now feasible. While these arguments seem logical, empirically there is not much to support them. African countries we might typically think about in this regard, such as Sudan (and the South) as well as Nigeria (and the Niger Delta), both have below average levels of metropolisation. So the fact that they have resources in peripheral urbanised regions only strengthens the assumption that peripheral groups will want to secede rather than strive for governmental control in low-metropolised countries. Moreover, the case of South Sudan shows that we should not imprudently overestimate the importance of natural resources: the Christian and Animist based rebel groups of South Sudan started their fight for secession from the north ten years before the first oil fields were actually discovered in the South in 1972.

Congo and Sierra Leone are two highly metropolised cases which further defuse the assumed limitations a bit. In Sierra Leone, Foday Sankoh's Revolutionary United Front controlled the country's main diamond fields located in the East, yet never aimed to secede the territory.

Rather, as would be predicted by our model, all conflict parties strived for the control of the capital, Freetown. The case of Congo further shows that our proposed mechanism does not necessarily become ineffective when resources are outside of a social groups own region and the capital. The main oil wealth of the country lies offshore before the second largest city Pointe Noire in the west of the country, dominated by the Kikongo ethnicity. Yet, the Kikongo never tried to secede this territory but always strived for control of Brazzaville. The importance of the capital Brazzaville – despite the fact that Point-Noire is also relevant – can be seen by the fact that when the main battles against Sassou-Nguesso and his Mbochi Cobra Militias were fought and lost by the Kikongo in Brazzaville, Pointe-Noire fell to Sassou-Nguesso's Cobra militias without resistance two days later. While some parts in the Pool region (dominated by the Teke Ninja militias) were still not under the total control of the government, the most important parts and cities of Congo fell to the rebels the moment they conquered the capital. Generally, while they might not be extraction sites of natural resources, primate cities in metropolised countries are a valuable resource themselves. The reason for their existence is often a geographically and economically valuable location, such on a river (Brazzaville at the Congo River), a bay or a coastal peninsula (such as Freetown)

Nevertheless, countries facing territorial conflict despite high levels of metropolisation exist. Natural resources, among other factors, certainly play a role. Senegal and the Casamance region comes to mind. This southern region is dominated by a Senegalese minority ethnicity (the Diola), is very fertile, has a viable urban centre with coastal Zuiguinchor, and importantly, is geographically separated from the rest of the country by Gambia. In this particular case, this variety of factors seems to make territorial rather than governmental conflict more feasible. Hence, I conclude that natural resources and other factors such as history, external actors, and the geographic conditions naturally play an important intervening or mediating

role for the relationship between metropolisation and civil war. By and large, however, they do not seem to distort the proposed mechanism to an extent that would fundamentally question its explanatory power.

Metropolisation and the Feasibility of Civil War

The second main mechanism linking metropolisation to civil war is related to feasibility. What often makes conflict unfeasible and stops individuals to collectively mobilise their motivation into rebellion is the well-known collective action problem[47] or the 'Rebel's Dilemma' as Lichbach[48] terms it. The Rebel's Dilemma states that it is very difficult to start and mobilise a rebellion because of the high incentive for individuals to try to 'free ride' on the eventual benefits of rebellion while avoiding the large (opportunity) costs of rebelling[49].

In his paper on 'Rethinking Rationality and Rebellion', Lichbach[50] identifies several solutions to the Rebel's Dilemma, two of them being 'lower costs' and 'increasing the probability of winning'. I argue that metropolisation can facilitate both these solutions. As mentioned above, high opportunity costs – such as leaving one's family or safe income from employment – disincentivise rebellion. In highly metropolised countries, however, participation costs are low for many potential dissidents. Henderson[51], based on a UN city dataset, shows that demographic primacy in a country increases child mortality, pupil-teacher ratios, use of non-potable water, and other grievances in both the primate city itself but also the periphery. In addition, Bronger[52] argues that primate cities are marked by 'increasing un- and underemployment, expansion of slum- and squatter areas together with the marginalisation of their inhabitants'. This assessment by Bronger is sustained by the UN-Habitat's[53] estimates that the highest poverty rate in the world prevails in metropolitan regions in sub-Saharan Africa, with over 60 per cent of its urban population living in slums, excluded from any form of socio-economic development. Hence, due to strong deprivation, both in the primate city

and in the periphery, highly metropolised countries have a great number of unemployed or low-income workers that face very low opportunity costs of participating in uprisings or rebellions. That is, it is easier for the leaders of socio-regional groups to find coethnics willing to fight for their cause.

Lichbach also describes that potential dissidents will rebel if they become convinced that collective dissent will likely achieve the 'public good' they seek. As argued above, in a metropolised country this public good is likely to be governmental control. To obtain it, rebels have to conquer the main seats of political, economic, and social power. In countries with low levels of metropolisation, such as Nigeria, rebels are more likely to have to conquer many cities in order to control the most relevant parts and institutions of the countries. In countries with high metropolisation, however, rebels would "only" have to conquer the primate city to attain their goal. As a consequence, potential dissidents might perceive the probability of winning as higher and are therefore more willing to join the rebellion, hereby overcoming the Rebel's Dilemma. And in fact, their perception might be right as our above-mentioned Congo example demonstrates. When Brazzaville fell to Sassou-Nguesso in October 1997, the country's only other relevant city – the coastal city and oil hub Pointe-Noire – also fell to his forces without resistance. Essentially, Brazzaville was the passe-partout to gaining control of all other important sites of the country. Concluding, metropolisation thus not only increases the motivation for civil war but also its feasibility.

Case Study Evidence from Congo and other African Countries

As mentioned above, there is substantial case study evidence from Africa supporting the theoretical model. Congo is one such case. With over 42% of the country's urban population living in the capital Brazzaville, Congo can be considered a highly metropolised country. After a move to multi party democracy in the early 1990s, the central African country has

seen a range of high-intensity armed conflicts over the control of government between the country's three main political leaders and their respective militias representing Congo's three main regional-based ethnicities. First, former and current President Sassou-Nguesso and his Cobra Militia from the Mbochi ethnicity, which stems from the sparsely populated and drier northern region of Congo. Second, former president Lissouba and his Coyote militia from Congo's largest ethnicity, the Kikongo, which primarily inhabit the southwestern part of the country. Finally, former prime minister Kolelas and his Ninja militia from the Teke ethnicity, which dominate the country's central "Pool" region surrounding Brazzaville. Supporting the feasibility argument, the militias were mainly recruited from young unemployed men from Brazzaville belonging to the respective ethnicities[54].

What is of central importance here is that none of the three ethno-regional groups, although rather clearly segregated geographically, ever tried to secede its territory. Obviously, as the Teke live mainly around and in the capital it would not make a lot of sense for them to secede. Yet, this argument should not hold true for the two other ethnicities. The example of the Mbochi ethnicity led by President Sassou-Nguesso, however, illustrates why they always strived for governmental control. As mentioned above, the Mbochi's northern home region is very sparsely populated, has no relevant cities (the largest had only 23,000 inhabitants in 2014 – compared to over 1.3 million inhabitants in Brazzaville), no mentionable natural resources and is rather arid. In short, seceding this poor region is an extremely unattractive target. Controlling the capital and hence the country's wealth allocating institutions, on the other hand, is a much more promising and rewarding target. In line with this, Mbochi elites putsched themselves to power and largely favoured their region and people for over 14 years[55]. Their rule was interrupted in 1992 by a short period of democracy and Kikongo rule (under Lissouba). Yet, former president and Mbochi leader Sassou-Nguesso had not given

up his objective of governmental control, and shortly before the 1997 presidential elections fighting broke out in Brazzaville between the countries three main ethnicities. After four month of civil war, aided militarily by the Angolans and financially by the French, Sassou-Nguesso had won back Brazzaville and with it governmental control of most of the country. Confirming our theoretical model, favouritism for the northern Mbochi dominated region returned to its high pre 1992 levels.

Similar patterns can be found in many other highly metropolised countries in Africa. The recent civil war in the Central African Republic is such a case. Rather than wanting to secede their sparsely populated, dry, barely urbanized and, hence, poor northern region, the Seleka rebels – claiming to fight for the country's Muslim minority – attacked and conquered the primate city Bangui in 2013. Importantly, this case shows that it is irrelevant whether the conflict emerges directly in the capital or – as in the Central African Republic – in the periphery. The key is that although their fight was confined to the northern territory for a long time, the Seleka rebels always clearly articulated their objective of governmental control. Similarly, the Muslim Ivorians (lead by Alassane Ouattara) which dominate the less urbanised and poorer north of the Ivory Coast always aimed for governmental control rather than secession. Further examples among many are the highly metropolised countries Djibouti, Liberia, Uganda or Togo in which peripheral ethnicities always strived for (access to) governmental control rather than territorial control.

On the other side of the coin, in countries with below average levels of metropolisation – such as Sudan, Ethiopia, or Nigeria – we more often see social groups trying to secede. Given low metropolisation, it is more likely that peripheral social groups have their own large cities and, hence, territories which could survive independently. As a consequence, territorial secession is often a more promising path to increasing one’s power and regional well-being

than trying to conquer the less important capital. In the case of Ethiopia for example, both the Eritrean and Djiboutian ethno-regional groups strived for independence. The respective regional urbanization surely played a central role. With large port cities as Asmara (649,000 inhabitants) and Djibouti (ca. 600,000 inhabitants) as potential capitals, the regions' social groups knew that they could survive as independent states, in fact, be better off. The same is true for the South Sudanese and Juba (obviously the location of oil in the South added to the viability of independence) and northern and southeastern secessionist movements in Nigeria. Even in Europe we find examples for this. In Spain both the Catalans and the Basques have strong regional capitals with Barcelona and Bilbao and hence, rather than investing their resources into controlling political power in Madrid, aim for more autonomy and independence.

Finally, what does this imply for civil war onset in general, that is, the aggregate of the two? Since governmental conflict onset is more likely in highly metropolised countries while territorial conflict onset is less likely, we might assume that the two would simply balance each other out, thus, leaving the overall likelihood of civil war unchanged. This assumption, however, is fallacious. As argued above, regional groups in metropolised countries are much more likely to be in (violent) conflict with each other, since they all have to control the capital to ensure their well-being. Regional groups in non-metropolised countries, however, do not necessarily want to fight for secession. Perhaps, their status-quo is already a de-facto autonomy, and fighting for secession is redundant. Moreover, the central government could solve potential conflicts much easier by granting de-jure autonomy or pursuing decentralisation reforms[56]. Hence, overall we would expect metropolisation's governmental conflict enhancing effect to be stronger than its territorial conflict reducing effect. Following the detailed discussions above, I propose two main hypotheses:

H1: The higher the level of metropolisation in a country, the more likely is governmental conflict onset.

H2: The higher the level of metropolisation in a country, the more likely is the risk of civil war onset in general.

Research Design

To triangulate the case study evidence provided above, I compare 51 African states from 1961 to 2010[57] using quantitative methods. The period chosen for the analysis is primarily bound to the availability of metropolisation data[58]. The unit of analysis for this panel design is the country-year. In total, the dataset consists of exactly 2,353 country-years. The statistical analysis is conducted in Stata 12.

Dependent Variables

For the operationalisation of my conflict variables, I rely on conflict data from the UCDP/PRIO Onset of Intrastate Armed Conflict dataset[59], which is a country-year version of the UCDP/PRIO Armed Conflict Dataset[60]. The latest release of this dataset includes every violent conflict between a state government and an organised opposition group that caused at least 25 annual battle-deaths between 1946 and 2011. Since this survey is mainly concerned with the risk – not duration, end, or severity – of civil war, only the conflict outbreaks are coded as conflict onsets and following conflict years are dropped from the analysis. However, in cases of discontinuous events, that is, if a conflict falls below the threshold of 25 deaths for at least two years and then resumes with the same parties and over the same incompatibility, I code the conflict as a separate conflict onset.

What is beneficial to this study is that the UCDP/PRIO dataset has classified all conflicts as concerning either territorial or governmental issues. This allows me to test assumption that the relationship between metropolisation and civil war onset is caused by the increase in governmental conflict rather than territorial conflict. Accordingly, I will include three dependent variables – civil war onset, governmental conflict onset, and territorial conflict onset – which are all coded dichotomously: 1 for the onset of conflict and 0 for peace years. Consequently, I calculate three logit regression models, which account for the binary conflict variables.

Explanatory Variable

Metropolisation is measured with the World Bank[61] indicator 'Population living in the largest city (per cent of urban population)'. The data is available for the period 1961-2010. Metropolisation, or rather urban primacy, is often measured through a standard rank-size measure, that is, in terms of the relative size of the largest to the second largest city. I argue, however, that using this operationalisation of metropolisation is not feasible, necessary, and most importantly not valid for our theoretical model. For one, data availability is surprisingly poor. There are two main data sets from the UN[62] that list city sizes over a range of time. However, their population size threshold for a city to be included is so high that they exclude a large part of African countries' largest and second largest cities. Moreover, their often very short time coverage is largely insufficient for our evaluation period from 1960 to 2010.

The good news is that metropolisation as I measure it and the rank-size measure seem to correlate very highly. Using the data sources above I created a cross-sectional dataset (see Annex) of all African countries including their rank-size measure at the point of their last

census. For countries the UN sources did not cover, I had to relied on the estimates proposed by Wikipedia and cross-checked these to the best of my knowledge with other online sources. Fortunately, yet not surprisingly, metropolisation and rank-size correlate very highly at 0.7.

Finally and importantly, I would argue that metropolisation itself is a more valid measure than rank-size for the key motivational measure discussed above. What we can see from the table in the Annex is that all countries with above-average levels of metropolisation have primate cities (in terms of rank-size, cities which are at least twice as large as the second largest city) and functional primacy, yet, not all countries with primate cities have high metropolisation (which is the reason why we do not have perfect collinearity between the two measures) and functional primacy. Lagos for example is two and half times as large as the second largest city in Nigeria, yet – given the very low metropolisation level of 12.48% - the country is relatively decentralised and the political capital is in Abuja. Ethiopia is one of these few cases that run counter to the high correlation of metropolisation and rank-size. While only 23% (the African average is 38%) of its urban population lived in the capital, Addis Ababa, its rank-size is in the highest quintile of all African cases. That is, Addis Ababa is over seven times more populated than the second largest city Mekele. Just looking at the rank-size measurement, we would think that there is only one important city in Ethiopia: Addis Ababa. In fact, however, we see that all regions in Ethiopia have relatively large and important cities (all with at least 200.000 inhabitants). While the high rank-size measure fails to capture this pattern, the low metropolisation level fares much better. And as mentioned above, this pattern is crucial for our theoretical model. In such non-metropolised contexts regional social groups have a larger incentive to secede their territory – as seen with the for-

mer Ethiopian regions Eritrea and Djibouti – or at least ask for more decentralisation and autonomy.

Control Variables

Based on James Lee Ray's[63] strategy and criteria for the careful use of control variables, I include several control variables which are theoretically both correlated with civil war and metropolisation, and their exclusion would therefore lead to omitted variable bias. The first variable I control for is the level of urbanisation, measured as the percentage of a country's population living in cities. As elaborated in the second part of this paper, urbanisation might be positively or negatively correlated with civil war. At the same time, Mutlu[64] finds that the greater the size of the urban population in a polity is, the less likely is urban primacy. Therefore, urbanisation might be a confounding variable. The data is provided by the World Bank[65]. Collinearity, however, should not be an issue (the same is true for all control variables), since metropolisation and urbanisation correlate negatively at a very low -0.08

Country size and population density are two further variables which have been found to determine both civil war[66] and metropolisation[67]. Therefore, I include a log-transformed variable of country size as well as population density, which is calculated based on population and country size data from the World Bank[68].

One of the most robust findings in the quantitative conflict literature is that countries with low levels of development, proxied by GDP per capita, have an exceptionally high risk of civil war[69]. Similarly, demographers have found that low per capita incomes increase the likelihood of metropolisation[70]. Thus, finding a positive association between metropolisation and armed conflict might just be a spurious correlation due to the omission of the level of

development. To control for this, I include the logarithm of GDP per capita at constant prices, drawn from the Penn World Table[71].

One of the most investigated potential determinants of civil war is ethnic fractionalisation. Although findings on whether ethnic fractionalisation is significantly correlated with conflict are ambiguous[72], I believe controlling for it is essential, as interestingly ethnic fractionalisation is also found by Mutlu[73] to be negatively associated with high metropolisation. The variable I include is based on Fearon's[74] update of the ethno-linguistic fractionalisation index (ELF). The ELF takes on values between 0 and 1 and indicates the probability of two randomly drawn persons in a country belonging to different ethnic groups, one being the highest probability.

Rough terrain might also be a cause of spurious correlation. On the one hand, rough terrain might force urbanisation to be concentrated to few locations and thus cause metropolisation[75]. On the other, especially Fearon and Laitin[76] argue that insurgency is favoured by rough terrain. To control that it is not rough terrain but actually metropolisation that increases the risk of conflict onset, I include Fearon and Laitin's[77] rough terrain variable, which denotes the proportion of the country that is 'mountainous'.

Finally, civil wars cluster in space as well as in time[78]. To account for spatial dependence, that is, that a conflict diffuses to a neighbouring country I include a dummy variable, which is coded 0 when all neighbouring countries are peaceful and 1 if one or more neighbouring countries faces civil war. Moreover, panel data is very likely to suffer from serial dependence in that the conflict status of a country-year is related to its status in the previous year[79]. In this study, the problem is dealt by coding only the onset of conflict as '1' rather than all years and thus dropping consecutive years of conflict from the analysis. However, this does

not solve the problem for temporal correlation entirely because periods of peace (coded as '0') will still be correlated over time. I account for this temporal dependency by using the simple yet effective cubic approximation method endorsed by Carter and Signorino[80]. First, I generate a control variable measuring the number of years in peace since the previous conflict, termed peace years. This peace year variable is then included as regressor (t) in the test regression together with its squared and cubed equivalents (t^2 and t^3).

Results

Before moving to the models which include all independent variables, I first present models of conflict onset which are as limited as possible, that is, using simple bivariate logit regressions. These three models are presented in Table 1. Supporting hypotheses one, metropolisation significantly relates positively to governmental. Metropolisation's negative and significant association with territorial conflict onset furthermore confirms our assumption that high levels of metropolisation make territorial conflict more unlikely. The relationship between the aggregate of the two, civil war, and metropolisation is positive as expected, yet, not significant. This appears to oppose our second hypothesis. In fact, the simple bivariate regression models seem to imply that the opposed relationships between metropolisation and the two conflict types neutralise one another once aggregated.

Table 1. Simple Bivariate Logit Regression Models of Civil War Onset, 1961-2010

	Model 1 Civil War Onset	**Model 2** Governmental Conflict Onset	**Model 3** Territorial Conflict Onset
Metropolisation	0.00698	0.0182***	-0.0364**
	(1.08)	(2.60)	(-2.54)
Constant	-3.317***	-4.148***	-3.089***
	(-12.03)	(-12.94)	(-6.49)
Observations	1987	2067	2224

Pseudo R^2	0.002	0.011	0.024

Note: t statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The results of the multivariate logit regression models summarised in Table 2, however, provide broad support for hypotheses one and three. While the negative partial association between territorial conflict and metropolisation becomes insignificant, that of civil war is now positive and significant at the 10%-level. Moreover, holding all other control variables constant, the partial correlation between metropolisation and governmental conflict remains highly significant. Given these results, the evidence does in fact suggest that metropolisation is associated with civil war in general and that this association is mediated by the effect of metropolisation on governmental conflict, rather than through territorial conflict.

Table 2. Multivariate Logit Regression Models of Civil War Onset, 1961-2010

	Model 4 Civil War Onset	**Model 5** Governmental Conflict Onset	**Model 6** Territorial Conflict Onset
Explanatory Variable			
Metropolisation	0.0174*	0.0259***	-0.0148
	(1.95)	(2.65)	(-0.66)
Control Variables			
Urbanisation	0.0145	0.00277	0.0277
	(1.42)	(0.24)	(1.23)
Country size (log)	0.493***	0.316**	1.085***
	(3.57)	(2.16)	(3.08)
Population density	0.00430*	0.00314	0.00659
	(1.87)	(1.22)	(1.30)
GDP per capita (log)	-0.332*	-0.221	-0.398
	(-1.66)	(-0.97)	(-0.98)
Ethnic fractionalisation	0.833	0.688	0.768
	(1.40)	(1.02)	(0.61)
Mountain	0.0183***	0.00492	0.0469***
	(2.97)	(0.65)	(4.37)
Controls for Statistical Dependency			

Neighbour Conflict	0.559**	0.714**	0.185
	(2.13)	(2.34)	(0.37)
Peace years	-0.197***	-0.103	-0.551***
	(-2.97)	(-1.38)	(-3.35)
Peace years^2	0.00988**	0.00502	0.0307**
	(2.33)	(1.09)	(2.57)
Peace years^3	-0.000138*	-0.0000663	-0.000471**
	(-1.96)	(-0.89)	(-2.09)
Constant	-8.667***	-7.578***	-16.24**
	(-3.35)	(-2.74)	(-2.45)
Observations	1897	1891	1894
Pseudo R^2	0.106	0.060	0.343

Note: t statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

This influence of metropolisation on civil war and governmental conflict can be expressed in numbers. For an 'average' country with median values on all independent variables, the probability for governmental conflict onset in any given year is 2.5 per cent. If the level of metropolisation is increased to the 95th percentile (over 65 per cent metropolisation) while maintaining the other variables at their median, the probability of conflict more than doubles to 5.2 per cent. Average countries, however, with a level of metropolisation at the fifth percentile (under 13 per cent metropolisation) face governmental conflict with a probability of only 1.3 per cent. To put this in more understandable terms: a country where at least 65 per cent of the urban population lives in the capital is four times more at risk to have a governmental conflict than a country with less than 13 per cent of the urban population living in the capital. A graphical illustration of this relationship is shown in Figure 2.

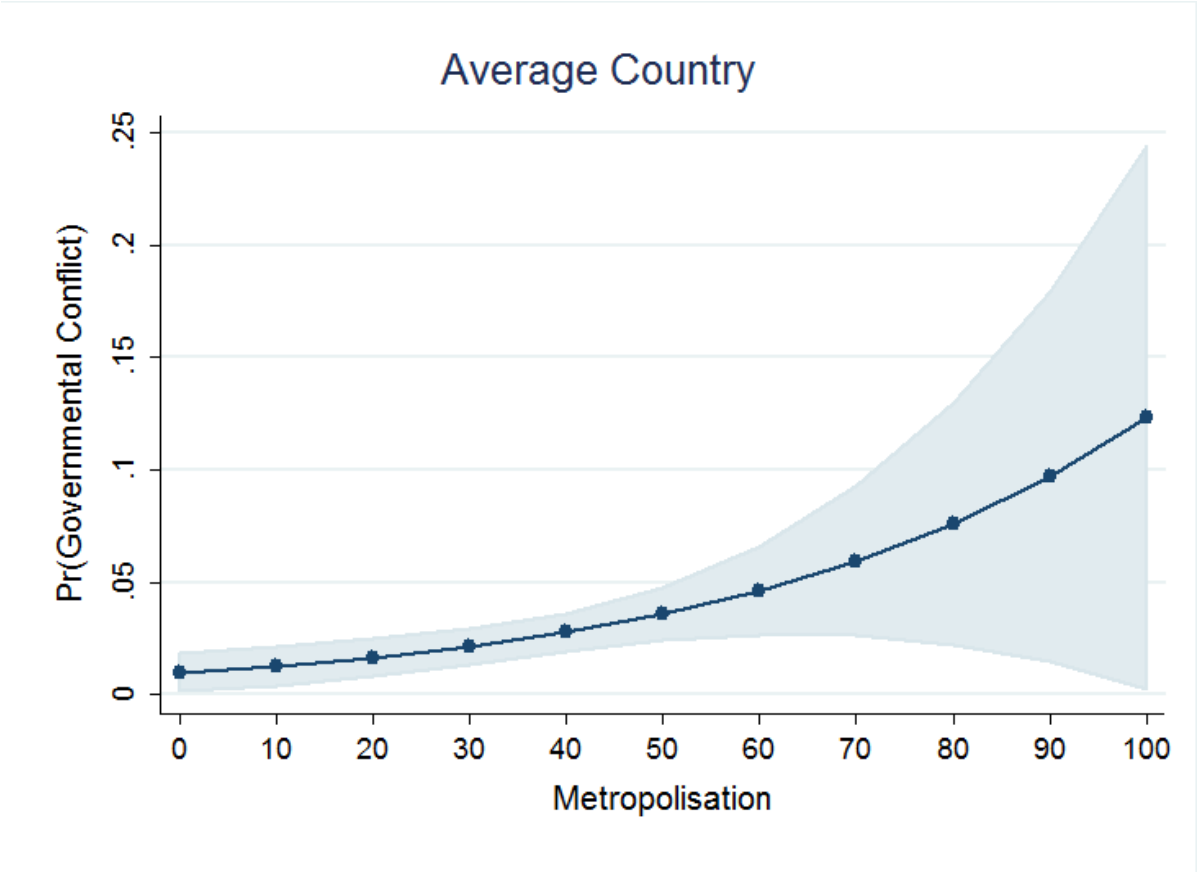

Figure 2: The effect of metropolisation on the probability for governmental conflict in an 'average country.' Note: The graph is simulated on the basis of Model 5, Table 2, with the aid of Stata 12. All control variables are held at their mean values.

For an alternative interpretation of these results, we can visualise how metropolisation affects conflict risk in a hypothetical worst-case scenario country, that is, a country with all significant civil war determinants at their most conflict-prone values. According to the results in Table 2, a worst-case scenario country would have a population density of 216 people per square kilometre or more, a country size of two million square kilometres or greater, a GDP per capita of 403$ or less, a neighbouring country in conflict, and at least 73 per cent of the country covered with mountains. When increasing metropolisation from the fifth to the 95th percentile in a country with all the least favourable characteristics, Model 4 predicts the probability for civil war onset to rise from 44 per cent to 66 per cent. This large change

illustrates the enormous effect metropolisation can have in countries which are already prone to conflict. For a graphical illustration of this relationship, see Figure 3.

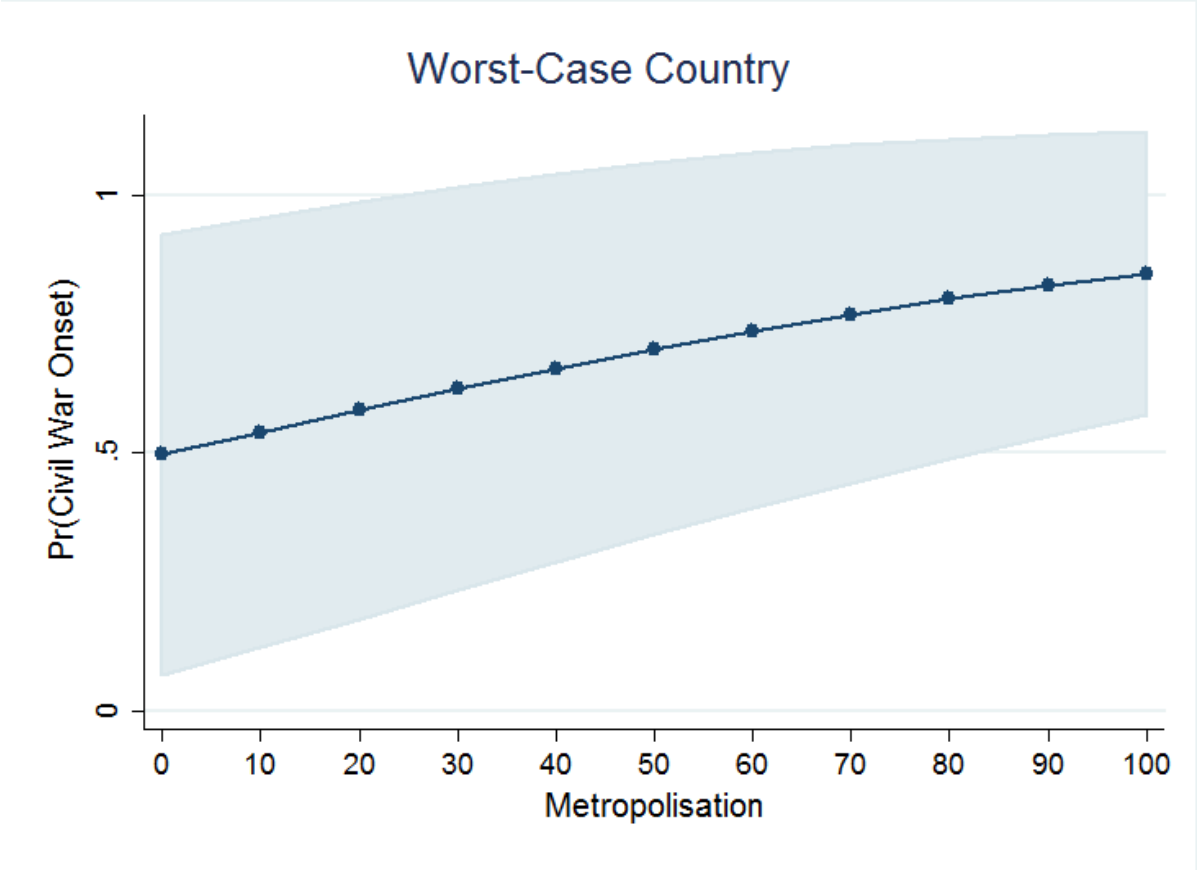

Figure 3: The Effect of Metropolisation on the Probability for Civil War in a 'Worst-Case Country.' Note: The graph is simulated on the basis of Model 4, Table 2, with the aid of Stata 12. All control variables significantly related to civil war are held at their most conflict promoting manifestation.

In conclusion, this analysis has demonstrated that the introduction of the metropolisation variable adds new valuable insights into the correlates of civil war. The results have shown that metropolisation increases the risk of civil war in general and governmental conflict in particular, while not having a significant correlation with territorial conflict. This confirms both hypotheses of this paper, namely that metropolisation increases the risk of civil war and

that this relationship is mediated through the association between metropolisation and governmental conflict. Interestingly, this paper confirms that urbanisation in its broad form has no significant relationship with civil war – even the distinction between governmental and territorial conflict could not add any explanatory power to this variable.

Robustness and Causality Checks

To provide more evidence that the results obtained are generally valid, I conduct a number of robustness checks (the results are presented in Table 3). First, I check whether using a higher casualty threshold alters the results. Therefore, I re-estimate Models 4 and 5, however, replacing the relatively low threshold of 25 battle-deaths per year by 1,000 battle-related deaths per year (respective data is included in the UCDP/PRIO conflict onset dataset). Although the smaller number of conflicts could be expected to lead to larger standard errors and less significant estimates, both civil war and governmental conflict are significantly correlated with metropolisation at the 5%-level and 1%-level respectively.

Second, I try to reduce the risk of omitted variable bias by calculating a conditional (fixed effects) logit regression model, which is grouped at the country level. The conditional logit regression accounts for all country specific variables which are invariant over time. This includes variables such as culture, which are difficult to measure and therefore often omitted, but also variables such as country size, ethnic fractionalisation and rough terrain, which are already included in the model. When using conditional logit regressions, the positive associations between metropolisation and both civil war onset and governmental conflict onset remain significant at the 5%-level.

Table 3. Robustness Checks

	Model 7 1000 Battled Related Threshold		**Model 8** Conditional Logit Regression	
	Civil War Onset	Gov. Conflict Onset	Civil War Onset	Gov. Conflict Onset
Explanatory Variable				
Metropolisation	0.083**	0.126***	0.0418**	0.0471**
	(2.20)	(2.71)	(2.12)	(2.28)
Metropolisation t-1				
Control Variables				
Urbanisation	-0.025	-0.045	-0.085***	-0.093***
	(-0.81)	(-1.32)	(-3.31)	(-3.51)
Country size (log)	3.019***	3.352***	0.018**	0.021**
	(3.69)	(3.26)	(2.38)	(2.49)
Population density	0.031***	0.037***	-0.099	-0.046
	(3.52)	(3.51)	(-0.21)	(-0.09)
GDP p.c. (log)	1.386**	1.883***	-15.92*	-21.33*
	(2.22)	(2.64)	(-1.74)	(-1.85)
Ethnic fraction.	4.245**	4.868**	-0.085***	-0.093***
	(2.02)	(2.05)	(-3.31)	(-3.51)
Mountain	0.064***	0.043**	0.0188**	0.0211**
	(3.72)	(2.09)	(2.38)	(2.49)
Controls for Statistical Dependency				
Neighb. Conflict	0.695	1.897	1.087***	0.764**
	(0.96)	(1.55)	(3.17)	(1.97)
Peace years	-0.68***	-0.524*	0.0469	0.0894
	(-2.61)	(-1.95)	(0.56)	(0.95)
Peace years^2	0.045*	0.034	-0.00424	-0.00569
	(1.92)	(1.51)	(-0.77)	(-0.94)
Peace years^3	-0.0008	-0.0006	0.000157	0.000168
	(-1.52)	(-1.22)	(1.58)	(1.58)
Constant	-61.5***	-72.7***		
	(-3.81)	(-3.60)		
Observations	1825	1893	1497	1360
Pseudo R^2	0.441	0.346	0.094	0.097

Note: t statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Third, I want to test for causality. Research by Beall et al.[81] has shown that 'cities can sometimes serve as places of refuge or relative security during conflict'. Therefore, it might be that not metropolisation causes civil war but the other way around, since the population from other cities might seek refuge in the capital and thus increase the countries degree of metropolisation. In fact, Liberia gives some evidence for this 'eye of the storm' hypothesis[82]: before the re-eruption of governmental conflict in 2000 the level of metropolisation actually decreased (from 58 per cent in 1998 to 51 per cent in 1997), while during the first conflict year and afterwards it increased rapidly (first to 54 per cent in 2000 and then 57 per cent in 2001). Of course, it has to be noted that the pre-conflict metropolisation level of 51 per cent was already extremely high and therefore consistent with the paper's hypotheses. Nevertheless, by lagging the metropolisation variable by one, two, three, five and ten years, I intent to account for this potential endogeneity problem. In all models the association between governmental conflict onset and metropolisation remains strong and highly significant. Table 4 presents the models including the one, two, and ten year lags. This provides strong evidence that the above found results are not flawed by reversed causation. Finally, identifying and omitting potential outliers with the Cook's D method does not change the findings' validity either.

Table 4. Causality Checks: Lagging of Metropolisation by One to Ten Years

	Model 9 Lagged t-1		**Model 10** Lagged t-2		**Model 11** Lagged t-10	
	Civil War Onset	Gov. Conflict Onset	Civil War Onset	Gov. Conflict Onset	Civil War Onset	Gov. Conflict Onset
Explanatory Variable						
Metropolisation	0.0161*	0.0258***	0.0149*	0.0247***	0.0190**	0.0284***
	(1.83)	(2.67)	(1.70)	(2.58)	(1.98)	(2.72)
Control Variables						

Urbanization	0.0143	0.00543	0.0114	0.00328	0.0154	0.0105
	(1.40)	(0.48)	(1.11)	(0.29)	(1.27)	(0.78)
Country size (log)	0.483***	0.315**	0.459***	0.296**	0.454***	0.303*
	(3.46)	(2.13)	(3.29)	(2.00)	(2.91)	(1.80)
Population density	0.00347	0.00285	0.00299	0.00246	0.00153	0.00158
	(1.46)	(1.06)	(1.24)	(0.91)	(0.57)	(0.51)
Ethnic fraction.	0.618	0.416	0.569	0.383	0.280	0.295
	(1.02)	(0.61)	(0.93)	(0.56)	(0.40)	(0.37)
Mountain	0.0186***	0.00479	0.0181***	0.00445	0.0203***	0.00728
	(2.97)	(0.62)	(2.87)	(0.57)	(2.84)	(0.80)
GDP p.c.	-0.00017*	-0.00015	-0.0001*	-0.00014	-0.0002*	-0.0001
	(-1.81)	(-1.44)	(-1.71)	(-1.37)	(-1.91)	(-1.58)
Controls for Statistical Dependency						
Neighbor Conflict	0.558**	0.802**	0.513*	0.773**	0.444	0.692*
	(2.09)	(2.51)	(1.91)	(2.41)	(1.49)	(1.94)
Peace years	-0.240***	-0.113	-0.263***	-0.133*	-0.262***	-0.124
	(-3.53)	(-1.48)	(-3.82)	(-1.71)	(-3.58)	(-1.48)
Peace years²	0.0123***	0.00582	0.0134***	0.00674	0.0132***	0.00624
	(2.86)	(1.24)	(3.08)	(1.43)	(2.86)	(1.25)
Peace years³	-0.00017**	-0.00007	-0.0001**	-0.00008	-0.0001**	-0.00008
	(-2.39)	(-1.02)	(-2.56)	(-1.18)	(-2.37)	(-1.03)
Constant	-10.21***	-8.805***	-9.581***	-8.299***	-9.405***	-8.603***
	(-4.73)	(-3.84)	(-4.43)	(-3.63)	(-3.83)	(-3.22)
Observations	1866	1860	1823	1817	1488	1482
Pseudo R^2	0.112	0.067	0.115	0.067	0.125	0.073

Note: t statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Conclusion

Urbanisation is arguably one of the central demographic and socio-economic trends of our time. It is inextricably linked with economic growth and social development. While governments seem to be relatively unified in the assumption that urbanisation is harmful and therefore implement policies to curb urban growth rates, the literature is divided on this topic: case studies have largely described urbanisation as a factor promoting conflict and civil war, while the vast majority of quantitative studies has found either the opposite or no significant relationship at all.

In this paper, I claimed that these contradictions are due to a conceptual and operational over-aggregation of urbanisation, which neglected the importance of how urbanisation distributes throughout a country. I argued that high metropolisation, that is, the concentration of a country's urbanisation in the capital, could increase the risk of civil war for one main reason: high metropolisation increases both the motivation for and the feasibility of rebellion. High levels of metropolisation imply that most sources of wealth and power are located in the country's capital, and that peripheral regions are likely to be sparsely urbanised and therefore poor. Hence, in order to secure their wellbeing, all socio-regional groups will want to control the capital and the state apparatus (the objective of governmental conflict), rather than seceding their unviable regions (the objective of territorial conflict). This intense conflict of interests over governmental control makes the use of violence more likely and, thus, increases the overall likelihood of civil war. On the other hand, high levels of metropolisation make conflicts both militarily and financially feasible as only the largest city has to be conquered to control the state and recruitment costs are low due to the widespread poverty and unemployment that typically prevail in metropolised late developing countries.

To empirically test these assumptions, I first analysed case study evidence and then used a cross-national time-series design comparing 51 African states from 1961 to 2010. The results largely confirmed the hypothesis: metropolisation is significantly and robustly associated with civil war in general and governmental conflict in particular. Territorial conflict is negatively, yet, not significantly correlated with higher levels of metropolisation. As expected, urbanisation in its broad sense has no significant correlation with civil war – neither with territorial nor with governmental conflict. In terms of policy recommendation, these findings do not support the perception of state officials that urbanisation is generally harmful. However, they stress that metropolisation can indeed increase the likelihood of civil war. There-

fore, a possible recommendation could be the creation of political institutions that encourage peaceful political bargaining and accommodation at the centre[83] or try to reduce metropolisation by promoting decentralisation policies[84].

While the study's findings provide new insights, they are definitely not the end of the story. The quality of urbanisation data and especially the cross-national design severely restricted this study. The general problem with studies using states as units of analysis is that they ignore intrastate variation[85]. I tried to mitigate this problem by approximating the local variation of urbanisation in a country through metropolisation. However, while metropolisation can denote how urbanisation is concentrated in the capital in contrast to the rest of the country, it does not indicate *where exactly* urbanisation occurs in the *remaining* parts and how this to relates to other factors, such as natural resources. Hegre and Raleigh[86] as well as Buhaug and Rod[87] showed in their geographically disaggregated studies that location and environment of cities matter. Therefore, I agree with Buhaug and Urdal[88] that using geographically disaggregated analyses or preferably two-level analysis as suggested by Weidmann[89] – combining both aggregated and disaggregated levels – is necessary to substantially validate the results obtained above and to advance the research field. Concluding, this study provides support for previous quantitative studies that indeed urbanisation in its broad sense does not seem to influence the risk of civil war. However, the significant relationship between metropolisation and civil war shows that, in fact, demographics can be dangerous and should therefore be considered more closely in policy and in research.

Acknowledgments

I am very grateful to Nils Weidmann and Katharina Holzinger for their excellent comments and guidance in writing this paper.

Biographical Description

Nicolai Schulz is a PhD student in Development Studies at the London School of Economics and Political Science (LSE). He holds a MSc in Development Studies from LSE and a BA in Politics and Public Administration from the University of Konstanz. His main research interests are related to political settlements and their implications for economic and social development, civil wars and political violence, as well as post-conflict state-building.

Bibliography

---

[1] UN-Habitat, *State of the World's Cities 2008/2009*: *Harmonious Cities* (London: Earthscan 2008) p.10
[2] UN-Habitat, *State of the World's Cities 2010/11*: *Bridging the Urban Divide* (London: Earthscan 2010)
[3] Kofi Annan, *Inaugural Address to Urban 21*: *Global Conference on the Urban Future* (Berlin 2000)
[4] UN-Habitat, *Slum Dwellers to Double by 2030*: *Millennium Development Goal Could Fall Short* (Nairobi, Kenya 2007) p.1
[5] UN-DESA, *World Urbanization Prospects*: *The 2007 Revision* (New York: United Nations Publication 2008) p.12
[6] Colin H. Kahl, *States, Scarcity, and Civil Strife in the Developing World* (Princeton, NJ and Oxford: Princeton University Press 2006)
[7] Gudrun Østby, Henrik Urdal, Zulfan Tadjoeddin, S. Mansoob Murshed and Håvard Strand, 'Population Pressure, Horizontal Inequalities and Political Violence: A Disaggregated Study of Indonesian Provinces, 1990-2003', *Journal of Development Studies* 47/3 (2011)
[8] Sabri Sayari and Bruce Hoffman, *Urbanization and Insurgency*: *The Turkish Case, 1976-1980* (Santa Monica, CA: RAND 1991)
[9] Henrik Urdal, 'People vs Malthus: Population Pressure, Environmental Degradation and Armed Conflict Revisited', *Journal of Peace Research* 41/4 (2005); Henrik Urdal and Kristian Hoelscher, 'Explaining Urban Social Disorder and Violence: An Empirical Study of Event Data from Asian and Sub-Saharan African Cities', *International Interactions* 38/4 (2012); Halvard Buhaug and Henrik Urdal, 'An Urbanization Bomb?: Population Growth and Social Disorder in Cities', *Global Environmental Change* 23/1 (2012)
[10] Mark Jefferson, 'The Law of the Primate City', *Geographical Review* 29 (1939)
[11] Mancur Olson, *The Logic of Collective Action*: *Public Goods and the Theory of Groups* (Cambridge, Mass: Harvard University Press 1965)
[12] Mark Lichbach, 'Rethinking Rationality and Rebellion: Theories of Collective Action and Problems of Collective Dissent', *Rationality and Society* 6/1 (1994)
[13] Paul R. Ehrlich, *The Population Bomb* (New York: Ballantine Books 1968)
[14] Malthusianism refers to the socio-economic thought of Thomas Malthus (1766-1834). Malthus believed that arithmetically growing food production could not keep up with the exponentially growing population and

would thus cause extreme poverty. Neo-Malthusians share the same concerns, but are more concerned with environmental degradation and catastrophic famine than Malthus was.
[15] Thomas Homer-Dixon and Jessica Blitt, *Ecoviolence*: *Links among Environment, Population and Security* (Lanham, MD: Rowman & Littlefield 1998); Thomas Homer-Dixon and Peter Gizewski, *Urban Growth and Violence: Will the Future Resemble the Past?* (Washington D.C. 1995)
[16] Jack A. Goldstone, *Revolution and Rebellion in the Early Modern World* (Berkeley/Los Angeles, CA: University of California Press 1991)
[17] Hans-Dieter Evers, 'Urbanization and Urban Conflict in Southeast Asia', *Asian Survey* 15/9 (1975)
[18] Valerie Percival and Thomas Homer-Dixon, 'Environmental Scarcity and Violent Conflict: The Case of Rwanda', *Journal of Environment and Development* 5/3 (1996); Valerie Percival and Thomas Homer-Dixon, 'Environmental Scarcity and Violent Conflict: The Case of South Africa', *Journal of Peace Research* 35/3 (1998)
[19] Colin H. Kahl, *States, Scarcity, and Civil Strife in the Developing World* (Princeton, NJ and Oxford: Princeton University Press 2006)
[20] Caroline O. N. Moser and Dennis Rodgers, *Change, Violence and Insecurity in Non-Conflict Situations* (London: Overseas Development Institute 2005)
[21] Samuel P. Huntington, *The Clash of Civilizations and the Remaking of World Order* (New York: Simon & Schuster 1996)
[22] Sayari and Hoffman (note 8)
[23] Richard P. Cincotta, Robert Engelman and Daniele Anastasion, *The Security Demographic*: *Population and Civil Conflict after the Cold War* (Washington, DC: Population Action International 2003)
[24] Monica D. Toft, 'Indivisible Territory, Geographic Concentration, and Ethnic War: Identity, Interests, and the Indivisibility of Territory', *Security Studies* 12/2 (2002)
[25] Nils B. Weidmann, 'Geography as Motivation and Opportunity: Group Concentration and Ethnic Conflict', *Journal of Conflict Resolution* 53/4 (2009)
[26] Juha Auvinen, 'Political Conflict in Less Developed Countries 1981-89', *Journal of Peace Research* 34/2 (1997)
[27] Paul Collier and Anke Hoeffler, 'Greed and Grievance in Civil Wars', *Oxford Economic Papers* 56 (2004) p.570
[28] Urdal (note 9)
[29] Henrik Urdal, 'Population, Resources and Political Violence: A Sub-National Study of India 1956-2002', *Journal of Conflict Resolution* 52/4 (2008)
[30] Halvard Buhaug and Henrik Urdal, 'An Urbanization Bomb?: Population Growth and Social Disorder in Cities', *Global Environmental Change* 23/1 (2012) p.4
[31] Ibid.
[32] Halvard Buhaug and Kristian Skrede Gleditsch, 'Contagion or Confusion? Why Conflicts Cluster in Space', *International Studies Quarterly* 52/2 (2008) p.222
[33] Demographic primacy can be calculated in the following way: if in a fictional country 60 out of 100 inhabitants live in cities then the urban share is 60 per cent. If 30 out of these 60 urban inhabitants live in the largest city of the country then the degree of demographic primacy amounts to 50 per cent.
[34] Bureau Central du Recensement du Cameroun, *Rapport de Presentation des Resultats Definitifs* (2010)
[35] Institut National de la Statistique du Niger, *Le Niger en Chiffres 2011* (2011)
[36] Paul Collier, Anke Hoeffler and Dominic Rohner, 'Beyond greed and grievance: feasibility and civil war', *Oxford Economic Papers* 61/1 (2009)
[37] Collier and Hoeffler (note 27)
[38] Collier, Hoeffler and Rohner (note 36) p.3
[39] David Keen, *Complex Emergencies* (Cambridge: Polity 2008)
[40] Mats Berdal, 'Beyond Greed and Grievance – and Not Too Soon: A Review Essay', *Review of International Studies. 31(4), pp. 687-698.* 31/4 (2005); David Keen, 'Greed and Grievance in Civil War', *International Affairs* 88/4 (2012); Syed Mansoob Murshed, *Explaining Civil War*: *A Rational Choice Approach* (Cheltenham, UK, Northampton, MA: Edward Elgar 2010); Frances Stewart, 'Horizontal inequalities and conflict: an introduction and some hypotheses' in Frances Stewart (ed.) *Horizontal Inequalities and Conflict: Understanding Group Violence in Multiethnic Societies* (New York: Palgrave Macmillan 2008)
[41]Adebayo Adedeji, ed., *Comprehending and Mastering African Conflicts*: *The Search for Sustainable Peace and Good Governance* (London, UK: Zed Books 1999); Jonathan Di John and James Putzel, *Political Settlements* (2009); Karl Marx, *Economic and Philosophic Manuscripts of 1844* (Moscow [first published 1932]:

Progress Publishers 1844); Douglass C. North, John Joseph Wallis, Steven B. Webb and Barry R. Weingast, *Limited Access Orders*: *Rethinking the Problems of Development and Violence* (2009)

[42]Abdul-Gafaru Abdulai and Sam Hickey, *Rethinking the Politics of Development in Africa? How the 'Political Settlement' Shapes Resource Allocation in Ghana* (Manchester, UK 2014); Alberto Alesina, Arnaud Devleeschauwer, William Easterly, Sergio Kurlat and Romain Wacziarg, *Fractionalization* (Cambridge, MA: National Bureau of Economic Research 2003); W. Easterly and R. Levine, 'Africa's Growth Tragedy: Policies and Ethnic Divisions', *The Quarterly Journal of Economics* 112/4 (1997); James D. Fearon, *Why Ethnic Politics and 'Pork' Tend to Go Together* (1999);

[43] J. Vernon Henderson, *The Effects of Urban Concentration on Economic Growth* (Cambridge, MA: National Bureau of Economic Research 2000)

[44]Raphael Franck and Ilia Rainer, 'Does the Leader's Ethnicity Matter?: Ethnic Favoritism, Education, and Health in Sub-Saharan Africa', *American Political Science Review* 106/02 (2012); Gerard Padró I Miquel, 'The Control of Politicians in Divided Societies: The Politics of Fear', *Review of Economic Studies* 74/4 (2007)

[45]Jeffrey Ira Herbst, *States and Power in Africa: Comparative Lessons in Authority and Control* (Princeton, N.J: Princeton University Press 2000) pp.109–11

[46] African Union, *Constitutive Act of the African Union* (Addis Ababa, Ethiopia 2000)

[47] Olson (note 11)

[48] Mark Irving Lichbach, *The Rebel's Dilemma* (Ann Arbor: University of Michigan Press 1995)

[49] Keen (note 39) p.773

[50] Lichbach (note 12) pp.12–3

[51] Vernon Henderson, 'Urban Primacy, External Costs, and Quality of Life', *Resource and Energy Economics* 24/1 (2002)

[52] D. Bronger, 'Metropolization in China?', *GeoJournal* 8/2 (1984) p.137

[53] UN-Habitat, *State of the World's Cities 2010/11*: *Bridging the Urban Divide* (London: Earthscan 2010) p.xiii

[54]Sabine C. Carey, Neil J. Mitchell and Will Lowe, 'States, the Security Sector, and the Monopoly of Violence: A New Database on Pro-Government Militias', *Journal of Peace Research* 50/2 (2013);

[55] Franck and Rainer (note 44)

[56] Stefan Lindemann, *Exclusionary Elite Bargains and Civil War Onset*: *The Case of Uganda* (London, UK 2010)

[57] States that gained their independence after 1961 are observed starting the year of their independence.

[58] It should be noted at this point that the quality of data concerning the African continent is often very poor. Morten Jerven (*Poor Numbers*: *How We Are Misled by African Development Statistics and What to Do about It* (Cornell University Press 2013)) illustrates this in great detail for the case of African GDP data in his recent book in 'Poor Numbers'. Nevertheless, in order to conduct the quantitative analysis that is necessary to answer the research question I have to make the best of this data, as, to my knowledge, there is unfortunately no better data available.

[59] Lotta Themnér and Peter Wallensteen, 'Armed Conflict, 1946-2011', *Journal of Peace Research* 49/4 (2012)

[60] Nils Petter Gleditsch, Peter Wallenstein, Mikael Eriksson, Margareta Sollenberg and Harvard Strand, 'Armed Conflict 1946–2001: A New Dataset', *Journal of Peace Research* 39/5 (2002)

[61] The Bank, 'World Development Indicators' (Washington, D.C. 2012), Available online at <http://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS>

[62] UN-DESA, *World Urbanisation Prospects: The 2014 Revision* (2014); UNSTATS, *Demographic Yearbook: Opulation of Capital Cities and Cities of 100 000 or More Inhabitants: Latest Available Year, 1994 - 2013* (2015)

[63] James Lee Ray, 'Explaining Interstate Conflict and War: What Should Be Controlled for?', *Conflict Management and Peace Science* 20/2 (2003)

[64] Servet Mutlu, 'Urban Concentration and Primacy Revisited: An Analysis and Some Policy Conclusions ,', *Economic Development and Cultural Change* 37/3 (1989)

[65] The World Bank (note 61)

[66] Halvard Buhaug, 'Relative Capability and Rebel Objective in Civil War', *Journal of Peace Research* 43/6 (2006) p.697; Halvard Buhaug and Jan Ketil Rød, 'Local Determinants of African Civil Wars, 1970-2001', *Political Geography* 25/3 (2006) p.323

[67] Surinder K. Mehta, 'Some Demographic and Economic Correlates of Primate Cities: A Case for Revaluation', *Demography* 1/1 (1964); Mutlu (note 64); Kenneth T. Rosen and Mitchel Resnick, 'The Size Distribution of Cities: An Examination of the Pareto Law and Primacy', *Journal of Urban Economics* 8/2 (1980); John

Rennie Short and Luis Mauricio Pinet-Peralta, 'Urban Primacy: Reopening the Debate', *Geography Compass* 3/3 (2009)
[68] The World Bank (note 61)
[69] Collier and Hoeffler (note 34); James D. Fearon and David Laitin, 'Ethnicity, Insurgency, and Civil War', *American Political Science Review* 97/1 (2003); Håvard Hegre and Nicholas Sambanis, 'Sensitivity Analysis of Empirical Results on Civil War Onset', *Journal of Conflict Resolution* 50/4 (2006)
[70] Mutlu (note 64); Rosen and Resnick (note 67); Short and Pinet-Peralta (note 67)
[71] Alan Heston, Robert Summers and Bettina Aten, *Penn World Table Version 7.1* (Nov 2012)
[72] Fearon and Laitin (note 69); Halvard Buhaug, Lars-Erik Cederman and Jan Ketil Rød, 'Disaggregating Ethno-Nationalist Civil Wars: A Dyadic Test of Exclusion Theory', *International Organization* 62/03 (2008); Eric Kaufmann, 'Why Ethnicity is Linked to Civil War: The Case for, and Limits of, Perennialism', *SSRN Electronic Journal* (2010)
[73] Mutlu (note 64)
[74] James D. Fearon, 'Ethnic and Cultural Diversity by Country', *Journal of Economic Growth* 8/2 (2003)
[75] Bronger (note 52) p.138
[76] Fearon and Laitin (note 69) p.76
[77] Ibid.
[78] Buhaug and Gleditsch (note 32)
[79] Gleditsch, Wallenstein, Eriksson, Sollenberg and Strand (note 60)
[80] David B. Carter and Curtis S. Signorino, 'Back to the Future: Modeling Time Dependence in Binary Data', *Political Analysis* 18/3 (2010)
[81] Jo Beall, Tom Goodfellow and Dennis Rodgers, *Cities, Conflict, and State Fragility* (2011) p.6
[82] James Putzel and Jonathan Di John, *Meeting the Challenges of Crisis States* (London, England: Crisis States Research Centre, London School of Economics and Political Science 2012) p.12
[83](DiamondÇ Larry Diamond, 'Promoting Democracy in the 1990s: Actors and Instruments, Issues and Imperatives' (Washington, D.C. 1995)
[84] Einar Braathen and Sirin Bjerkreim Hellevik, 'Decentralisation, Peace Making and Conflict Management: From Regionalism to Municipalism', *Journal of Peace, Conflict and Development* 12 (2008); Dawn Brancati, 'Decentralization: Fueling the Fire or Dampening the Flames of Ethnic Conflict and Secessionism?', *International Organization* 60/03 (2006);
[85] Nils B. Weidmann, 'Kausalprozesse auf mehreren Ebenen: Ein Plädoyer für vertikale Integration in der Bürgerkriegsforschung', *Politische Vierteljahresschrift* 43 (2009) p.494
[86] Håvard Hegre and Clionadh Raleigh, *Population Size, Concentration, and Civil War*: *A Geographically Disaggregated Analysis* (Washington, DC: World Bank, Development Research Group, Growth and Macroeconomics Team 2007)
[87] Buhaug and Rød (note 66)
[88] Halvard Buhaug and Henrik Urdal, *Will Climate Change Lead to more Urban Violence?*: *Urbanization, Urban Environmental Problems, and Social Disorder in Cities* (Presented at 50th Annual Convention of the International Studies Association 2009)
[89] Weidmann (note 85)

Annex: African Countries Sorted By Level of Metropolization

Country	Year of Respective Census	Level of Metropolization (in per cent)	Level of Urbanization (in per cent)	Largest to second largest city ratio
South Africa	2005	11.66	59.26	1.88
Tunisia	1998	12.01	62.65	2.82
Algeria	1998	12.48	58.87	2.23
Nigeria	2000	13.76	42.35	2.48
Morocco	2010	18.12	56.68	1.78
Cameroon	2005	18.53	48.54	1.05
Ghana	2009	18.76	50.51	1.18
Botswana	2001	19.21	54.04	2.31
Mozambique	1997	20.89	27.37	2.43
Libya	2010	22.37	77.56	1.62
Benin	2010	22.72	44.26	2.98
Ethiopia	2002	23.32	15.12	7.66
Comoros	2000	24.08	28.08	1.82
Swaziland	1997	25.05	22.88	1.36
Mauritius	2009	27.52	41.86	1.32
Tanzania	2010	28.29	26.28	5.30
Malawi	2008	29.58	15.35	1.04
Madagascar	2005	31.19	28.81	4.99
Zambia	2010	31.44	38.73	3.51
Sudan	2000	32.00	32.50	9.33
Chad	2000	33.62	21.53	5.33
Zimbabwe	2010	33.89	38.13	2.27
Egypt	2000	35.29	42.80	2.00
Uganda	2009	36.09	14.78	9.31
Mali	1995	36.32	25.52	8.96
Congo, DRC	2000	37.94	29.30	5.67
Angola	2000	37.98	48.99	4.49
Niger	2001	38.80	16.30	4.15
Kenya	2009	39.06	23.19	5.46
Sierra Leone	2010	39.98	38.88	4.08
Namibia	2008	40.56	36.71	3.79
Central African Republic	2000	41.57	37.64	4.18
Cote D'Ivoire	2000	42.03	43.54	6.20
Cape Verde	2009	42.17	61.00	3.52
Lesotho	2005	42.98	23.28	2.91
Somalia	2010	42.98	37.29	3.26
Gambia	2007	45.97	54.54	4.32
Equatorial Guinea	2005	46.28	38.88	1.11
Guinea	1996	46.35	29.78	3.80
Gabon	2000	49.57	80.11	5.30
Mauretania	2008	51.06	40.88	11.02
Burkina Faso	2006	52.18	22.36	3.21
Burundi	2008	52.67	10.14	7.26
Senegal	2010	53.67	42.25	10.85
The Republic of Congo	2000	53.94	58.70	4.50
Rwanda	2010	57.07	18.81	8.32
Togo	2010	63.72	37.53	6.36
Guine-Buissau	2009	67.97	42.49	17.23
Eritrea	2000	72.52	17.62	7.54
Liberia	2004	73.31	45.71	19.84
Djibouti	2000	78.06	76.53	14.53