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Globalisation and Conflict: Evidence from sub-Saharan Africa*

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Abstract

Stephen Pinker (2011) advances that various forms of violence such as homicide, rape, torture and conflict have decreased over time because of the following historical shifts in society: pacification process, civilising process, humanitarian and rights revolutions, and extended periods of peace. We regard these shifts as modernising processes encompassed in globalisation and investigate the effects of globalisation on conflict, one of the forms of violence Pinker discusses. We use panel data from 46 sub-Saharan African countries dated 1970 to 2013 and find that increased globalisation significantly reduces severity of conflict through increased opportunity costs. Furthermore, we disaggregate globalisation into its three key components (social, political and economic openness) and find that social globalisation drives the results, an indication of the significance of increased flows of people and information in fostering tolerance and empathy. We also disaggregate conflict into intrastate and interstate and find that the severity of intrastate conflict is significantly reduced by the globalisation processes compared to interstate conflict.

Keywords: globalisation, conflict, sub-Saharan Africa

JEL Classification: O10, O55, H56, F69

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1 Introduction

Stephen Pinker (2011) advances that various forms of violence such as homicide, rape, torture and conflict have decreased over time because of the following historical shifts in society. Firstly, the pacification process which has seen less tribal conflict as societies transition from hunter-gatherer to state-run societies based on agriculture. Secondly, the civilising process which has seen an increase in urbanisation and industrialisation. Thirdly, the humanitarian and rights revolutions which have seen a reduction in violent practices such as torture, decrease in violence against ethnic minorities, religion, race, women and children. Lastly, the extended periods of peace after World War II and the Cold War which have seen decreases in both interstate and intrastate wars.

We view these historical shifts as modernising processes that encompass economic, social and political openness, *i.e.* globalisation. Globalisation has eliminated borders between countries and created more opportunities for mutual economic, social and political gains. We contribute to the conflict debate in literature by conducting an empirical exercise of Pinker's (2011) theory for the sub-Saharan African region. We form a hypothesis that globalisation and all it entails has encouraged non-violent forms of interactions and reduced hostility within and between states.

Following this hypothesis, we investigate the effects of globalisation on conflict in 46 sub-Saharan African countries between 1970 and 2013. Over the last half century, sub-Saharan African countries have experienced transitions towards more open economies, as well as becoming more inclusive of social and political differences within and between countries. They have opened up their borders to foreign nationals and businesses in an effort to increase foreign direct investment, to gain expertise in policies, to increase transfer of technology and skilled labour, and to encourage integration of different cultures, religions and races.

During this period of transition, episodes of conflict which were initially widespread across the region have gradually decreased, significantly so in the last decade. Does this decline in conflict coincide with the increase in globalisation? According to Pinker (2011), by opening up national borders to people, money, ideas and goods, Western Europe reduced the incentives for countries to engage in conflict amongst each other. Figure 1 illustrates the possible trend emerging between globalisation and conflict in sub-Saharan Africa over a ten year period. There are fewer conflict zones in 2010 than in 1990, whereas globalisation has improved significantly from 1990. It is interesting to note that countries that are surrounded by relatively stable economies globalised faster than those surrounded by relatively unstable economies (e.g. Zimbabwe which

shares borders with Botswana and South Africa indicates a more globalised economy in the decade than Eritrea which shares borders with Sudan and Ethiopia). This statistical evidence suggests a possible spill-over effect which deters countries from engaging in conflict for fear of losing the welfare gains associated with the trading relationships (Barbieri & Schneider 1999).

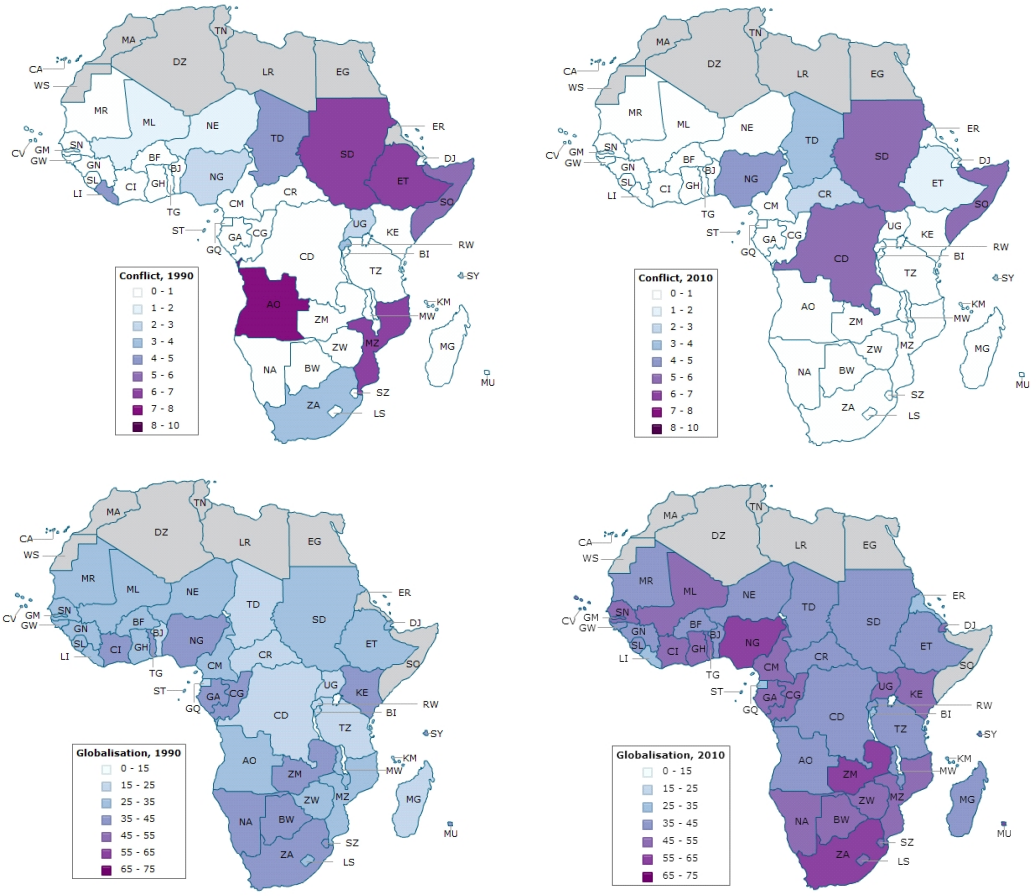


Figure 1: Globalisation and Conflict (Source: Dreher *et al.* 2008, Center for Systemic Peace)

Although Pinker (2011) covers broad categories of violence, we focus this paper on conflict because comprehensive measures of conflict that cover the period under review are readily available for sub-Saharan Africa than data on homicide rates, rape, child abuse or hate crimes. Furthermore, it is one of the forms of violence common to the region given its recent history with decolonisation, independence wars and subsequent civil wars. Apart from the ongoing debate on the causes of conflict (Arezki & Gylfason 2013, Collier & Hoeffler 1998, Lacina 2006), Pinker (2011) has also come under criticisms from some reviewers for his bias towards peace, his statistical evidence and unreliable data sources (Epstein 2011, Stone 2014, Hammond 2015).

We use panel data techniques, namely pooled OLS and fixed effects to allow for heterogeneity. From a methodological approach, several papers fail to address the endogeneity issues with globalisation (Barbieri & Reuveny 2005, Choi 2010, Flaten & De Soysa 2012). We improve on the methodology by using fixed effects with instrumental variables which allows for both heterogeneity and endogeneity. The results indicate a negative relationship between globalisation and conflict, suggesting that the modernisation processes that come with globalisation create incentives that increase the opportunity cost of conflict. Countries have more to lose in terms of political allies, social gains and trade benefits. We further extend the analysis by decomposing globalisation into economic, social and political globalisation. We find that social globalisation is a stronger predictor for decreasing conflict than the other two components, suggesting that social interactions play a more beneficial role as a pacifying agent than economic or political affiliations.

This paper contributes to a growing literature on the effects of openness on conflict with two contrasting views dominating the debate. The one view proposes that globalisation has a pacifying effect on conflict as it promotes economic growth and social progress through trade, migration of people and transfer of information and technology. These factors encourage peaceful relationships amongst countries. A study by Choi (2010) finds that globalisation generates a negative effect on militarised interstate disputes by encouraging a common peaceful disposition among national leaders who are then less likely to resort to arms in times of crisis, while Barbieri & Reuveny (2005) find that economic forms of globalisation through trade, foreign direct investment and portfolio investment reduce the likelihood of civil war by increasing the opportunity costs for richer countries whereas internet use reduces civil war presence only for the less developed countries. Moreover, Flaten & De Soysa (2012) find that globalisation predicts a lower risk of civil war and political repression by increasing prospects for social progress. Moreover, Hegre *et al.* (2003, 2010) find that economic openness reduces internal conflict through its beneficial effects on growth and political stability.

In contrast, the other view sees globalisation as increasing conflict by creating conditions that increase income inequality and poverty, as well as facilitating social breakdown because of resistance from those who become oppressed. Research undertaken by Bezemer & Jong-A-Pin (2013) finds that globalisation on its own works to reduce ethnic violence, however when it is interacted with market dominant minorities and democracy, globalisation increases ethnic violence. Furthermore, Olzak (2011) reports positive effects of economic and cultural globalisation on ethnic conflicts through ethnic inequality which may come about from increased ethnic heterogeneity

due to migration. On the other hand, Beck & Baum (2000) find little evidence that trade decreases conflict. With sub-Saharan Africa's relatively unstable political environment, this paper is relevant for identifying possible avenues that may help to minimise conflict in the region.

2 Empirical Analysis

2.1 Data

The dependent variable (*conflict)* is taken from the Major Episodes of Political Violence (MEPV) and Conflict Regions (Marshall 2013). Major episodes of political violence involve at least 500 directly-related deaths and reach a level of intensity in which the use of lethal violence by organised groups is systematic and sustained. The variable measures the total summed magnitudes or severity of all societal and interstate violence which include international, civil, ethnic, communal, and genocidal violence and warfare. Episodes are scaled from 1 to 10 according to an assessment of the full impact of the violence on the society's normal networking and functioning which is directly affected by the conflict. These effects include fatalities, casualties, resource depletion, destruction of infrastructure and population displacements (Marshall 2013)[1]. The variable is normalised so that values are between 0 and 1.

For the purpose of this paper, the variable is sufficient as a measure of analysis as it measures the general magnitude of the violence on society caused by the conflict. The variable therefore takes into account the intangible aspects of conflict such as torture, rape and a general deterioration in the living standards of the affected country. The greater the effects of the violence on society, for example the higher the number of fatalities or casualties, the greater the magnitude of the conflict.

The independent variables are based on Pinker's (2011) theory, specifically globalisation which we view as representing a significant part of the historical shifts. We introduce an index (*globalisation*) which is compiled by Dreher (2006) and updated by Dreher *et al.* (2008). It combines three key components of globalisation into a weighted index ranging from 0 (no globalisation) to 100 (highly globalised). The globalisation index captures the international flows of goods, capital, businesses, people, technology, information and the presence of international organisations which is applicable to the analysis as these different aspects are closely related to the civilising process, pacification process, humanitarian and rights revolutions and the extended periods of

[1] See Table 11 in Appendix A for the descriptions of the conflict magnitudes.

peace discussed in Pinker's theory (2011).

The first component incorporates economic globalisation which accounts for trade and financial openness through actual flows of trade, foreign direct investment, foreign portfolio investment, income payments to foreign nationals, and trade restrictions such as capital account restrictions, hidden import barriers and mean tariff rates. We view this component as representing the pacification and civilising processes which increased trade, urbanisation and industrialisation. Not only has civilisation been accompanied by international trade which has created opportunities for industries and for higher education, but the modernising process has also increased innovations in technology which have improved productivity, as well as introducing judicial institutions to protect the rights of people. This increase in economic globalisation promotes international cooperation and discourages countries from engaging in conflict with their trading partners as the opportunity costs are high.

The second component is social globalisation which accounts for personal contact through international tourism, the percentage of foreign population in countries, telephone traffic, information flows through the use of the internet, televisions and newspapers, and cultural proximity through trade in books and presence of multinational corporations. We view social globalisation as representing parts of the civilising process as well as the increase in humanitarian and rights revolutions. Pinker (2011) attributes the humanitarian revolution to the age of reasoning and enlightenment when literacy spread from the elite to the masses. Social globalisation through migration, travelling and the use of internet, newspapers, books and televisions has encouraged people to be more tolerant of each other's differences in societies, ethnicities, religions, race and gender. Some may argue that the cultural proximity measure in the sub-index is too narrow, considering that in Africa there are no IKEA stores and only a few McDonald's restaurants. However the measure indicates that countries that accept foreign businesses are more integrated with global markets (Flaten & De Soysa 2012). Besides the other measures within the sub-index are sufficient representations of Pinker's historical processes.

The third component measures political globalisation through the number of embassies in the country, membership in international organisations, participation in United Nations (UN) security council missions and number of international treaties. We view political openness as further representation of the humanitarian and rights revolutions, as well as the extended periods of peace after World War II and the Cold War. Becoming members of international organisations encourage leaders to interact and come to common understandings, but more than that the benefits obtained

from being a member act as incentives to reduce conflict. For example part of the mandates for blocs such as Southern African Development Community (SADC) or the African Union (AU) include good governance, peace and security. As such, governments within the organisation are likely to intervene in member countries that engage in conflict. Moreover, Pinker (2011) states that the increasing presence of international organisations, such as peacekeeping forces which mediate negotiations between aggrieved parties, acts as a deterrent to renewed skirmishes that can escalate into conflict. He also draws inferences to support his theory from Immanuel Kant (1983) who finds that not only does international trade reduce conflict, but also memberships in intergovernmental organisations and democracy. In addition, analysis by Russett and Oneal (2001) finds that increased participation in international organisations reduces the likelihood of two countries within the same organisation engaging in conflict.

Of the reviewed literature only a few use a similar globalisation index as a determinant for conflict (Bezemer & Jong-A-Pin 2013, Choi 2010, Flaten & De Soysa 2012, Olzak 2011). The other studies use trade as a percentage of gross domestic product (GDP) as the preferred measure of globalisation (Barbieri & Reuveny 2005, Beck & Baum 2000, Hegre *et al.* 2003, 2010). A main concern in Barbieri & Schneider (1999) is whether the varying measures of trade used by the various empirical studies is capturing the "complex relationship of economic interdependence" considering the limitations in the trade variable. In our view the trade variable captures only one facet of globalisation which is economic openness and as such does not give an accurate reflection of the historical shifts proposed by Pinker (2011). Economic openness mostly explains trade and financial globalisation through the flow of foreign direct investment and goods. It does not take into account the movement of people across borders, the exchange of ideas and dissemination of information through internet, television, telephones, radio and books, as well as the political influence of international organisations and embassies based within countries. Other possible globalisation indices include the Kearney Foreign Policy globalisation index (KFP), the $CSGR_2$ globalisation index, the Maastricht globalisation index (MGI), the New globalisation index (NGI) and the Globalisation index (G-index). However these indices do not have sufficient data for most sub-Saharan African countries and their time periods are limited (Samimi *et al.* 2011).

We include controls to avoid omitted variable bias. The controls complement Pinker's (2011) theory, and are also commonly used in conflict literature (Barbieri & Reuveny 2005, Collier & Hoeffler 1998, Montalvo & Reynal-Querol 2005). These include income per capita, democracy, education, and resource rents.

Income per capita at 2005 constant prices (*gdpcap*) is taken from the World Development Indicators (WDIs) and measures the real gross domestic product. We expect that increases in income will reduce the grievances that make conflict more likely such as poverty and inequality. In Collier & Hoeffler (2002) and Fearon & Laitin (2003) they find that low incomes per capita facilitate easy recruitments for rebel groups as income opportunities are worse in the formal labour market. Furthermore, Pinker (2011) shows evidence that wars take place mainly in developing countries found in Central and East Africa, Southwest Asia and Middle East which supports the conclusion drawn by Collier & Hoeffler (2002) that Africa's poor economic performance attributed to the rising trend of conflict in the region during the 1980s and 1990s.

Education measures the duration in secondary education obtained from the WDIs. This variable has contrasting results across the literature. While Krueger & Maleckova (2003) find no correlation suggesting that increased education decreases conflict, Collier & Hoeffler (2004) report that males enrolled in secondary education have a negative effect on conflict. Education equips people with skills that they can use in employment rather than "brigandage and warlording " and keeps young boys off the streets and out of militia (Pinker 2011). Moreover, Reynal-Querol (2002a) find that the level of education is a significant determinant in reducing conflict, especially when not used in conjunction with income per capita. The contrasting results make it difficult to infer a priori expectations, but we expect a negative relationship between education and the magnitude of conflict.

Democracy is obtained from the Polity IV Project (2014). It measures the checks and balances on the executive or the extent of institutionalised constraints on the decision-making powers of chief executives, whether individuals or collectivities. A seven-category scale is used: 1 (unlimited authority of the decision-making body) to 7 (executive parity, *i.e.* the accountability groups have effective control over the executive). The variable is normalised to between zero and one.

Democratic countries can be more responsive to people's demands and avoid rebellions, or democracy can create the opportunity for people to collude and organise. According to Pinker (2011) democratic countries tend to avoid disputes that hinder their trade relations and welfare gains. This is confirmed by Collier & Hoeffler (2004) who find a significant negative democracy-conflict relationship, while evidence by Reynal-Querol (2005) finds that democracy along with political systems that are more inclusive are less prone to civil war. Others however find no significant effect on conflict (Barbieri & Reuveny 2005, Elbadawi & Sambanis 2002, Fearon & Laitin 2003, Miguel *et al.* 2004), whereas Olzak (2011) reports that democracy actually raises the

severity levels of ethnic conflict. Although several studies find that democracy does not reduce the number of civil conflicts, it does seem to reduce their severity (Gleditsch 2008, Lacina 2006). We expect increased democracy to be associated with lower magnitudes of conflict.

Given the abundance of resources in sub-Saharan Africa, we also include total natural resource rents (*resource rents*) measured as a percentage of GDP from the WDIs. Resource rents increase conflict through rentier effects that accrue to elite groups and raise the incentive to stay in power (Fearon & Laitin 2003, Pinker 2011). These rents also fund rebel groups for those authoritarian incumbents who want to intimidate civilians (Barbieri & Reuveny 2005, Collier & Hoeffler 2004). The resource curse appears prevalent in developing economies with weak governments (Sachs & Warner 2001, Ross 2003). Given the history with Africa's institutions, we expect a positive resource rents-conflict relationship.

We include the number of bordering countries engaged in conflict (*bordering states*) as an additional control. The variable is obtained from the Major Episodes of Political Violence and Conflict Regions (Marshall 2013). We expect a positive relationship between the number of bordering countries involved in conflict and the magnitude of conflict in the region. According to Michalopoulos (2015), conflict is more likely in countries with ethnic groups split by the artificial colonial borders because i) these split groups can be used by governments to destabilise neighbouring countries (for example, the DRC left Burundi rebels to operate within its borders to disrupt Congolese rebels that controlled part of the DRC and Burundi border (Seybolt 2001)); and ii) split ethnic groups that often face discrimination from the national government can engage in conflict with support from their co-ethnics across the border (for example, Rwandan Hutu farmers displaced by the Burundi government joined rebel groups opposing the Burundi government (Seybolt 2001)). Cross-country evidence from Bosker and de Ree (2014) also finds that the likelihood of conflict increases when there is an ethnic war in neighbouring countries.

2.2 Descriptive Statistics

Table 1 offers a brief overview of the data. The descriptive statistics indicate the heterogeneity that is present between the countries. Interestingly, the countries which are more globalised, with higher incomes per capita, stronger constraints on the executive, and lower resource rents also exhibit lower magnitudes of conflict (*e.g.* Botswana, Cape Verde, Mauritius and South Africa). These countries are also not surrounded by warring neighbours. On the other hand, the countries with low levels of globalisation, lower incomes per capita and weak executive constraints exhibit

higher magnitudes of conflict (*e.g.* Chad, Eritrea, Ethiopia and Sudan). The correlation matrix also indicates that these determinants are in line with a priori expectations, while resource rents and bordering countries with conflict work against the other determinants and increase conflict. Social globalisation also indicates a higher correlation, suggesting that it may be a stronger predictor for conflict.

Table 1: Descriptive Statistics and Correlation Matrix

Variable	Obs	Mean	Std. Dev.	Min	Max	Sources
Conflict	1947	0.82	1.78	0	10	Center for Systemic Peace
Globalisation	1979	34.05	10.41	10.56	69.37	Dreher *et al.* 2008
Social globalisation	2023	23.09	10.55	5.24	64.49	Dreher *et al.* 2008
Political globalisation	2023	43.68	18.55	3.73	90.94	Dreher *et al.* 2008
Economic globalisation	1755	39.18	15.59	7.76	87.22	Dreher *et al.* 2008
Democracy	1948	3.11	1.95	1	7	Polity IV Project
Education	2068	6.25	0.78	4	8	World Development Indicators
Resource rents	1866	12.15	14.8	0	100.37	World Development Indicators
Gdpcap	1868	1305.29	2093.50	50.04	14235.84	World Development Indicators
Bordering states	1902	1.05	1.19	0	7	Center for Systemic Peace

	Conflict	Globalisation	Social globalisation	Political globalisation	Economic globalisation	Democracy	Education	Resource rents	Gdpcap	Bordering states
Conflict	1.000									
Globalisation	-0.209*	1.000								
Social globalisation	-0.361*	0.732*	1.000							
Political globalisation	-0.050*	0.578*	0.051*	1.000						
Economic globalisation	-0.137*	0.818*	0.665*	0.037	1.000					
Democracy	-0.111*	0.478*	0.421*	0.235*	0.430*	1.000				
Education	-0.055*	-0.303*	-0.219*	0.059*	-0.461*	-0.205*	1.000			
Resource rents	0.124*	0.007	-0.194*	0.117*	0.137*	-0.198*	0.078*	1.000		
Gdpcap	-0.1182*	0.4228*	0.6225*	-0.1049*	0.5174*	0.1990*	-0.1949*	0.1670*	1.000	
Bordering states	0.237*	-0.166*	-0.305*	0.094*	-0.264*	-0.154*	-0.077*	0.004	-0.105*	1.000

* significant at 5%

A negative linear relationship between the mean overall globalisation and mean magnitude of conflict is shown in Figure 2. A significant downward trend is also shown between social globalisation and conflict compared with economic and political globalisation which remain relatively flat, supporting our previous suggestion that social globalisation may be a better determinant for reducing conflict. The graph also shows that the countries with higher severity of conflict are those that have had longer durations of conflict such as Angola, the DRC, Ethiopia, Mozambique and Sudan. The remaining countries range between 0 and 2 for levels of severity during conflict times.

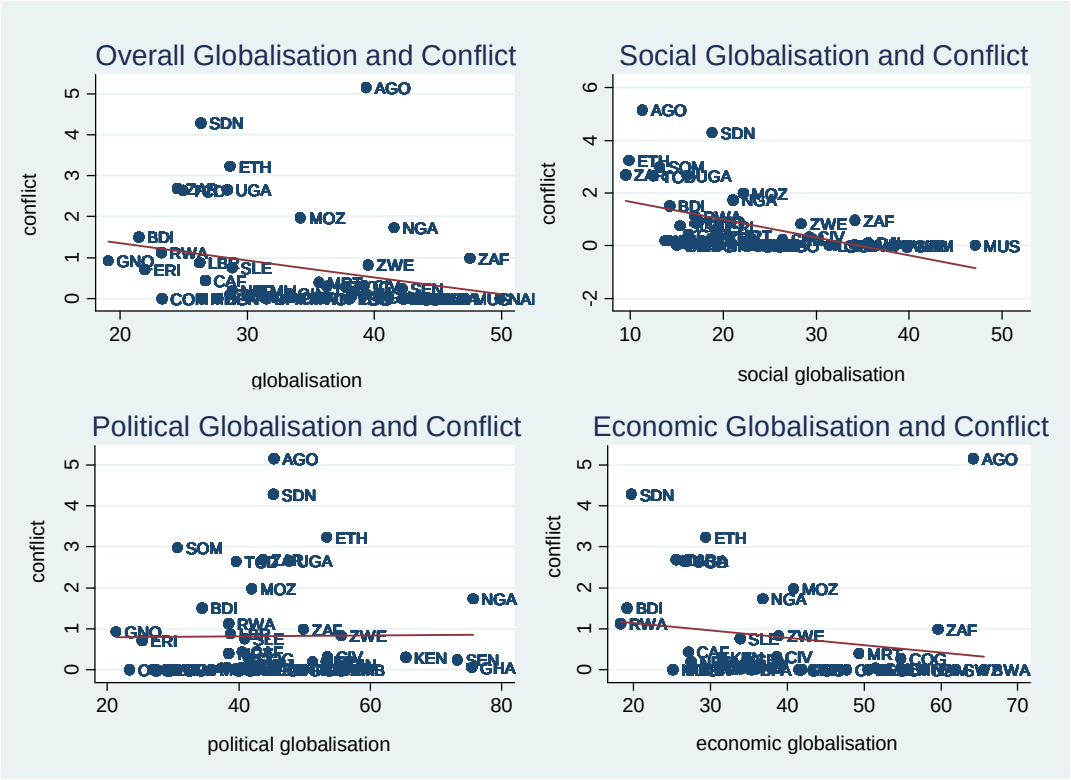


Figure 2: Globalisation and Conflict (Source: Dreher *et al.* 2008, Center for Systemic Peace)

The overall statistical analysis favours our hypothesis that globalisation reduces conflict.

2.3 Methodology

The baseline model specification is:

$$\begin{aligned} conflict_{it} &= \alpha_i + \beta_1 \ln globalisation_{it-1} + \beta_2 democracy_{it} + \beta_3 education_{it} + \beta_4 \ln resourcerents_{it} \\ &\quad + \beta_5 \ln gdpcap_{it} + \beta_6 borderingstates_{it} + \mu_{it}. \end{aligned} \tag{1}$$

Despite the time period 1970 to 2013 covering over 4 decades only as compared to Pinker's analysis, the period is sufficient for this research as it covers most episodes of conflict that occurred in the region such as the civil wars in Angola, the DRC and Mozambique, the Eritrea-Ethiopia war, the Rwandan genocide, the Nigeria and Sierra Leone resource conflicts, the South African apartheid violence and the Zimbabwean independence war. According to Miguel *et al.* (2004), 23 out of 49 countries experienced conflict during the 1980s and 1990s in Africa and these periods are covered by the dataset. Given that Pinker (2011) discusses the effects of the historical shifts

as being gradual processes in reducing violence, we lag the globalisation index to account for this delay.

We use panel data analysis to estimate a pooled OLS (POLS) model which assumes homogeneity among the countries, that is they share common intercepts and slopes. However, countries like Botswana and Ethiopia will not necessarily exhibit similar characteristics in trade policies, political barriers, or geographic location. The country (α_i) fixed effects capture this unobserved heterogeneity specific to each country allowing for more efficient estimates.

We also include fixed effects with instrumental variables (FE-IV) to minimise both heterogeneity and economic endogeneity in the form of reverse causality. We expect endogeneity to be present in globalisation because it is possible for conflict to affect the openness of a country. For example trade sanctions can be imposed on countries engaged in conflict which can limit their ability to interact and trade with other countries (South Africa was a closed economy during the apartheid period because of sanctions. Zimbabwe was placed under sanctions during the farm invasion period). Studies by Barbieri & Levy (1999), Dixon & Moon (1993) and Mansfield (1994) also find negative effects of conflict on trade.

The validity and reliability of the instrumental variables approach depends on the selection of the instruments which should satisfy the following criteria: i) the instrument must be correlated with the endogenous variable, in our case the level of globalisation; and ii) the instrument must not have a direct causal effect on the dependent variable. These criteria imply that any changes in conflict that may result from changes in the values of the instrument must be attributable to globalisation only. This type of method allows for consistent estimation in large samples. Finding valid instruments that are external to the model is difficult, especially when using a broad measure such as globalisation. Some studies prefer to lag the globalisation variable as a means of minimising endogeneity (Choi 2010, Flaten & de Soysa 2012, Olzak 2011). We use an instrument that in our view is exogenous to the model, based on the abovementioned criteria.

The external instrument is a measure of China's trade as a percentage of gross domestic product from the WDIs. China's trade and investment influence has grown in Africa over the years as African countries seek an alternative to the Western trade partners, while China's growing dependence on energy sources such as oil has increased the benefits of China-Africa trade (Ademola *et al.* 2009, Renard 2011, Wang & Bio-Tchane 2008). We expect that any changes in China's trade will have a direct impact on globalisation in sub-Saharan Africa as depicted in Figure 3. Trading with China has increased economic, political and social openness in the region through increased

export volumes, lower import prices, investments in infrastructure and transfer of technology and technical expertise, as well as strengthening political ties through trade agreements or associations such as BRICS (Brazil, Russia, China, India and South Africa).

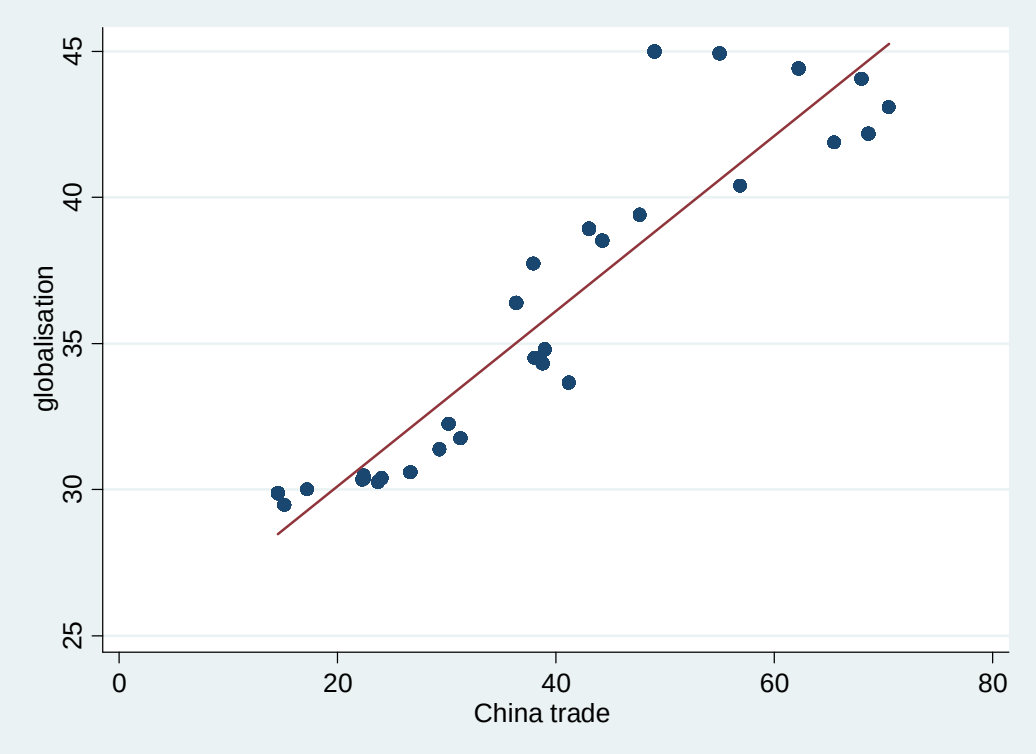


Figure 3: China Trade and Globalisation in sub-Saharan Africa (Source: World Development Indicators, Dreher *et al.* 2008)

We do not expect trade from China to influence conflict in Africa as China has adopted a non-interference policy and as such relations are dependent on less restrictive terms compared to the European and American partners. According to Kaplinsky and Morris (2009) and Lyman (2005) Chinese investments are less constrained by conditions related to governance, environmental and social concerns that drive Western donors. China has therefore been known to trade with countries regardless of whether they are involved in conflict or not. Evidence of China's indifference to political controversy in Africa is indicated in Figure 4. The map shows increased Chinese investments in countries that have experienced conflict such as Ethiopia, Kenya, Mozambique, Nigeria, Sudan and Sierra Leone, as well as in countries that are under sanctions, such as Zimbabwe.

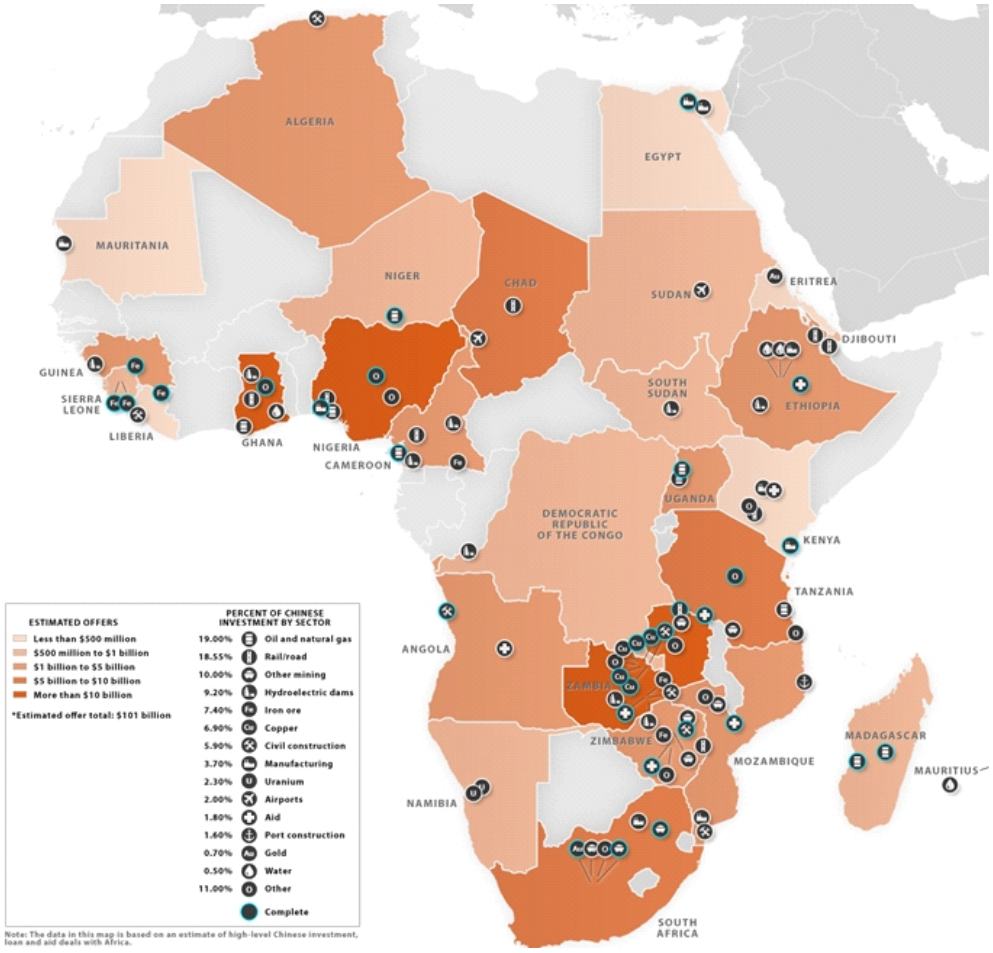


Figure 4: Chinese Investment Offers in Africa in 2010 (Source: China Business Review, open source commercial information from www.stratfor.com)

3 Results

3.1 Baseline analysis

Table 2 reports the pooled OLS, fixed effects and fixed effects with instrumental variables estimates. The results indicate that overall globalisation is significant in reducing the severity of conflict within the region. A ten percent increase in the level of globalisation in the previous period reduces the magnitude of conflict by about 0.01 points in the current period. In general, globalisation has relatively larger coefficients than income per capita, democracy and resource rents indicating that it explains a significant part of the decrease in the magnitude of conflict. This result is in line with our hypothesis which is associated with Pinker's (2011) theory. The historical shifts encompassed by the rise of globalisation such as trade, industrialisation and urbanisation

which encourages flows of people and dissemination of information, as well as relations with international organisations and foreign businesses have developed a pacifying effect on conflict over time.

The explanatory powers of democracy improve with the inclusion of fixed effects which allows for the unobserved differences across countries, while education is a weak determinant of conflict. Democracy is positively related to conflict. Even though Pinker (2011) attributes longer periods of democracy to less conflict, he highlights that democracy is delayed in anocracies (semi-democracies) where weak governments do not encourage better institutions but prefer to protect their positions of power. This conclusion can be drawn for sub-Saharan Africa. Given the region's relatively low average for executive constraints, and coupled with the fact that some of the countries only achieved democracies within the last half decade, the effects of democracy may not yet have spread across the region. The region may also simply be in a state formation process where conflict is a catalyst for change to determine state governing structures.

The resource rents indicate a positive and sometimes significant effect on the magnitude of conflict in sub-Saharan Africa. Higher levels of resource rents provide motivation and opportunities for rebel groups and governments to support themselves through expropriation, particularly when it comes to controlling state power (*e.g.* diamond-financed civil wars in Sierra Leone and Angola, oil conflict in Nigeria). These results support Pinker's (2011) theory that countries with abundance of nonrenewable easily controllable resources are prone to violence. However the results are not so conclusive and this may be from the aggregated variable we use. Analysis by Snyder and Bhavnani (2005) find that the resource curse is more evident in countries where non-lootable resources, such as bauxite in Guinea, are not available to rulers as a source of revenue and lootable resources, such as diamonds in Sierra Leone or Gold in Ghana, are extracted by difficult to tax companies. We do not pursue this disaggregated avenue as it is not within the scope of this particular study.

Income per capita is consistent with previous literature and enters negatively and significantly across the models. However the conclusions drawn from the results contradict conclusions drawn by previous studies that find that countries with low incomes per capita are the most likely to have civil wars and longer durations of war (Collier & Hoeffler 2002, Fearon & Laitin 2003, Miguel *et al.* 2004). The results indicate that even at sub-Saharan Africa's relatively low levels of income per capita which average under US$2,000.00, there is still a significant negative effect on the magnitude of conflict. The robust income result supports Pinker's (2011) statement that "the

most important thing a little wealth buys a country is an effective police force and army to keep the domestic peace". In as much as wealthier countries may afford bigger military forces, poor countries can also use their scarce national incomes to fund their armies. Even if the show of force is for the oppression of citizens, it still suppresses rebellions and maintains a semblance of peace.

Table 2: Pooled OLS, Fixed Effects and Fixed Effects with Instrumental Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
CONFLICT	POLS	POLS	POLS	POLS	POLS	POLS	FE	FE	FE	FE	FE	FE	FE-IV	FE-IV	FE-IV	FE-IV	FE-IV	FE-IV
Globalisation $_{t-1}$	-0.119***	-0.116***	-0.132***	-0.129***	-0.084***	-0.074***	-0.077	-0.104**	-0.114**	-0.125***	-0.082*	-0.081*	-0.133***	-0.179***	-0.185***	-0.194***	-0.153***	-0.141***
	(0.013)	(0.014)	(0.015)	(0.015)	(0.014)	(0.013)	(0.047)	(0.051)	(0.050)	(0.045)	(0.045)	(0.044)	(0.022)	(0.027)	(0.028)	(0.031)	(0.032)	(0.033)
Democracy		-0.007	-0.017	0.001	0.006	0.027*		0.056	0.062*	0.064**	0.061**	0.061**		0.064***	0.073***	0.075***	0.070***	0.070***
		(0.013)	(0.013)	(0.015)	(0.015)	(0.014)		(0.035)	(0.035)	(0.026)	(0.026)	(0.026)		(0.019)	(0.020)	(0.020)	(0.020)	(0.020)
Education			-0.030***	-0.025***	-0.024***	-0.015***			-0.016	-0.002	-0.004	-0.002			0.014	0.013	0.008	0.010
			(0.005)	(0.005)	(0.005)	(0.005)			(0.033)	(0.033)	(0.030)	(0.030)			(0.011)	(0.011)	(0.011)	(0.011)
Resource rents				0.007*	0.005	0.007*				0.016	0.019**	0.019**				0.006	0.007	0.006
				(0.004)	(0.004)	(0.004)				(0.010)	(0.009)	(0.009)				(0.005)	(0.005)	(0.005)
Gdpcap					-0.020***	-0.012***					-0.076*	-0.071*					-0.070***	-0.066***
					(0.004)	(0.004)					(0.040)	(0.038)					(0.011)	(0.011)
Bordering states						0.034***						0.014						0.014***
						(0.004)						(0.009)						(0.005)
Observations	1,845	1,845	1,802	1,675	1,653	1,653	1,845	1,845	1,802	1,675	1,653	1,653	1,373	1,373	1,342	1,283	1,279	1,279
F test	89.37***	45.49***	34.70***	28.03***	20.48***	31.07***	2.63	2.33	2.17	3.53**	3.26**	4.27***	36.61***	22.91***	17.79***	12.10***	21.70***	20.49***
R-squared	0.048	0.048	0.063	0.065	0.061	0.122	0.016	0.022	0.026	0.033	0.081	0.089	0.0472	0.0551	0.0592	0.0579	0.0917	0.0991
Number of i							45	45	44	44	44	44	45	45	44	44	44	44
CountryFE							YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
First Stage Regressions																		
Chinatrade $_{t-1}$													0.322***	0.312***	0.311***	0.303***	0.290***	0.285***
													(0.007)	(0.008)	(0.008)	(0.009)	(0.009)	(0.009)
F test weak instruments													2141.32***	1076.99***	720.55***	527.71***	442.90***	378.77***

Coefficients reported. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

An increase in the number of bordering countries engaged in conflict increases the magnitude of conflict in the region. This result indicates some spill-over effects from sharing borders with warring countries. The effects can be through either militarised interventions from neighbouring countries, such as Angola, Namibia and Zimbabwe contributing troops to the DRC government during its' civil war, or displaced populations who offer support to rebel groups in opposition to the national government.

The identifying instrument in the first stage regression is statistically significant[2], as well as the F-test for joint significance which minimises the issues of weak instruments. Trade with China significantly increases sub-Saharan Africa's level of globalisation through increased trade, migration and investments in infrastructure. The external variation from the instrument also reduces the endogeneity bias and improves the efficiency of the estimates. The F-statistics for overall joint significance of the regressors are also statistically significant indicating that the models are correctly specified.

We extend the analysis by decomposing the globalisation index into its three key components. The results in Table 3 indicate that social globalisation has a larger effect in reducing the magnitude of conflict than the other two sub-indices across the models. The coefficient is negative

[2]We also use globalisation lagged twice as an instrument. Results remain in line with those reported in the paper and are available on request.

and significant. The increase in migration and the increased access to information through media, internet and books has improved people's tolerance and empathy of one another and brought in a wave of humanitarianism and rights movements in the region. For example, campaigns against war may not have begun were it not for the violent images that were shown in newspapers, on televisions, or the reports over the radio.

Economic globalisation also plays a relatively significant role in decreasing the magnitude of conflict. The use of force disrupts the gains from trade thus discouraging mutually beneficial economic ties. With the increase in trade blocs in sub-Saharan Africa, countries are more likely to avoid disputes that can compromise their international relations. In addition, Pinker (2011) states that some of the institutions that come with the civilising process associated with economic globalisation, such as infrastructure for trade and commerce, are necessary for the reduction of "chronic violence".

The coefficient for political globalisation, though negative, has mostly insignificant predictive powers. However, the external variation from the instrument improves the efficiency of both economic and political globalisation as indicated by the larger and significant coefficients. This is in line with our predictions that trade with China has increased both business and political opportunities for sub-Saharan Africa. With China's trade contributing positively to increasing globalisation in Africa, the incentives to engage in conflict are significantly reduced. The instrument in the first stage regression is valid and statistically significant.

Table 3: Sub-indices of Globalisation

	1	2	3	4	5	6	7	8	9
CONFLICT	POLS	POLS	POLS	FE	FE	FE	FE-IV	FE-IV	FE-IV
Social globalisation $_{t-1}$	-0.157***			-0.138**			-0.145***		
	(0.018)			(0.068)			(0.034)		
Political globalisation $_{t-1}$		-0.006			-0.028			-0.094***	
		(0.008)			(0.023)			(0.022)	
Economic globalisation $_{t-1}$			-0.048***			-0.018			-0.147***
			(0.017)			(0.037)			(0.056)
Democracy	0.030**	0.001	0.020	0.075**	0.041	0.048*	0.075***	0.060***	0.094***
	(0.014)	(0.016)	(0.014)	(0.033)	(0.027)	(0.025)	(0.021)	(0.019)	(0.025)
Education	-0.023***	-0.009*	-0.014**	0.002	0.002	0.012	0.016	0.016	0.012
	(0.005)	(0.005)	(0.006)	(0.030)	(0.030)	(0.030)	(0.011)	(0.011)	(0.014)
Resource rents	-0.003	0.006	0.008**	0.017**	0.016*	0.014	0.002	0.003	0.012*
	(0.004)	(0.004)	(0.004)	(0.008)	(0.009)	(0.015)	(0.004)	(0.005)	(0.007)
Gdpcap	0.011*	-0.020***	-0.010**	-0.061	-0.074*	-0.130**	-0.063***	-0.068***	-0.156***
	(0.006)	(0.004)	(0.005)	(0.036)	(0.038)	(0.053)	(0.011)	(0.011)	(0.022)
Bordering states	0.021***	0.036***	0.033***	0.011	0.014	0.011	0.014***	0.013***	0.011**
	(0.004)	(0.004)	(0.004)	(0.010)	(0.010)	(0.009)	(0.005)	(0.005)	(0.005)
Observations	1,653	1,653	1,503	1,653	1,653	1,503	1,279	1,279	1,147
F test	41.97***	27.07***	25.65***	4.03***	2.82**	2.18*	21.09***	20.31***	28.88***
R-squared	0.203	0.110	0.110	0.120	0.081	0.097	0.125	0.0914	0.0909
Number of i				44	44	39	44	44	39
Country FE				YES	YES	YES	YES	YES	YES
First Stage Regressions									
Chinatrade $_{t-1}$							0.277**	0.429***	0.182***
							(0.012)	(0.013)	(0.015)
F test weak instruments							181.85***	303.18***	141.36***

Coefficients reported. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

The rest of the controls are generally in line with previous results, particularly the positive effects of democracy on conflict when we allow for heterogeneity and endogeneity. Sharing borders with countries in conflict also increases the severity of conflict. Income per capita remains robust in reducing severity of conflict across the estimations, while education and resource rents are insignificant. The F-statistics for overall significance of the models remain statistically significant.

3.2 Additional Analysis

3.2.1 Dynamic Specification

In the post colonial decades, civil wars were breaking out at a higher rate than they were ending such that by the late 1990s, an average civil war had been going on for many years (Pinker 2011). For example, conflicts in Angola, the DRC, Ethiopia, Eritrea, Liberia, Mozambique, Nigeria, Sierra Leone, Somalia, South Africa, Sudan and Zimbabwe carried on for more than a decade. In order to account for this persistence in conflict we specify a dynamic model by including the lagged dependent variable.

We report the results in Table 4. Overall globalisation remains robust and significant in reducing the magnitude of conflict in the region, with social globalisation accounting for a significantly larger pacifying effect than political and economic openness.

The external variation from the instrument improves the efficiency of the estimates as indicated by the larger significant coefficients for globalisation and its sub-indices. Both political and economic globalisation become significant in reducing the magnitude of conflict. While economic globalisation encourages mutual interactions between countries, the need for political allies rather than foes has also negated the incentives for engaging in conflict. Furthermore Pinker (2011) attributes the increase in peace at the end of the 20^{th} century to an increase in political globalisation through international organisations and peacekeeping forces which have assisted in preventing renewed episodes of conflict.

Table 4: Dynamic Specification

	1	2	3	4	5	6	7	8	9	10	11	12
CONFLICT	POLS	POLS	POLS	POLS	FE	FE	FE	FE	FE-IV	FE-IV	FE-IV	FE-IV
Globalisation $_{t-1}$	-0.015**				-0.028**				-0.058***			
	(0.007)				(0.012)				(0.021)			
Social globalisation $_{t-1}$		-0.025***				-0.044**				-0.060***		
		(0.007)				(0.019)				(0.022)		
Political globalisation $_{t-1}$			-0.001				-0.008				-0.038***	
			(0.004)				(0.006)				(0.014)	
Economic globalisation $_{t-1}$				-0.014*				-0.013				-0.062*
				(0.008)				(0.012)				(0.034)
Democracy	0.004	0.003	-0.001	0.003	0.018*	0.022	0.010	0.014	0.021*	0.024*	0.017	0.025*
	(0.006)	(0.006)	(0.006)	(0.006)	(0.010)	(0.013)	(0.010)	(0.010)	(0.013)	(0.013)	(0.012)	(0.015)
Education	-0.003	-0.004*	-0.002	-0.004	-0.001	0.000	0.000	0.001	0.001	0.004	0.004	-0.002
	(0.002)	(0.002)	(0.002)	(0.003)	(0.009)	(0.008)	(0.009)	(0.009)	(0.007)	(0.007)	(0.007)	(0.009)
Resource rents	-0.000	-0.002	-0.001	-0.000	0.004*	0.003*	0.002	0.002	-0.000	-0.002	-0.001	0.002
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)
Gdpcap	-0.001	0.002	-0.002	0.000	-0.011	-0.008	-0.012	-0.025**	-0.009	-0.008	-0.010	-0.023
	(0.002)	(0.002)	(0.002)	(0.002)	(0.009)	(0.009)	(0.009)	(0.012)	(0.007)	(0.007)	(0.007)	(0.014)
Bordering states	0.005***	0.004**	0.006***	0.004**	0.004	0.003	0.004	0.003	0.003	0.003	0.002	0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Conflict $_{t-1}$	0.870***	0.857***	0.873***	0.882***	0.781***	0.772***	0.784***	0.792***	0.770***	0.761***	0.771***	0.778***
	(0.025)	(0.027)	(0.025)	(0.025)	(0.034)	(0.031)	(0.034)	(0.035)	(0.018)	(0.019)	(0.018)	(0.019)
Observations	1,653	1,653	1,653	1,503	1,653	1,653	1,653	1,503	1,279	1,279	1,279	1,147
F test	216.71***	316.59***	210.38***	206.31***	235.15***	248.40***	239.80***	185.70***	321.40***	322.99***	319.53***	305.71***
R-squared	0.805	0.806	0.804	0.819	0.650	0.653	0.649	0.665	0.647	0.649	0.645	0.658
Number of i					44	44	44	39	44	44	44	39
Country FE					YES	YES	YES	YES	YES	YES	YES	YES
First Stage Regressions												
Chinatrade $_{t-1}$									0.282***	0.269***	0.425***	0.184***
									(0.009)	(0.012)	(0.013)	(0.015)
F test weak instruments									329.56***	167.93***	263.00***	121.58***

Coefficients reported. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

The explanatory powers of the controls are reduced most likely by the inclusion of the lagged dependent variable which dominates the results (Achen 2001). The lagged variable is positive and significant confirming the persistence of conflict and it is not equal to one suggesting that there is no unit root present. The identifying instruments in the first stage regression are statistically significant, as well as the F-test for joint significance which indicates that the instruments are valid.

The F-statistics for overall joint significance of the regressors remains statistically significant.

3.2.2 Intrastate and Interstate Conflict

As further analysis, we separate the conflict variable into intrastate and interstate wars. Interstate conflict takes place between two or more countries. Intrastate conflict includes civil and ethnic wars which take place between the government of a country and internal opposition group(s) without intervention from other countries. These intrastate conflicts were common to the sub-Saharan region during the period under review, such as the DRC civil war, Rwandan genocide, Sierra Leone's resource conflict, or the Zimbabwean ethnic violence. Figure 5 not only indicates a negative linear relationship between globalisation and both intrastate and interstate conflict, but also indicates that there are more recorded cases of internal conflict within sub-Saharan African countries than episodes of external conflict. This statistical evidence supports the results reported in Table 5 that overall globalisation plays a more significant role in decreasing the magnitudes of intrastate conflict than interstate conflict[3], given that there are not that many cases of external conflicts recorded. For example, the only interstate conflict recorded in the late 1990s was between Ethiopia and Eritrea, whereas several civil wars took place during the same period such as in Angola, the DRC, Sierra Leone and Sudan.

[3] We also run dynamic regressions for intrastate and interstate conflict. The results remain robust with similar conclusions drawn. The results are available on request.

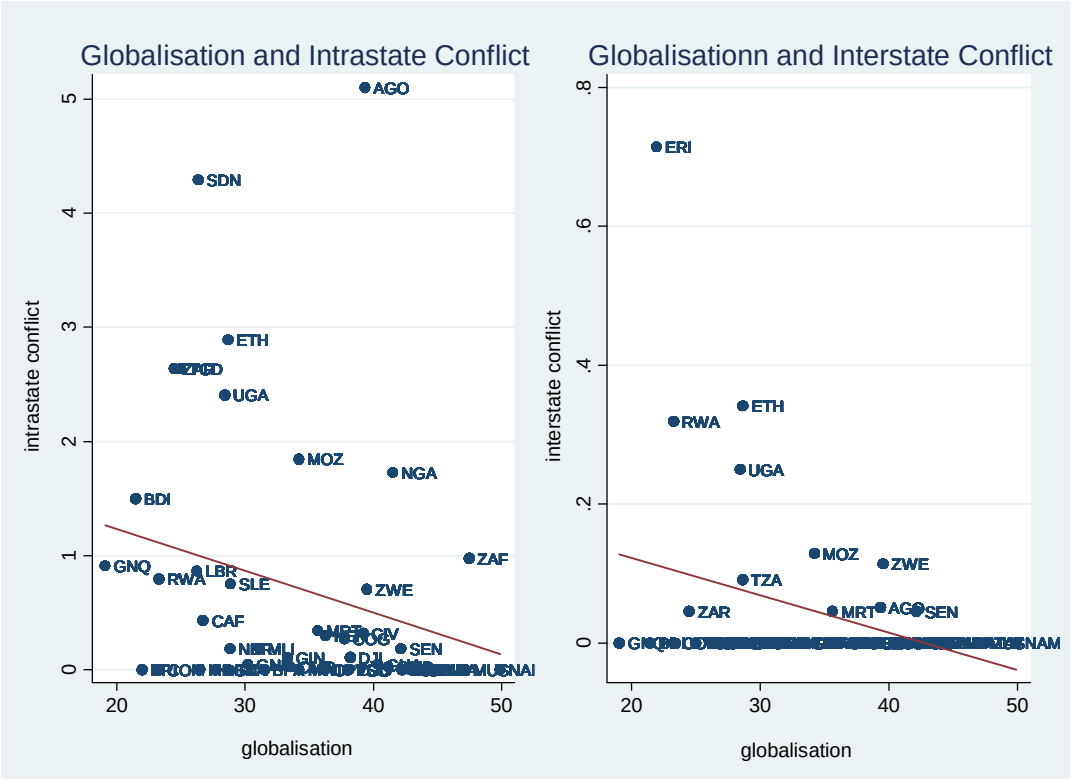


Figure 5: Intrastate vs Interstate Conflict (Source: Dreher *et al.* 2008, Center for Systemic Peace)

According to Pinker (2011) by early 2000 civil wars were declining at a faster rate than new ones were taking place and he attributes this to globalisation, better governance and increase in international organisations. Several studies find that openness to the global economy appears to drive down both the likelihood and the severity of civil conflict (Blanton 2007, Bussman & Schneider 2007, Gleditsch 2008). Furthermore evidence by Russett and Oneal (2001) finds that increased participation in the international community has contributed significantly to the drop in civil wars. A study by Fortna (2008) also finds that the presence of peacekeepers reduced the risk of relapse into civil conflict by reinforcing the security and acting as a barrier between the adversaries.

These results are contrary to Olzak (2011) who finds that the composite measure of globalisation increases fatalities from ethnic armed conflicts, driven by political and social globalisation. She argues that globalisation creates opportunities that may encourage minorities to mobilise against regimes that are not inclusive. However, our results suggest otherwise. The infrastructure and institutions that come with globalisation, particularly social globalisation, have contributed to a civilising process which promotes trade, foreign investment, access to information, and tolerance

of different races, ethnicities and gender. These factors have reduced the magnitude of intrastate violence within sub-Saharan Africa. The coefficients for globalisation and its sub-indices are improved by the inclusion of the instrument. The results are insignificant for interstate conflict. This may be because there are not that many cases of wars between nations within sub-Saharan Africa during the period under review.

The positive effects of democracy on civil conflict, once heterogeneity and endogeneity are accounted for, are in line with Hegre *et al.* (2001) and Reynal-Querol (2002b) who also find that mid-level democracies are more prone to civil wars than full democracies or full autocracies. Moreover Olzak (2011) attributes the positive democracy association to the state capacity (or state strength), *i.e.* strong states compared to weak states have the capacity to suppress civil wars based on their strong bureaucratic administrations. Civil wars are more likely to break out in countries with unstable governments (Fearon & Laitin 2003). These conclusions can be drawn for sub-Saharan African countries which are characterised by mid-level democracies and weak executive constraints.

Table 5: Intrastate vs Interstate Conflict

INTRASTATE CONFLICT	POLS (1)	POLS (2)	POLS (3)	POLS (4)	FE (5)	FE (6)	FE (7)	FE (8)	FE-IV (9)	FE-IV (10)	FE-IV (11)	FE-IV (12)
Globalisation $_{t-1}$	-0.067***				-0.075*				-0.129***			
	(0.013)				(0.044)				(0.032)			
Social globalisation $_{t-1}$		-0.157***				-0.136*				-0.133***		
		(0.018)				(0.069)				(0.032)		
Political globalisation $_{t-1}$			-0.002				-0.025				-0.085***	
			(0.008)				(0.022)				(0.021)	
Economic globalisation $_{t-1}$				-0.047***				-0.021				-0.153***
				(0.017)				(0.038)				(0.055)
Democracy	0.023	0.029**	-0.002	0.018	0.056**	0.072**	0.037	0.047*	0.061***	0.066***	0.052***	0.092***
	(0.014)	(0.014)	(0.016)	(0.014)	(0.025)	(0.033)	(0.027)	(0.025)	(0.019)	(0.020)	(0.018)	(0.024)
Education	-0.012***	-0.022***	-0.008	-0.013**	0.008	0.011	0.012	0.017	0.025**	0.030***	0.030***	0.019
	(0.005)	(0.005)	(0.005)	(0.006)	(0.028)	(0.027)	(0.027)	(0.028)	(0.011)	(0.010)	(0.011)	(0.014)
Resource rents	0.007*	-0.003	0.005	0.007*	0.019**	0.018**	0.016*	0.014	0.005	0.002	0.002	0.012*
	(0.004)	(0.004)	(0.004)	(0.004)	(0.009)	(0.008)	(0.009)	(0.015)	(0.005)	(0.004)	(0.004)	(0.007)
Gdpcap	-0.009**	0.014**	-0.017***	-0.008*	-0.072*	-0.061	-0.075*	-0.128**	-0.066***	-0.063***	-0.068***	-0.148***
	(0.004)	(0.006)	(0.004)	(0.005)	(0.039)	(0.037)	(0.039)	(0.053)	(0.011)	(0.011)	(0.011)	(0.022)
Bordering states	0.032***	0.018***	0.033***	0.030***	0.010	0.007	0.010	0.008	0.009**	0.009**	0.008*	0.007
	(0.004)	(0.004)	(0.004)	(0.004)	(0.010)	(0.010)	(0.010)	(0.010)	(0.004)	(0.004)	(0.004)	(0.005)
Observations	1,653	1,653	1,653	1,503	1,653	1,653	1,653	1,503	1,279	1,279	1,279	1,147
F test	27.15***	38.77***	23.51***	22.82***	3.43***	3.47***	2.16*	1.91	20.38***	21.03***	20.25***	27.87***
R-squared	0.105	0.193	0.094	0.096	0.088	0.121	0.080	0.094	0.0980	0.126	0.0923	0.0831
Number of i					44	44	44	39	44	44	44	39
Country FE					YES	YES	YES	YES	YES	YES	YES	YES
Chinatrade $_{t-1}$									0.285***	0.277***	0.429***	0.182***
									(0.009)	(0.012)	(0.013)	(0.015)
F test weak instruments									325.17***	181.85***	303.18***	141.36***
INTERSTATE CONFLICT	POLS (1)	POLS (2)	POLS (3)	POLS (4)	FE (5)	FE (6)	FE (7)	FE (8)	FE-IV (9)	FE-IV (10)	FE-IV (11)	FE-IV (12)
Globalisation $_{t-1}$	-0.007*				-0.006				-0.012			
	(0.004)				(0.006)				(0.010)			
Social globalisation $_{t-1}$		0.000				-0.002				-0.013		
		(0.001)				(0.006)				(0.011)		
Political globalisation $_{t-1}$			-0.003				-0.003				-0.008	
			(0.002)				(0.002)				(0.007)	
Economic globalisation $_{t-1}$				-0.001				0.003				0.006
				(0.002)				(0.003)				(0.014)
Democracy	0.004**	0.001	0.003*	0.002	0.006	0.003	0.004	0.000	0.009	0.010	0.008	0.002
	(0.002)	(0.002)	(0.002)	(0.001)	(0.005)	(0.004)	(0.003)	(0.002)	(0.006)	(0.007)	(0.006)	(0.006)
Education	-0.002***	-0.002***	-0.001***	-0.002***	-0.010*	-0.010*	-0.010*	-0.005	-0.014***	-0.014***	-0.014***	-0.007**
	(0.001)	(0.001)	(0.000)	(0.001)	(0.006)	(0.006)	(0.006)	(0.004)	(0.003)	(0.003)	(0.003)	(0.004)
Resource rents	0.000	0.000	0.000*	0.000*	-0.000	-0.001	-0.000	-0.001	0.001	0.000	0.001	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Gdpcap	-0.002**	-0.003***	-0.003***	-0.002**	0.001	0.000	0.001	-0.002	-0.000	-0.000	-0.001	-0.009
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)	(0.004)	(0.003)	(0.006)
Bordering states	0.003***	0.003***	0.003***	0.003***	0.004*	0.004*	0.004*	0.003	0.005***	0.005***	0.005***	0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	1,653	1,653	1,653	1,503	1,653	1,653	1,653	1,503	1,279	1,279	1,279	1,147
F test	3.14***	3.13***	3.13***	2.77**	0.74	0.86	0.86	0.77	5.83***	5.81***	5.82***	4.25***
R-squared	0.026	0.024	0.025	0.027	0.019	0.019	0.019	0.015	0.0283	0.0259	0.0265	0.0228
Number of i					44	44	44	39	44	44	44	39
Country FE					YES	YES	YES	YES	YES	YES	YES	YES
Chinatrade $_{t-1}$									0.285***	0.277***	0.429***	0.18***
									(0.009)	(0.012)	(0.013)	(0.015)
F test weak instruments									378.77***	181.85***	303.18***	141.36***

Coefficients reported. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

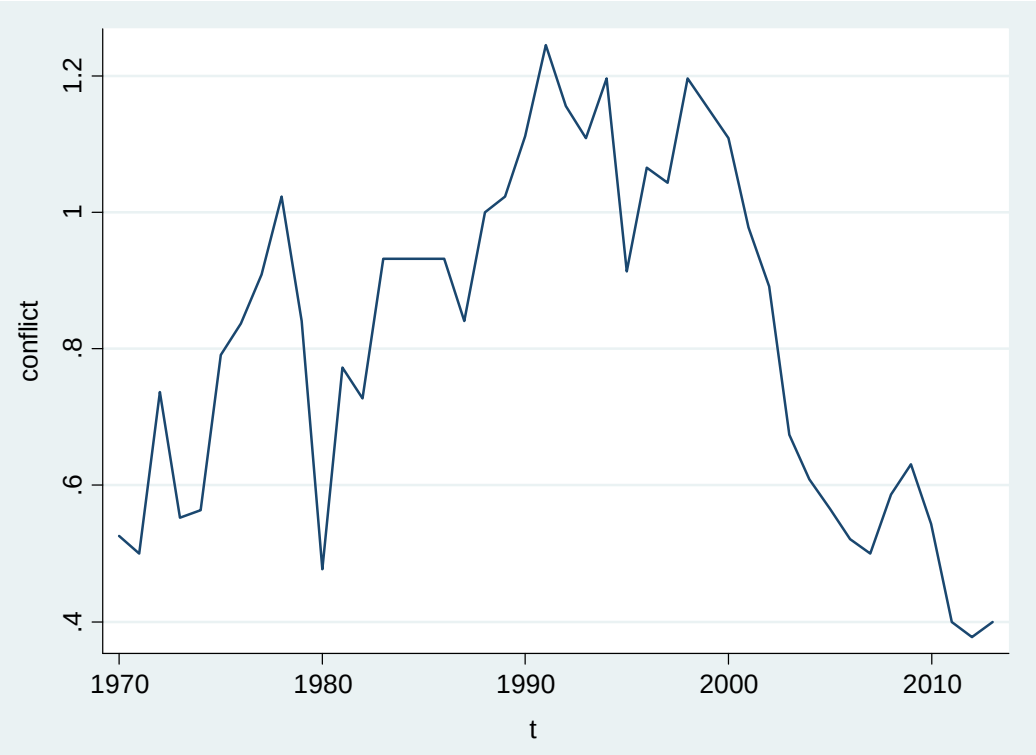
Income per capita is a better predictor for intrastate conflict than interstate, remaining robust in reducing the severity of civil wars in the region. The coefficients for resource rents, though positively related to conflict as predicted, remain insignificant for both intrastate and interstate conflict, while education appears to reduce interstate conflict than intrastate. A frustrated educated population tends to demand better institutions through protests which can increase internal

conflict over external conflict.

Sharing borders with countries involved in conflict also increases the magnitude for interstate conflict compared to intrastate conflict. As mentioned earlier, civil wars can spill over into neighbouring countries. Examples include the civil war in the DRC in 1998 which spilled over the borders into Burundi following the Rwandan genocide, the civil war in Liberia which moved to Sierra Leone and the Ivory Coast crisis in 2010 which saw many of its citizens crossing over into Liberia for safety.

3.2.3 Robustness Checks

According to Pinker (2011), the post Cold War period saw a decrease in conflict because i) the major powers stopped warring with each other and ii) there was an increased interest in the political states of developing economies by the Western countries which saw an increase in the deployment of peacekeeping forces to conflict regions. Figure 6 indicates a general decline in the magnitudes of conflict in sub-Saharan Africa which coincides with the post Cold War period, while prior to that there had been a steady increase in the severity of conflicts with a slight reprieve between 1979 and 1980 during which only a few episodes of conflict were ongoing [4].



[4] See Table 12 in Appendix A for a list of recorded episodes of conflict.

Figure 6: Average Magnitude of Conflict in sub-Saharan Africa (Source: Center for Sustemic Peace)

We include a post cold war dummy (0=1970-1990; 1=1991-2013) to account for this period. The results in Table 6 indicate no significant causal relationship between the dummy and magnitude of conflict, suggesting that the drop in conflict in sub-Saharan Africa is being driven by other factors than the end of the Cold War. This is evident by the consistently negative and significant coefficients for globalisation, social globalisation, and income per capita indicating that the incentives provided by these factors contribute to favourable conditions that lower conflict.

Table 6: Results with Post Cold War Dummy

	1	2	3	4	5	6	7	8	9	10	11	12
CONFLICT	POLS	POLS	POLS	POLS	FE	FE	FE	FE	FE-IV	FE-IV	FE-IV	FE-IV
Globalisation $_{t-1}$	-0.087***				-0.108**				-0.161***			
	(0.016)				(0.044)				(0.043)			
Social globalisation $_{t-1}$		-0.168***				-0.148**				-0.143***		
		(0.019)				(0.068)				(0.037)		
Political globalisation $_{t-1}$			-0.006				-0.038				-0.129***	
			(0.010)				(0.027)				(0.034)	
Economic globalisation $_{t-1}$				-0.051***				-0.017				-0.103
				(0.018)				(0.041)				(0.064)
Democracy	0.016	0.005	-0.000	0.014	0.050	0.061	0.034	0.049	0.069***	0.075***	0.054***	0.091***
	(0.016)	(0.016)	(0.017)	(0.017)	(0.032)	(0.036)	(0.033)	(0.031)	(0.020)	(0.021)	(0.019)	(0.024)
Education	-0.016***	-0.025***	-0.009*	-0.015**	-0.001	0.004	0.003	0.012	0.010	0.016	0.016	0.017
	(0.005)	(0.005)	(0.005)	(0.006)	(0.029)	(0.028)	(0.029)	(0.029)	(0.011)	(0.011)	(0.011)	(0.014)
Resource rents	0.006	-0.005	0.006	0.007*	0.018**	0.016**	0.015*	0.014	0.006	0.002	0.002	0.009
	(0.004)	(0.004)	(0.004)	(0.004)	(0.008)	(0.007)	(0.009)	(0.014)	(0.005)	(0.004)	(0.005)	(0.007)
Gdpcap	-0.010**	0.013**	-0.020***	-0.009*	-0.070*	-0.061*	-0.073*	-0.130**	-0.064***	-0.063***	-0.064***	-0.165***
	(0.004)	(0.006)	(0.004)	(0.005)	(0.037)	(0.035)	(0.038)	(0.052)	(0.011)	(0.011)	(0.011)	(0.023)
Bordering states	0.033***	0.018***	0.036***	0.032***	0.012	0.009	0.013	0.011	0.012**	0.014***	0.009*	0.012***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.009)	(0.010)	(0.009)	(0.009)	(0.005)	(0.005)	(0.005)	(0.005)
Postcoldwar	0.019*	0.032***	0.002	0.009	0.020	0.015	0.011	-0.002	0.007	-0.001	0.020	-0.010
	(0.010)	(0.009)	(0.010)	(0.010)	(0.021)	(0.019)	(0.025)	(0.024)	(0.012)	(0.010)	(0.014)	(0.011)
Observations	1,653	1,653	1,653	1,503	1,653	1,653	1,653	1,503	1,279	1,279	1,279	1,147
F test	0.124	0.210	0.110	0.110	0.092	0.122	0.082	0.097	0.098	0.125	0.085	0.116
R-squared	27.15***	36.51***	24.23***	22.86***	3.82***	3.60***	2.54**	1.96*	17.74***	18.29***	17.49***	25.43***
Number of i					44	44	44	39	44	44	44	39
Country FE					YES	YES	YES	YES	YES	YES	YES	YES
First Stage Regressions												
Chinatrade $_{t-1}$									0.328***	0.370***	0.409***	0.234***
									(0.013)	(0.018)	(0.020)	(0.022)
F test weak instruments									332.42***	169.07***	260.33***	123.42***

Coefficients reported. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

We also split the sample according to the World Bank income classifications[5]. The results for income per capita have been consistently robust in reducing the severity of conflict which is in line

[5]Low income economies are defined as those with a GNI per capita, calculated using the World Bank Atlas method, of $1,045 or less in 2014: Benin, Burkina Faso, Burundi, Central African Republic, Chad, Comoros, the DRC, Eritrea, Ethiopia, Gambia, Guinea, Guinea Bissau, Liberia, Madagascar, Malawi, Mali, Mozambique, Niger, Rwanda, Sierra Leone, Somalia, Tanzania, Togo, Uganda and Zimbabwe.

Middle income economies are those with a GNI per capita of more than $1,045 and less than $4,125: Cape Verde, Cameroon, Congo Republic, Ivory Coast, Djibouti, Ghana, Kenya, Lesotho, Mauritania, Nigeria, Senegal, Sudan,

with most related literature (Blattman & Miguel 2010). However the majority of the countries in sub-Saharan Africa are poor and according to literature low income levels contribute to the outbreak of conflict, therefore we would expect income per capita not to have any significant impact on conflict in the region particularly a negative effect. The results reported in Table 7 contradict the conclusions drawn in literature. The pacifying effects of income per capita are to a larger extent driven by the low income countries as indicated by the larger and robust income coefficients across the three estimators. These results support our earlier conclusions that even a little wealth can buy national security and peace for a country even if that peace is obtained through the oppression of citizens.

On the other hand, the pacifying effects of globalisation are largely driven by the high income countries. This is not surprising as countries within this group such as Botswana, Mauritius, Namibia and South Africa are popular tourist destinations in the region which attract foreign investments and as such have an incentive to avoid conflict. The middle income countries contribute minimally to reducing conflict.

Swaziland and Zambia.

Upper middle income are those with a GNI per capita of more than $4,125 and less than $12,736, while high income economies have GNI per capita of more than $12,736. We combine these two categories into upper income: Angola, Botswana, Equatorial Guinea, Gabon, Mauritius, Namibia and South Africa.

Table 7: Results by Income Classifications

	Low Income			Middle Income			High Income		
	1	2	3	1	2	3	1	2	3
CONFLICT	POLS	FE	FE-IV	POLS	FE	FE-IV	POLS	FE	FE-IV
Globalisation $_{t-1}$	-0.102***	-0.062	-0.141***	-0.083**	-0.027	-0.051	0.181***	-0.233**	-0.733***
	(0.017)	(0.042)	(0.040)	(0.040)	(0.048)	(0.048)	(0.051)	(0.092)	(0.125)
Democracy	-0.009	0.017	0.019	0.022	0.068*	0.066***	0.239***	0.184	0.289*
	(0.017)	(0.032)	(0.027)	(0.025)	(0.032)	(0.020)	(0.062)	(0.131)	(0.157)
Education	-0.006	0.014	0.010	-0.019***	-0.024	-0.006	0.058***	-0.055**	-0.022
	(0.008)	(0.033)	(0.015)	(0.006)	(0.026)	(0.012)	(0.018)	(0.015)	(0.046)
Resource rents	0.028***	-0.008	0.015	-0.007	0.022***	-0.003	0.043***	-0.018	-0.020
	(0.007)	(0.021)	(0.013)	(0.007)	(0.005)	(0.004)	(0.007)	(0.016)	(0.016)
Gdpcap	-0.101***	-0.200***	-0.217***	-0.032***	-0.010	-0.000	-0.106***	-0.009	0.049**
	(0.015)	(0.053)	(0.023)	(0.010)	(0.019)	(0.017)	(0.022)	(0.035)	(0.024)
Bordering states	0.028***	0.015	0.014**	0.025***	0.001	-0.001	0.046**	-0.011	-0.035*
	(0.004)	(0.013)	(0.006)	(0.006)	(0.005)	(0.004)	(0.020)	(0.011)	(0.021)
Observations	900	900	701	507	507	378	246	246	200
F test	39.41***	4.78***	32.31***	7.39***	50.84***	3.79***	8.26***	143.54***	7.60***
R-squared	0.254	0.204	0.212	0.152	0.138	0.056	0.256	0.090	0.0674
Number of i		24	24		13	13		7	7
Country FE		YES	YES		YES	YES		YES	YES
First Stage Regressions									
Chinatrade $_{t-1}$			0.350***			0.198***			0.249***
			(0.012)			(0.013)			(0.021)
F test weak instruments			271.64***			144.29***			62.85***

Coefficients reported. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Another robustness check we undertake is to use the commonly preferred measure for globalisation in literature, trade as a percentage of GDP (Barbieri & Reuveny 2005, Beck & Baum 2000, Hegre *et al.* 2003, 2010). The variable is obtained from the WDIs. The results in Table 8 indicate similar conclusions with openness contributing to reduced magnitudes of conflict, particularly intrastate conflict. The conclusions drawn from the control variables remain in line with previous results. The instrument is also valid and significant, as well as the F-test for weak instruments. The overall joint significance of the regressors is statistically significant.

Table 8: Different Globalisation variable

	CONFLICT			INTRASTATE CONFLICT			INTERSTATE CONFLICT		
	1	2	3	4	5	6	7	8	9
	POLS	FE	FE-IV	POLS	FE	FE-IV	POLS	FE	FE-IV
Trade $_{t-1}$	-0.081***	-0.093***	-0.691***	-0.083***	-0.099***	-0.639***	0.001	0.006	-0.053
	(0.010)	(0.034)	(0.265)	(0.010)	(0.034)	(0.243)	(0.002)	(0.007)	(0.056)
Democracy	0.008	0.061**	0.208***	0.004	0.057**	0.189***	0.003*	0.004	0.018
	(0.013)	(0.025)	(0.075)	(0.013)	(0.024)	(0.069)	(0.002)	(0.004)	(0.016)
Education	-0.014***	0.001	-0.041	-0.012***	0.010	-0.023	-0.002***	-0.009*	-0.018***
	(0.005)	(0.029)	(0.030)	(0.005)	(0.027)	(0.028)	(0.000)	(0.005)	(0.006)
Resource rents	0.007**	0.019**	0.063**	0.007**	0.020**	0.057**	0.000	-0.001	0.005
	(0.003)	(0.009)	(0.027)	(0.003)	(0.009)	(0.025)	(0.000)	(0.001)	(0.006)
Gdpcap	0.003	-0.054*	-0.014	0.007*	-0.054*	-0.016	-0.004***	-0.000	0.002
	(0.004)	(0.031)	(0.027)	(0.004)	(0.032)	(0.025)	(0.001)	(0.002)	(0.006)
Bordering states	0.029***	0.016*	-0.003	0.026***	0.012	-0.007	0.003***	0.004*	0.003
	(0.004)	(0.009)	(0.012)	(0.004)	(0.009)	(0.011)	(0.001)	(0.002)	(0.003)
Observations	1,632	1,632	1,258	1,632	1,632	1,258	1,632	1,632	1,258
F test	41.68***	3.94***	6.24***	39.20***	4.06***	6.79***	3.31***	0.95	4.64***
R-squared	0.162	0.102	0.19	0.152	0.110	0.163	0.025	0.021	0.043
Country FE		YES	YES		YES	YES		YES	YES
Number of i		44	44		44	44		44	44
First Stage Regressions									
Chinatrade $_{t-1}$			0.059***			0.059***			0.059***
			(0.021)			(0.021)			(0.021)
F test weak instruments			43.11***			43.11***			43.11***

Coefficients reported. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

For a final analysis, we use two different dependent variables for conflict. The first conflict variable is taken from the UCDP Battle-Related Deaths dataset version 5-2015 and takes on the value of one when there are at least 25 battle-related deaths in a given country and year. The results in Table 9 are similar to previously reported ones with globalisation and its sub-indices significantly reducing the severity of conflict in the region. Democracy and education are mostly negative and significant in explaining conflict, while resource rents remain positive in line with literature. However, income per capita now increases severity of conflict which contradicts the previous results. This suggests that the response of income on conflict may be affected by the coding of the conflict variable (Blattman & Miguel 2010).

Table 9: Results with UCDP Conflict

	1	2	3	4	5	6	7	8	9	10	11	12
UCDP CONFLICT	POLS	POLS	POLS	POLS	FE	FE	FE	FE	FE-IV	FE-IV	FE-IV	FE-IV
Globalisation $_{t-1}$	-0.192***				-0.380***				-0.664***			
	(0.033)				(0.101)				(0.066)			
Social globalisation $_{t-1}$		-0.058**				-0.235**				-0.726***		
		(0.030)				(0.102)				(0.077)		
Political globalisation $_{t-1}$			-0.139***				-0.224***				-0.434***	
			(0.018)				(0.068)				(0.043)	
Economic globalisation $_{t-1}$				-0.120***				-0.202***				-1.093***
				(0.027)				(0.064)				(0.135)
Democracy	-0.212***	-0.275***	-0.217***	-0.253***	-0.122	-0.209**	-0.157*	-0.190*	0.013	0.052	-0.038	0.150**
	(0.032)	(0.031)	(0.029)	(0.033)	(0.084)	(0.094)	(0.085)	(0.099)	(0.040)	(0.045)	(0.037)	(0.0602)
Education	-0.029***	-0.022**	-0.001	-0.036***	-0.004	0.016	0.011	-0.002	-0.051**	-0.037	-0.021	-0.164***
	(0.011)	(0.011)	(0.011)	(0.011)	(0.026)	(0.029)	(0.028)	(0.022)	(0.022)	(0.023)	(0.022)	(0.0342)
Resource rents	0.013***	0.006	0.018***	0.026***	0.017	0.000	0.008	0.020	0.028***	0.008	0.013	0.107***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.017)	(0.016)	(0.016)	(0.018)	(0.009)	(0.010)	(0.009)	(0.0174)
Gdpcap	0.130***	0.119***	0.110***	0.148***	0.043	0.036	0.045	0.037	0.083***	0.099***	0.073***	0.274***
	(0.012)	(0.012)	(0.011)	(0.013)	(0.038)	(0.039)	(0.038)	(0.069)	(0.022)	(0.024)	(0.022)	(0.0536)
Bordering states	0.010	0.007	0.022***	0.008	0.019	0.014	0.019	0.026	0.007	0.001	0.003	0.0272**
	(0.006)	(0.007)	(0.006)	(0.006)	(0.019)	(0.019)	(0.019)	(0.021)	(0.009)	(0.010)	(0.009)	(0.0114)
Observations	1,643	1,643	1,643	1,493	1,643	1,643	1,643	1,493	1,269	1,269	1,269	1,137
F test	29.49***	28.29***	32.49***	32.44***	3.12**	2.16*	2.59**	2.76**	27.81***	24.28***	28.04***	16.36****
R-squared	0.154	0.134	0.162	0.180	0.112	0.081	0.111	0.076	0.049	0.033	0.057	0.065
Country FE					YES	YES	YES	YES	YES	YES	YES	YES
Number of i					44	44	44	39	44	44	44	39
First Stage Regressions												
Chinatrade $_{t-1}$									0.288***	0.263***	0.440***	0.183***
									(0.009)	(0.012)	(0.013)	(0.015)
F test weak instruments									376.00***	181.27***	313.25***	139.75***

Coefficients reported. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

The second conflict variable is obtained from the Armed Conflict Location and Event Data Project (ACLED) database that measures the casualties reported during periods of conflict. The data is recorded from 1997 and as such does not take into account the independence wars prior to the 1990s. However it does include lower level violence that by other criteria would not be considered conflict such as the terrorism attacks in Nigeria and Kenya between 2012 and 2013.

The results indicate that globalisation drives the results in reducing the number of deaths caused during conflict, particularly when we allow for endogeneity. The external variation from the China trade instrument improves significantly the explanatory powers for overall globalisation, as well as social and political globalisation. The resource rents and bordering states are mainly positive and significant in increasing fatalities, while the remaining control variables are insignificant.

Table 10: Results with ACLED Fatalities

	1	2	3	4	5	6	7	8	9	10	11	12
FATALITIES	POLS	POLS	POLS	POLS	FE	FE	FE	FE	FE-IV	FE-IV	FE-IV	FE-IV
Globalisation $_{t-1}$	0.098				-0.220				-7.749***			
	(0.516)				(1.544)				(2.740)			
Social globalisation $_{t-1}$		-1.323***				-2.121				-5.004***		
		(0.370)				(1.454)				(1.652)		
Political globalisation $_{t-1}$			0.690*				0.134				-6.659***	
			(0.382)				(0.857)				(2.500)	
Economic globalisation $_{t-1}$				-0.308				0.536				-13.57
				(0.447)				(0.780)				(10.07)
Democracy	0.949**	1.044***	0.636	0.886**	-1.384	-0.838	-1.425	-1.447*	-0.434	-0.057	-0.726	0.0487
	(0.408)	(0.396)	(0.427)	(0.402)	(0.893)	(1.083)	(0.868)	(0.804)	(0.788)	(0.798)	(0.795)	(1.494)
Education	0.012	-0.074	-0.024	-0.056	0.206	0.147	0.164	1.167*	1.086*	0.102	0.975*	3.177*
	(0.143)	(0.142)	(0.145)	(0.168)	(0.676)	(0.623)	(0.751)	(0.614)	(0.569)	(0.440)	(0.582)	(1.647)
Resource rents	0.705***	0.486***	0.698***	0.773***	0.384	0.416*	0.363	0.251	0.875***	0.480***	0.727***	2.234
	(0.109)	(0.109)	(0.103)	(0.119)	(0.258)	(0.228)	(0.233)	(0.293)	(0.259)	(0.178)	(0.239)	(1.441)
Gdpcap	-0.072	-0.075	-0.071	-0.036	-1.611	-0.963	-1.727	-2.178**	0.683	0.009	0.739	1.386
	(0.048)	(0.046)	(0.048)	(0.052)	(1.145)	(0.734)	(1.059)	(1.027)	(0.983)	(0.738)	(1.061)	(2.669)
Bordering states	1.011***	0.832***	1.006***	0.942***	0.366**	0.298*	0.372**	0.289*	0.206	0.199	0.281**	-0.0305
	(0.063)	(0.074)	(0.056)	(0.073)	(0.156)	(0.151)	(0.160)	(0.149)	(0.138)	(0.130)	(0.137)	(0.291)
Observations	479	479	479	439	479	479	479	439	479	479	479	439
F test	66.39***	66.76***	72.31***	64.97***	3.23**	2.91**	3.23**	3.16**	7.30***	8.38***	6.48***	3.47***
R-squared	0.336	0.353	0.342	0.351	0.089	0.111	0.089	0.108	0.057	0.07	0.002	0.081
Country FE					YES	YES	YES	YES	YES	YES	YES	YES
Number of i					41	41	41	37	41	41	41	37
First Stage Regressions												
Chinatrade $_{t-1}$									0.159***	0.246***	0.185***	0.064***
									(0.021)	(0.027)	(0.032)	(0.035)
F test weak instruments									78.24***	61.88***	34.27***	41.77***

Coefficients reported. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

4 Conclusion

Pinker's (2011) book is dedicated to explaining the decline in violence witnessed over history. He attributes the declining trend to several historical shifts which have enhanced the influence of more passive human traits and made people less prone to conflict. We view these shifts as modernising processes that encompass globalisation and study the effects of globalisation on violence in sub-Saharan Africa, focusing solely on conflict.

Overall the results are in favour of Pinker's (2011) theory that opening up borders and increasing global trade has increased the opportunity costs of conflict. We find that globalisation, particularly social globalisation, plays a significant role in reducing the magnitudes of conflict. Even when we include conflict-related control variables, use different conflict variables, use different globalisation variable, account for the post cold war period and persistence in the conflict variable, globalisation emerges as the most robust and stronger predictor for lowering magnitudes of conflict. We also find that this result is driven to a large extent by the high income countries.

Income per capita is a significant determinant in reducing conflict, even in a relatively poor region such as sub-Saharan Africa. However, democracy is not a sufficient condition to prevent conflict in sub-Saharan Africa which is characterised by countries with weak constraints on the ruling government. We also have inconclusive evidence for the effects of resource rents and education on conflict. We find significant evidence of spill-over effects from sharing borders with countries involved in conflict.

The results suggest that creating incentives that put greater value on mutual prosperity and advance economic development can contribute to lower conflict in the region. Although we realise that global processes are volatile and the trend of conflict can shift at any time, we contend that today's peace-promoting global forces are dominant enough to offset the negative effects of globalisation. According to Pinker (2011) if these conditions that pacify conflict persist, then episodes will remain low or decline further.

5 Appendix A

The definitions of the magnitude scores of conflict are given in Table 11. The magnitudes reflect multiple factors including state capabilities, interactive intensity (means and goals of conflict), area and scope of death and destruction, population displacement, and episode duration (Marshal 2013).

Table 11: Definitions of Conflict Magnitudes

Magnitude	Description
1	Sporadic or expressive political violence. Applied technologies are relatively low level; objectives are often diffuse and ill-defined and violent actions occur mainly as an expression of general dissatisfaction and/or social control. Oppositional violence is achieved mostly by small militant groups or confined to a very specific time, target, or location. Small population dislocations of short duration may occur from areas directly affected by violence. Deaths usually are less than two thousand. E.g. Cameroon 1984.
2	Limited political violence. Applied technologies are limited. Objectives may be limited and clearly defined allowing warfare to remain confined or the general support for warfare and/or the nature of the opposition may be weak or resistant to provocation. Events are confined to short periods or specific areas of operation or may involve sporadic acts of terrorism over longer periods. Population dislocations of short duration may occur. Deaths range from three to ten thousand. E.g. Guinea 2000-2001.
3	Serious political violence. Technologies of destruction are limited; objectives are usually focused on strategic authority, including control of human and/or material resources. Long periods of relative quiescence may be punctuated by focused operations targeting armed factions, group leaders, or symbols of defiance. Population dislocations respond to specific, localised operations and may be counted in the tens of thousands. Effects of political violence are unevenly distributed, mainly targeting militias, leaders, and symbolic targets. Deaths range from ten to fifty thousand. E.g. Sierra Leone 1991-1998.
4	Serious warfare. Available technologies of destruction are at a lower level and/or applications remain limited; challenger groups' authority, discipline, and objectives are often diffuse and/or indistinct. Areas affected by warfare may be extensive but the intensity and the effects are limited, otherwise, warfare is confined to distinct areas and/or periods of time. If armed conflict is protracted, long periods of dormancy will be punctuated by sporadic operations (re)establishing opposing group boundaries. Population dislocations may exceed one hundred thousand in affected regions. Deaths range from fifty to one hundred thousand. E.g. Liberia 1990-1997.
5	Substantial and prolonged warfare. Technology of destruction is at a high level but goals are limited and often ill-defined. Impetus to warfare is often sustained by issue complexities that make negotiation and compromise difficult. Warfare is intense but mostly confined to particular regions. Population dislocations may exceed one million. Over twenty-five percent of societal production is consumed by the war effort. For challengers, local autonomy may be preferred over complete separation or predominance, allowing negotiated outcomes. Deaths range from one hundred thousand to half a million. E.g. Somalia 1988-present.
6	Extensive warfare. Technology of destruction is extensive but limited; supplemental resources from external supporters are limited. Effects are persistent and development is arrested over the medium-term. Social mobilisation is largely determined by the warfare event but crucial areas are fairly secure from attack. Population dislocations often exceed two million. Over forty percent of societal production is consumed by the war effort. Issues of contention are perceived as vital but terms are somewhat negotiable as neither war party has the capacity to unilaterally impose and enforce a lasting settlement. "Ethnic cleansing" is often viewed as a strategic imperative in the struggle to control a territorial and resource base. Deaths often range from five hundred thousand to one million. E.g. Ethiopia 1974-1991, Sudan 1983-present.
7	Pervasive warfare. Technology of destruction is extensive but resources and productive capacity are limited and, so, continuation of the war effort is often dependent on supplemental resources from external suppliers. Effects are persistent and development is arrested over the medium to long-term. Social roles and mobilisation are almost entirely determined by the culture of warfare. No location within the society is secure from attack, including the largest cities. Population dislocations often exceed five million. Over fifty percent of societal production is consumed by the war effort. Core issues are considered non-negotiable. Deaths exceed one million. E.g. Democratic Republic of Congo 1996-2003.
8	Technological warfare. Massive, mechanised destruction of human resources and physical infrastructure in a war of attrition with medium-term effects, non-combatants are not systematically targeted although great numbers are directly affected by violence. The adversary's military capabilities are the target for destruction; adversaries are of comparable strength. Population dislocations often exceed ten million. Sixty to ninety percent of societal production is consumed by the war effort. Society and human capital are prioritised over military victory (capitulation or stalemate are possible). Deaths often exceed two million. E.g. Angola 1975-2002.
9	Total warfare. Massive, mechanised destruction of human resources and physical infrastructure in a war of attrition, with intentional targeting of both combatant and non-combatant societal factors resulting in widespread destruction and long-term effects. Whole societies are the target for destruction, that is, their capacity for both action and reaction. Adversaries are of comparable strength and compromise is unacceptable. Population dislocations often exceed twenty million. Ninety to one hundred percent of societal production is consumed in the war effort. Military victory (unconditional surrender) is prioritised over all other societal and humanitarian values. Deaths exceed five million. E.g. Rwanda 1994.
10	Extermination and annihilation. Extensive, systematic, and indiscriminate destruction of human resources and/or physical infrastructure with persistent, adverse effects. The social identity itself is the target of Greatly disparate power and weapons' technologies and singularity of intent between adversarial groups make this category possible. E.g. Rwanda 1990-1998.

Source: Center for Systemic Peace

Table 12 lists the conflicts in sub-Saharan Africa between 1970 and 2013.

Table 12: List of Conflicts in sub-Saharan Africa 1970-2013

Country	Episodes of Conflict and duration (1970-2013)	Highest overall magnitude recorded between 1970-2013
Angola	1974-1975 Guerilla war 1975-1991 First and Second civil wars 1992-1994 War of Cities 1998-2002 Third civil war	8
Benin	1972 Transfer from military rule to civilian government	0
Botswana	No episodes recorded	0
Burkina Faso	1980 Military coup and suspension of constitution 1985 Agacher Strip war	0
Burundi	1972 First civil war 1993-1998 Second civil war 2001-2003 Third civil war	6
Cameroon	1984 Military coup	1
Cape Verde	No episodes recorded	0
Central African Republic	1987- ongoing Lord's Resistance Army insurgency 2004-2007 Civil war 2012 Civil war	2
Chad	1978-1987 Chadian-Libyan conflict 1980-1984 Second civil war (Habre revolt) 1989-1990 Third civil war (Deby coup) 1998-2000 Fourth civil war (Togoimi revolt) 2002- ongoing insurgency in the Maghreb 2005-2006 Fifth civil war	4
Comoros	No episodes recorded	0
Democratic Republic of Congo	1977-1978 Shaba civil wars 1996-1997 First Congo war 1998-2003 Second Congo war 1999-2007 Ituri war	7
Republic of Congo	1997-1999 First and Second Brazzaville civil wars	3
Ivory Coast	2002-2004 First civil war 2010-2011 Second civil war	2
Djibouti	1991-1994 Civil war 2008 Djiboutian-Eritrean border war	1
Equatorial Guinea	1969-1979 Genocide against Bubi ethnic minority	4
Eritrea	1972-1974 Civil war 1975-1978 Civil war 1982-1991 Tigrean and Eritrean war 1998-2000 Eritrean-Ethiopian war 2008 Djiboutian-Eritrean border war 2010 Eritrean-Ethiopian border war	5
Ethiopia	1977-1978 Ethiopian-Somali war 1991 Eritrean war of Independence 1998-2000 Eritrean-Ethiopian war 2002-2003 Anyuaa-Nuer civil war 2007- ongoing conflict in southern Somalia 2010 Eritrean-Ethiopian border war	8
Gabon	No episodes recorded	0
Gambia	1994 Military coup	1
Ghana	1972 Military coup 1981 Coup by Jerry John Rawlings	1
Guinea	2000-2001 Civil war	2
Guinea-Bissau	1962-1974 War of Independence 1998-1999 Civil war	1
Kenya	1980 Garissa massacre 1984 Wagalla massacre 2005 Turbi Village massacre 2007-2008 Political crisis	4
Lesotho	1970 Regime change 1998-1999 South African intervention in Lesotho	0
Liberia	1989-1990 First civil war 1992-1995 Second civil war 1996 Third civil war 2002-2003 Fourth civil war	4
Madagascar	1975 Coup 2009 Coup	0
Malawi	No episodes recorded	0
Mali	1985 Agacher Strip War 1990-1995 Civil war 2007-2009 Second Tuareg rebellion 2012 Third Tuareg rebellion	1
Mauritania	1970- ongoing Western Sahara conflict 2002- ongoing Insurgency in the Maghreb 2008 Military coup	3
Mauritius	No episodes recorded	0
Mozambique	1979-1992 Civil war	6
Namibia	1975-1988 Civil war	0
Niger	1990-1995 First Azawad insurgency 2007-2009 Second Azawad insurgency 2012 Tuareg rebellion	1
Nigeria	1967-1970 Civil war 1980-1981 Nigeria-Muslim war 1999-2000 Nigerian Christian-Muslim war 2004 Nigerian Christian-Muslim war	6
Rwanda	1990-1998 Civil war and genocide 2001 Civil war	10
Senegal	1982-2004 Casamance rebellion	2
Sierra Leone	1991-1996 First civil war 1998-2000 Second civil war	3
Somalia	1977-1978 Ethiopian-Somali war 1988-1991 First civil war 1991-1997 Second civil war 2006-2008 Third civil war	5
South Africa	1976 Soweto uprising 1966-1990 South African border war 1987-1994 Inkatha-ANC war	3
Sudan	1955-1972 First civil war 2003-2006 War in Darfur 2005-2010 Chad-Sudan border war 2011-2013 Sudan-South Sudan war	6
Swaziland	No episodes recorded	0
Tanzania	1978-1979 Uganda-Tanzania War	2
Togo	No episodes recorded	0
Uganda	1971-1979 Ugandan coup and military rule 1978-1979 Uganda-Tanzania war 1980-1986 Uganda civil war 1980-2006 Lord's Resistance Army at war with government military	7
Zambia	No episodes recorded	0
Zimbabwe	1972-1979 Rhodesian Bush War 1983-1987 Matabeleland war	4

Source: Political Instability Task Force 2013, Correlates of War List 2010

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