

Democratization, Globalization and Ethnic Violence

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Abstract

Recent research suggests that the concurrence of democratization and globalization in developing economies with a 'market-dominant minority' tends to increase ethnic violence. We explore the theoretical underpinning of this scenario and its particular relevance to Africa. We empirically assess its implications for a sample of 107 countries over the period 1984-2003, employing panel fixed effects regressions with various measures for market dominant minorities to examine under which conditions democracy and globalization increase violence. We find evidence that it is relevant to Sub-Saharan Africa but not generally in developing economies.

Keywords: Globalization; Democracy; Ethnic Violence; Market-dominant minorities

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Democracy, Globalization and Ethnic Violence

I. Introduction

In many developing countries, a small ethnic minority has a large economic advantage over the indigenous majority. Examples are the Chinese in South-east Asia, the Lebanese in West Africa, Indians in East Africa and Whites in Latin America. As these minorities live by and benefit from 'the market', Chua (2003) aptly labelled them 'market-dominant minorities' (MDMs). MDMs typically control large parts of the economy so that globalizing markets favor them disproportionately. These growing inequalities may lead to resentment among the majority which, in democratic settings, cannot be contained by repression - or is even stimulated by office-seeking politicians (Glaeser, 2005). Chua (2003) hypothesized that such resentment causes violent backlashes against the MDM, against markets and against democracy. Thus, the current globalization and democratization waves may be increasing ethnic violence in much of the developing world. The aim of this paper is to examine this possibility empirically.

The issue is of particular relevance to our time given the strong democratization and globalization trends of the last two decades. Never before did so many countries in so little time switch from authoritarian to democratic polities (Jensen and Paldam, 2006). Simultaneously, the second globalization wave gathered pace at a rate and scale which outranks the world's first globalization era from the 1890s to the 1920s (Baldwin and Martin, 1999). While existing evidence suggests that both democracy and globalization tend to decrease conflict *between* countries (O'Neal and Russett, 2000), their relationship with internal conflict is less clear (Sambanis, 2002). The specific hypothesis that we examine is that outbursts of ethnic violence in developing countries with an MDM result from the concurrence of democratization and globalization. This scenario was forcefully argued by Chua (2003:16), who observed that '[i]n the numerous countries around the world that have pervasive poverty and a market-dominant minority, ... the combined pursuit of free markets and democratization has repeatedly catalyzed ethnic conflict in highly predictable ways, with catastrophic consequences, including genocidal violence.'

The 2007 elections in Kenya are a recent example. After the proclaimed victory of president Kibaki, the Luo tribe of presidential candidate Odinga turned violent against the Kikuyu constituency of president Kibaki leading to over 700 casualties. Although not all rich, part of the Kikuyu tribe own much of the wealth in the Kenyan economy.

There are many more such case studies from developing countries around the world. The mechanisms leading to violence seem especially relevant to Africa south of the Sahara, where ethnic diversity, ethnic tensions, large wealth disparities and low violence threshold combine to create explosive societies. We are inspired by such anecdotal evidence to examine the relationship between democratization, globalization and violence along ethnic lines in the presence of an MDM in a general regression framework. We do this first for a panel of 107 countries (both developed and developing) over the period 1984-2003 and then separately for Sub-Saharan Africa. We employ a fixed-effects panel estimator to focus on the variation of ethnic violence within countries. Our measure for the presence of an MDM is taken from the 'Minorities at Risk' project (MAR, 2005), which we compare with an analysis based on a data set that we compiled from Chua (2003).

Previewing our results, we find partial but not global support for our hypothesis. In the global sample, neither democracy, nor globalization, nor a combination of both increase ethnic violence in MDM countries. Instead, the results suggest that they do increase ethnic violence in non-MDM countries. But in our Africa-only analysis we cannot reject the hypothesis. These findings survive a range of specification and robustness checks.

The remainder of this paper is organized as follows. In the next section we discuss our hypothesis and relate it to the literature on civil conflict. In section III we present the data and our empirical framework. In Section IV we present our findings, while in section V we perform various sensitivity analyses and robustness checks. We conclude by reflecting on the merits and shortcomings of our study in section VI and suggest avenues for future research.

II. Literature Review

A large body of literature provides evidence on the determinants of civil conflict and instability. Studies that examine the role of ethnic diversity in fostering conflict include Easterly and Levine (1997), Collier (2001) and Elbadawi and Sambanis (2000). The effect of (changes in) democracy is studied by Sambanis (2001), Elbadawi and Sambanis (2002) and Hegre et al. (2001). Hegre et al. (2003) and Elbadawi and Hegre (2003) investigate whether globalization is related to conflict. Other studies that examine the impact of economic variables include Collier and Hoeffler (2002), Fearon and Laitin (2003) and Miguel et al. (2004). We refer to Sambanis (2002) for a fairly complete review of this literature. Although some of these studies explore interactions between different explanatory variables, the specific hypothesis we study has not been empirically examined yet¹.

Much of this literature is on sub-Saharan Africa and several of its contributors suggest that this is no coincidence. A combination of factors that is specific to Africa may make most of the continent particularly vulnerable to ethnic conflicts. These factors include deep and widespread poverty; large disparities in wealth and income; weak states; young populations; mass youth unemployment and underemployment; and the widespread availability of arms (Collier and Hoeffler 2002, 2004; Fearon and Laitin 2003). Such conditions lower the threshold for the continents' deep ethnic divisions to erupt into violence. Since this constellation of factors cannot be easily captured in a single variable, Elbadawi and Sambanis (2002) and others argues that there is an 'Africa effect' in the study of civil conflict and instability. We take this into account by including a separate analysis of sub-Saharan Africa in the present paper.

The hypothesis we test is not without precedent. One way to view it is as a contemporary version of Huntington's (1968) early work. He argued that resentment by those left behind in an economic growth episode would cause political instability unless restraining (often repressive) institutions were in place. The present study is more

¹ Rodrik and Wacziarg (2005) purport to test the thesis suggested by Chua but actually analyze whether transitions to democracy affect economic growth. We instead examine whether (the concurrence of) globalization and democracy affects ethnic violence levels.

specific in that it posits that economically powerful ethnic minorities unwillingly act as the focal points for resentment and attractors of violence. This does not imply that MDM *become* dominant through globalization; they typically have already been dominant for hundreds of years (as the Chinese in Indonesia).

With regard to the presumed catalysts of violence, two arguments may be proposed. The first is that globalization and free markets increase the probability of violence. Economic globalization – the increase in trade, migration and FDI - has been increasing domestic income inequality over the last thirty years (Goldberg and Pavcnik, 2007). As this typically also implies rising inequality between MDMs and the rest of the population, the result could well be growing popular resentment towards the MDM waiting to erupt in violence against it, if not repressed politically. Alternatively, globalization may bring wealth to those *outside* the traditional MDM, empowering them to organize protest and violence. In the present study we are not able to distinguish between these two channels. But either way, economic globalization would increase the likelihood of violence.

A second argument implied in our hypothesis is that the introduction of democracy in countries with an MDM further contributes to the likelihood of internal violence. This relationship between democracy and violence finds some theoretical support in Glaeser's (2005) model of the market for political hatred. On the supply side of this market, politicians with different income redistribution agendas compete for office. To gain electoral support, they supply hatred towards a minority if this can discredit a more minority-friendly competitor. The demand side of the market consists of rational voters who may believe the hate-creating messages sent out by the politician. Their willingness to do so depends inversely on their incentives to learn about the minority. But incentives to learn are weak particularly if there are high costs of interacting with the minority (due to, for instance, language or cultural differences) or low returns of interacting with the minority (due to, for instance, occupational segregation between the minority and the majority population). Thus Gleaser (2005) emphasizes that political office seeking combined with inter-ethnic ignorance may be the breeding ground for ethnic hatred. Chua's (2003) emphasis on the MDM being a small, wealthy and ethnically different group active in (typically commercial and financial)

sectors not normally accessed by the majority of the population (typically employed in agriculture) fits in naturally with this model. An environment where globalization increases income inequality (Goldberg and Pavcnik, 2007) and thereby popular resentment, would increase the incentives of politicians to supply hatred, increasing the likelihood of violence.

III. Method and Data

We employ a panel data model with country and time specific fixed effects², where we include two-way and three-way interaction effects to test if democracy and globalization spark ethnic violence especially in MDM countries. Time specific effects capture all variation in the data specific to some year, while country fixed effects are included to take account of all characteristics specific to each individual country (e.g., the degree of ethnic fractionalization or the institutional framework). Our baseline model specification is:

$$y_{it} = \alpha + \mu_i + \gamma_t + \beta_1 GL_{it} + \beta_2 DEM_{it} + \beta_3 MDM_i * GL_{it} + \beta_4 MDM_i * DEM_{it} + \beta_5 DEM_{it} * GL_{it} + \beta_6 MDM_i * DEM_{it} * GL_{it} + \beta_7 X_{it} + \varepsilon_{it}$$

where y_{it} is the dependent variable measuring violence resulting from ethnic tensions in country i in year t , α is a constant term, μ_i denotes the country fixed effect of country i , γ_t is the time specific effect of year t . GL_{it} is an indicator measuring the degree of globalization in country i in year t . DEM_{it} refers to a measure of democracy for country i in year t . MDM_i denotes our dummy for a market dominant minority. The vector X is a set of control variables suggested in previous studies on the determinants of civil conflict. In the remainder of this section we discuss our data in more detail. An MDM can be defined as “ an ethnic minority, who for widely varying reasons, tend under market conditions to dominate economically, often to a startling extent, the “indigenous”

² The inclusion of both country and time specific effects is based on various statistical tests. Hausman tests reject the null-hypothesis that the estimates of the fixed effects model are equal to the estimates of a random effects model. F-tests reject the null-hypotheses that all country and time specific effects are zero.

majorities around them.” Chua (2003, p.6). Chua (2003) classifies 53 countries with an MDM and 45 countries without MDM. We list them in Appendix A. A drawback of this classification is its lack of a clear MDM definition. Also, this sample is based on unclear selection criteria for cases in the Chua (2003) book so that an analysis based on it might be driven by confirmation bias. Since these limitations preclude further data set expansion and call into question the validity of the data distilled from Chua (2003), we do not solely rely on this classification, but also consider an alternative source: the Minorities at Risk data set (MAR, 2005).

The MAR project reports on the status of ethnic minorities within nation states. A minority is included in the data set if the country in which they reside has a population greater than 500,000 and the minority has a population of, at least, either 100,000 or one percent of the total population. From this source we use the variable *ecdifxx*, which purports to measure the “economic difference between individual minority groups relative to the majority”.³ The variable *ecdifxx* is scaled from -2 (very advantageous position of the minority) to + 4 (very disadvantageous position of the minority). The economic position of a minority is assessed over six dimensions: income level, ownership of land and other property, incidence of higher education and presence in commerce, the professions and official positions). For our purpose, we construct a dummy variable (labelled ‘*MDM*’) equal to one when there is at least one minority group within a country with an economically advantageous position (*ecdifxx*<0), and zero otherwise. Using this definition, there are 37 countries with an MDM and 118 without an MDM. Country classifications according to the MAR data are listed in Appendix B. In table 1 we compare the two *MDM* variables.

[insert table 1 here]

The two data sets are similar but with some noteworthy differences. They agree in 66 out of 98 cases (67%): in 44 cases both Chua (2003) and MAR indicate no MDM, while in

³ See Minorities at Risk Project codebook (2005).

22 cases both indicate the presence of an MDM⁴. But there are 31 MDMs in the Chua (2003) data not identified by the MAR data. Conversely, the MAR data identify the Berbers in Algeria to be market-dominant, but according to Chua (2003, p. 213) Algeria has no MDM. Since the MAR data set covers more countries than the Chua study and uses transparent and consistent definitions, we use it in our main analysis below. To probe the robustness of our results, we also conduct the analysis with the Chua (2003) data.

It is important to note here that the presence of an MDM is different from ethnic fractionalization, usually defined as the probability that two randomly selected individuals from a population belong to different ethnic groups (e.g. Alesina et. al, 2003). Even when fractionalization scores are low MDMs can be present, as in the case of Russia where a small number of tycoons of Jewish origin dominate economically (Chua, 2003). Conversely, the Central African Republic has no MDM, but scores high on all fractionalization measures.⁵ Moreover, MDMs are defined by ethnicity in general, while fractionalization measures differentiate between race, religion and language. The correlation coefficients in table 2 illustrate the difference between ethnic fractionalization and the concept of a market-dominant minority.⁶

[Insert table 2 here]

Our main democracy indicator is the widely used ‘*polity2*’ variable from the Polity IV project (Marshall and Jaggers, 2002). This variable ranges from -10 (very autocratic) to +10 (very democratic). As there are many different democracy indicators available in the literature (de Haan, 2007), we run auxiliary regressions with alternative democracy indicators to test the robustness of our results. These alternatives include the Gastil index,

⁴ It should be noted that the consistency between the two classifications increases to 75% if all Latin American countries are excluded. Latin America’s economic elites tend to be of lighter skin (it is a ‘pigmentocracy’), but their ethnic affiliation is unclear and they are mostly not listed as a minority in the MAR data. Another reason why the two sources differ is the size restriction included in the MAR criteria, while Chua (2003) also refers to very small groups that are economically dominant

⁵ The fractionalization scores for Russia and the Central African Republic (within brackets) are: ethnic fractionalization 0.25 (0.83), religious fractionalization 0.25 (0.83), language fractionalization 0.44 (0.79).

⁶ It is also important to note that our MDM measure is different from the “ethnic dominance” variable as used by e.g. Collier (2001). “Ethnic dominance” refers to situations in which one ethnic group outnumbers other ethnic groups.

which is based on the level of political rights and civil liberties (Freedom House, 2006), and two ‘democracy’ dummies. The first is taken from Przeworski et al. (2000), who define a democracy as a regime that holds elections in which the opposition has some chance of winning and taking office. The second dummy is due to Vanhanen (2000), who defines democracies by a minimum level of political competition and electoral participation.⁷

To proxy globalization, we use the KOF globalization index (Dreher, 2006), which is an aggregate index of economic, political and social globalization. We will also use its constitutive components in our robustness analysis.

To the best of our knowledge, there exists no source providing information on incidences (and intensity) of ethnic violence. Therefore, we use the International Country Risk Guide (ICRG, 2005) assessments of internal conflicts and ethnic tensions as a proxy for ethnic violence. The variable “internal conflicts” (scaled from 0 to 6) assesses political violence and is based on the occurrence of civil war, the threat of a *coup d’etat*, the incidence of terrorist acts and the extent of civil disorder in a country. The variable “ethnic tension” ranges from 0 to 12 and is an assessment of the degree of tension within a country attributable to racial, nationality, or language divisions.⁸

Arguably, “internal conflicts” and “ethnic tensions” are both incomplete measures of ethnic violence. “Internal conflicts” may well capture more than only violence resulting from ethnic hatred. Conversely, ethnic tensions may not result in actual violence. A scatter plot of the two variables confirms that, in general, countries with severe ethnic tensions have more internal conflict, but also that the correlation is far from perfect (Figure 1). To proxy ethnic violence we therefore use the product of “ethnic tensions” and “internal conflicts” as our dependent variable⁹. While this measure has

⁷ More specifically, democracies are polities in which at least 10% of the electorate votes and the largest political party receives not more than 70% of the votes (Vanhanen 2000).

⁸ In the ICRG data, higher values indicate lower levels of internal conflicts and ethnic tension, respectively. In our analysis, we multiplied each variable by -1 such that higher values imply higher level of conflict (or/and ethnic tension).

⁹ Specifically, we multiply ‘ethnic tensions’ (ranging from -6 to 0) with ‘internal conflict’ (ranging from -12 to 0) and then with -1 in order to obtain ‘ethnic violence’ (ranging from -72 to 0; see Appendix 3). Hence, higher (less negative) values for ‘ethnic violence’ indicate more ethnic violence.

limitations of its own¹⁰, it is arguably a better proxy for internal conflicts related to ethnic tensions than either “internal conflicts” and” “ethnic tensions”.

[Insert figure 1 here]

Although the ICRG data appear suitable, it is conceivable that these country assessments are biased. For example, a country with an MDM (or any other country characteristic) might receive *a priori* a higher score on ethnic tensions even though such tensions might not be present. To account for such a potential bias, we use fixed effects regressions that focus on the within variation of the data. Also, it is possible that country assessments are influenced by a country’s past violence experience. To examine this possibility, it is necessary to differentiate between the potential bias in country assessments and the persistence in ethnic violence. Therefore, we regress the ethnic conflict variable on several objective violence indicators (also interacted with the ethnic fractionalization index of Alesina et al. (2003)) and compare it with a model that also include lags of the explanatory variables¹¹ The R-squared values of both models are 0.80, which supports the view that additional lagged explanatory variables do not contribute much to current assessments of ethnic violence. Appendix C provides descriptive statistics of all variables used in our analysis.

IV. Estimation results

Baseline estimation results are shown in table 3. In columns 1-3 we sequentially examine the one-way, two-way and three-way interaction effects of MDMs, democracy and globalization on ethnic violence using the MAR data. In columns 4-6 we follow the same procedure, but use the data compiled from Chua (2003).

¹⁰ For instance, if in the true model ethnic tensions directly cause internal conflict, then our variable ‘ethnic violence’ is tantamount to ethnic tensions squared. Hence our results should be interpreted with some caution. But note that our results do not hinge on using this particular variable (see section IV).

¹¹ These explanatory variables are based on actual incidences of violence and include: a civil war dummy (Gleditsch et al. 2002 and updates), dummies indicating the presence of small communal conflict and medium communal conflict (Gleditsch et al. 2002 and updates), the number of guerrilla warfare attacks in a country, political revolutions, political assassinations and coups d’etat in a country (Banks 2005) and the number of deadly terrorist attacks in a country (MIPT, 2004).

[insert table 3 here]

The results using the classification of MAR and those obtained with the Chua (2003) data are very similar. In the first (and fourth) specification the coefficient on the level of democracy is insignificant, but all coefficients in specification 2-3 (and 5-6) are highly significant, with the exception of globalization in models (3) and (5).¹² This implies that the effects of globalization and democracy are non-linear and interaction effects are present in the data. However, table 3 does not yet allow us to evaluate our hypothesis; the estimated coefficients (and their standard errors) in interaction analysis are meaningless unless they are evaluated conditional on the other interacted variables, by calculating appropriate marginal effects (see Brambor et al, 2006). Before we do so, we first account for a potential omitted variable bias by including different control variables that have been suggested in the literature. The results are shown in table 4.

[insert table 4 here]

In columns 1-4 we add several economic variables i.e., GDP per capita, real GDP growth, the unemployment rate and inflation (all variables are taken from the World Development Indicators, 2007). Confirming earlier findings in the literature, we find that lower income, lower income growth and higher unemployment are significantly related to more ethnic violence. But, more importantly, the sign and significance of the variables of interest are unchanged. In column 5 we include a measure of wage inequality from the University of Texas Inequality Project (UTIP, 2006), but its impact is insignificant. Next, we include a measure of corruption (ICRG, 2005) in the model as a proxy for weak governance. Although we focus on the within-country variation of the data, we find that this variable is highly significant. Finally, we examine whether ethnic violence is affected by regional ethnic conflicts. To do so, we follow the approach of Ades and Chua (1997), who

¹² We also ran the same regressions using ‘ethnic tensions’ and ‘internal conflicts’ as our dependent variable. The results of these regressions, which are available on request, were nearly identical to the results we present in tables 6 and 7 and therefore we use only the aggregate indicator in the remainder of the analysis.

construct an index for regional political instability. This index is a (weighted) average of the instability observed in country i 's neighbouring countries. In our case, we calculate this index for country i in year t on the basis of the ethnic violence scores observed in the neighbouring countries. The results shown in column 7 indicate that regional ethnic violence is strongly related to domestic ethnic violence. In column 8 we add all significant control variables to the model. Unemployment and economic growth are now insignificant. Therefore, we exclude them in column 9, which is our preferred specification.¹³ We repeat this procedure using the Chua (2003) data in column 10, and again find that results are insensitive to the choice of MDM data.

In order to interpret our results, we plot the marginal effects and their 95% confidence intervals in four graphs. Figures 2 and 3 show the marginal effects of democracy and globalization for MDM countries and non-MDM countries in the global sample, respectively. Figures 4 and 5 do the same for a sample of sub-Saharan African countries¹⁴.

[Insert figures 2 and 3 here]

Figures 2a and 2b show that in MDM countries, democracy and globalization are not significantly related to ethnic violence. The effects of both variables do not depend on each other. In figure 3a and 3b the same plots are depicted, but now for non-MDM countries. As figure 3a shows, we now do find an interaction effect between globalization and democracy. Specifically, democracy increases ethnic violence once a country has a relatively high level of globalization. For instance **...<countries>** are highly globalized and have been democratizing since the 1980s. They have no MDM but score high on our ethnic conflict variable which, our analysis suggests, would be attributable to their simultaneous democratization and globalization. Again, we find largely no effect of globalization alone on ethnic violence – only for very autocratic countries globalization is just significant. On the basis of these results, we find no evidence that globally, democracy and globalization spark ethnic violence in MDM countries.

¹³ We also did a general to specific model selection procedure in which we dropped the least significant variable until only significant variables remained. The outcome is identical to specification 9.

¹⁴ The figures are based on the results of column 9, table 4.

As the literature review showed, the large ethnic disparities and low violence thresholds of many Sub-Saharan African countries suggest that a separate ‘African’ analysis is warranted theoretically (i.e., not just as an exercise in data mining). Figure 4a shows that democracy increases ethnic violence in MDM countries in Sub-Saharan Africa; and that the effect is larger for high levels of globalization. In addition, globalization decreases ethnic violence in autocratic countries, but the effect becomes positive (but insignificant) for higher values of democracy. We find the opposite effect of democracy in non-MDM countries in Sub-Saharan Africa (figure 5a), i.e., democracy decreases ethnic violence in these countries – especially for high levels of globalization. Figure 5b shows that in non-MDM countries in Sub-Saharan Africa, globalization significantly increases ethnic violence, most strongly at low levels of democracy.

Contrary to our findings in the global sample, these graphs support the hypothesis suggested in this paper for the African context; but they also modify it. We find that while globalization is related to more ethnic violence in Africa, higher levels of democracy weaken globalization’s violent impacts. This is in line with Hegre et al (2001) who find that regimes with low levels of democracy are most prone to conflicts.

[Insert figures 4 and 5 here]

V. Robustness Analysis

We subjected both the global-sample and the African-sample analysis to a number of additional robustness and specification checks.¹⁵ First, we replace our democracy and globalization indices by a number of alternative measures. That is, we substitute the polity2 index with the measures of Vanhanen (2000), Przeworski et al. (2000) and the Freedomhouse (2006) and we replace the globalization index by the disaggregated measures (economic, political and social globalization) of globalization of Dreher (2006). None of these changes affects our results. Secondly, we consider an alternative approach

¹⁵ As explained in the previous section, the estimation results can only be interpreted conditional on the other covariates. Therefore, we opt not to present a table with estimation results; but all results are available on request.

to measure ethnic violence. We regard ethnic violence as a latent concept and use factor analysis on a number of violence indicators as well as the individual ICRG measures.¹⁶ The correlation between our preferred index and the factor score is 0.77. Our results are unaffected.¹⁷

Theoretically, it is possible that our results suffer from attrition bias, as a number of ethnically diverse countries (e.g. Yugoslavia) disintegrated and dropped out of the sample, and were replaced by their ethnically more homogenous successor states (e.g. Slovenia). However, if we avoid this bias by including only countries for which we have data throughout the entire time period (89 countries, N=1708), our findings still stand: attrition bias is not driving the results, either in the global sample or the African sample.

We further examine the robustness of our results using alternative estimation techniques. First, we employ panel corrected and autocorrelated standard errors to account for possible time dependency in the data. Next, we estimate the model using different robust estimators. We use the robust regression routine of Stata 9.2, which is based on iteratively least squares (Huber and Tukey bi-weight functions). Furthermore, we also use the Least Trimmed Squares estimator by Rousseeuw (1985). We conclude that our results are not driven by time dependence or outliers in the data.

Finally, we explore sample heterogeneity by estimating the model also for a sub-sample in which we exclude all OECD countries, since these countries have been almost always stable democracies and (apart from Mexico) do not have an MDM. Omission of these countries does not affect our results.

VI. Concluding Remarks

Why did many developing countries witness outbreaks of ethnic violence over the last two decades? Chua (2003) suggested that the root cause is the concurrence of globalizing markets and increasing democracy in countries where a small ethnic minority (an

¹⁶ Besides the ICRG assessments, we used the same violence indicators as mentioned in section 3. See footnote 13.

¹⁷ We also run the analysis using (only) the civil war dummy as dependent variable. Again the results were very similar to our main results.

‘MDM’) economically dominates the indigenous majority. This explanation can be understood as a contemporary application of the strand of literature building on Huntington’s (1968) work on growth and conflict. The underlying mechanisms may well follow Glaeser’s (2005) exposition of ethnic strife between economically segregated ethnic groups, which is driven by the electoral process.

In this paper we empirically test if democracy and globalization spark ethnic violence especially in MDM countries. We contribute to the literature in two ways. First, we assign a pivotal role to market-dominant minorities, an approach not used in earlier studies. We use different sources to identify these minorities and find that there are substantial differences with conventional measures of ethnic fractionalization. Our second contribution is that we focus on the interaction of ethnic differences, democracy and globalization. This adds to the existing literature which has mainly focused on the direct impact of these variables.

On the basis of our empirical analysis we conclude that there is no evidence for a worldwide joint effect of democracy and globalization on ethnic violence in countries with an MDM. Worries about a ‘World on Fire’ effect of increasing violence in developing countries spurred by globalization, are not restricted to the popular press, but are also publicised by academics, as e.g. in the Chua (2003) book. This analysis suggests that these worries are misplaced for most developing countries insofar MDMs are assigned a special role in the process.

But another finding is that globally, the combination of democracy does robustly increase ethnic violence in countries *without* market-dominant minorities, but only at high levels of globalization. This suggests that there is a worldwide joint effect of democracy and globalization on ethnic violence in some intensely globalizing developing countries; but also that market-dominant minorities are not a sufficient nor a necessary condition for this to occur. The need is then for an alternative account that links globalization, democracy and violence, without invoking the concept of a market-dominant minority.

Our third finding is that when we focus on the region most infamous for its ethnic violence, we do find strong evidence for the ‘MDM hypothesis’. In Sub-Saharan Africa, democracy is clearly associated with ethnic conflict; and the effect increases as countries

in the region are globalizing more. Importantly, we find that democracy decreases ethnic conflict when market-dominant minorities are absent. It appears therefore that in Sub-Saharan Africa, market dominant minorities are indeed (unwittingly) moderators in the combustible effect of democracy plus globalization, by acting as focal points for popular resentment. We have suggested some of the reasons for the Sub-Saharan African conditions responsible for this 'Africa effect' in the present study. These factors include deep and widespread poverty; large disparities in wealth and income; weak states; young populations; mass youth unemployment and underemployment; and the widespread availability of arms. It is beyond the scope of the present study to systematically investigate which if these effects play a role, and this merits more attention in future research.

References

Ades, A. and H. Chua (1997). "Thy neighbor's curse: regional instability and economic growth", *Journal of Economic Growth*, 2: 279-304.

Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S. and R. Wacziarg (2003). *Fractionalization*, *Journal of Economic Growth*, 8: 155-194.

Baldwin, R. and P. Martin (1999). "Two waves of globalization: superficial similarities, fundamental differences", NBER Working Paper, 6904, *National Bureau of Economic Research, Cambridge, Mass. (January)*.

Banks, A. (2005). *Cross National Time Series Data Archive, 1815-2003. Binghamton, NY.*

Brambor, T., Clark, W. and M. Golder (2006). "Understanding interaction models: improving empirical analyses", *Political Analysis*, 14: 63-82.

Chua, A. (1995). "The privatization-nationalization cycle: the link between markets and ethnicity in developing countries", *Columbia Law Review*, 95: 223-303.

Chua, A. (1998). "Markets, democracy, and ethnicity: towards a new paradigm for law and development", *Yale Law Journal*, 108: 1-107.

Chua, A. (2000). "The paradox of free market democracy: rethinking development policy", *Harvard International Law Journal*, 41: 287-379.

Chua, A. (2003). *World On Fire. How Exporting Free Market Democracy Breeds Ethnic Hatred and Global Instability, New York: Anchor Books.*

Collier, P. (2001). "Ethnic diversity: an economic analysis, *Economic Policy – A European Forum*, 32: 127-166.

Collier, P. and A. Hoeffler (2002). "On economic causes of civil war", Oxford Economic Papers, 50: 563-73.

Collier, P. and A. Hoeffler (2004). "Greed and grievance in civil war: On economic causes of civil war", Oxford Economic Papers, 56 : 563-595

De Haan, J. (2007). "Political institutions and economic growth reconsidered", Public Choice, 127: 281-292.

Dreher, A. (2006). "Does globalization affect growth? Evidence from a new index of globalization", Applied Economics, 38: 1091-1110.

Easterly, W. and R. Levine (1997). "Africa's growth tragedy: policies and ethnic divisions. Quarterly Journal of Economics, 112: 1203-50.

Elbadawi, I. and N. Sambanis (2000). "Why are there so many civil wars in Africa? Understanding and preventing violent conflict?", Journal of African Economies, 9: 244-69.

Elbadawi, I. and N. Sambanis (2002). "How much war will we see? Explaining the prevalence of civil war", Journal of Conflict Resolution, 46: 307-34.

Elbadawi, I. and H. Hegre, (2003). "Globalization, economic shocks, and armed conflict". Paper presented to the 2nd ECPR conference, Marburg, Germany, September 18-21.

Fearon, J. and D. Laitin (2003). "Ethnicity, insurgence and civil war", American Political Science Review, 97: 75-90.

Freedom House (2006). Freedom in the World Historical Rankings. Data Downloadable: <http://www.freedomhouse.org>.

Glaeser, E. (2005). "The political economy of hatred", Quarterly Journal of Economics, 120:

45–86.

Gleditsch, N., Wallensteen, P., Eriksson M., Sollenberg M. and H. Strand (2002). “*Armed conflict 1946–2001: a new dataset*”, *Journal of Peace Research*, 39: 615–637.

Goldberg, P. and N. Pavcnik (2007). “*Distributional effects of globalization in developing countries*”, *Journal of Economic Literature*, 45: 39-82.

Hegre, H., Ellingsen, T., Gates, S. and N. Gleditsch (2001). “*Towards a democratic civil peace? Democracy, political change and civil war, 1816-1992*”, *American Political Science Review*, 95: 16-33.

Hegre, H., Gleditsch N. and R. Gissinger (2003). “*Globalization and internal conflict*”. pp. 251-275 in Schneider, G., Barbieri, K. and N. Gleditsch, (eds), *Globalization and Armed Conflict*. Boulder, CO: Rowman & Littlefield.

Huntington, S. (1968). “*Political Order in Changing Societies*”. New Haven, CT: Yale University Press.

ICRG (2005). *International Country Risk Guide*. The PRS Group. New York.

Minorities at Risk Project (2005) College Park, MD: Center for International Development and Conflict Management. Retrieved from <http://www.cidcm.umd.edu/mar/> on: 17 April 2007.

Marshall, M. and K. Jaggers (2002). Polity IV Data Set. [Computer file; version p4v2002] College Park, MD: Center for International Development and Conflict Management, University of Maryland.

Miguel, E., Sathyanath, S. and E. Sergenti (2004). “*Economic shocks and civil conflict: an instrumental variable approach*”, *Journal of Political Economy*, 112: 725-751.

MIPT (2004). *Memorial Institute for the Prevention of Terrorism*. <http://www.tkb.org>

O'Neal, J. and B. Russett (2000). *Triangulating Peace: Democracy, Interdependence, and International Organizations*. New York: Norton.

Jensen P. and M. Paldam (2006). "The pattern of democracy in the 20th century. A study of the Polity Index", forthcoming in: Casas, J. and P. Schwartz, (eds.), *Problems of Democracy*. Edward Elgar, Cheltenham, UK.

Przeworski, A., Alvarez, M., Cheibub, J. and Limongi, F. (2000). "Democracy and Development: Political Regimes and Economic Well-being in the World", 1950-1990, New York: Cambridge University Press.

Rodrik, D. and R. Wacziarg (2005). "Do democratic transitions produce bad economic outcomes?", *American Economic Review*, 95: 50-56.

Rousseeuw, P. (1985). "Multivariate estimation with high breakdown point", in: Grossmann, W., Pflug, G. Vincze, I. and Wertz, W. (eds.), *Mathematical Statistics and Applications*, Dordrecht: D. Reidel Publishing Co.

Sambanis, N. (2002). "A review of recent advances and future directions in the literature on civil war", *Defense and Peace Economics*, 13: 215-243.

Sambanis, N. (2001). "Do ethnic and non-ethnic civil wars have the same causes? A theoretical and empirical inquiry (Part 1)", *Journal of Conflict Resolution*, 45: 259-82.

Schumpeter, J A (1942). *Capitalism, Socialism, and Democracy*. New York: Harper and Brothers.

UTIP (2006). *University of Texas Inequality Project*. Data Set downloadable at: <http://utip.gov.utexas.edu/>

Vanhanen, T. (2000). "A new dataset for measuring democracy, 1810-1998", *Journal of Peace Research*, 37: 251-265.

Tables and Figures

Table 1. Cross tabular of MDM classification Chua (2003) with MAR (2005) data.

		Chua (2003)		
		MDM no	MDM yes	Total
MAR (2005)	no	44	31	75
	yes	1	22	23
Total		45	53	98

Sources: Chua (2003), Minorities at Risk project (2005).

Table 2. Correlation coefficients between MDM and fractionalization measures.

	MDM MAR (2005)	MDM Chua (2003)
Ethnic fractionalization	0,27	0,51
Religious fractionalization	0,22	0,14
Language fractionalization	0,32	0,46
N	149	95

Sources: Chua (2003), Minorities at Risk project and Alesina et. al (2003).

Table 3. Estimation results baseline model.

Dependent variable: ethnic violence	(1)	(2)	(3)	(4)	(5)	(6)
MDM variable:	MAR	MAR	MAR	Chua	Chua	Chua
GL	10.514 (7.64)***	3.895 (2.18)**	1.417 (0.76)	11.882 (7.57)***	2.826 (1.41)	-4.655 (2.10)**
DEM	0.021 (0.28)	-1.354 (7.01)***	-1.746 (7.97)***	0.135 (1.41)	-2.485 (7.72)***	-3.786 (10.59)***
MDM*GL		-10.723 (5.66)***	-7.288 (3.75)***		-4.511 (2.75)***	4.506 (2.18)**
DEM*GL		0.679 (6.23)***	0.962 (7.49)***		0.875 (7.78)***	1.721 (11.05)***
MDM*DEM		1.282 (9.67)***	2.877 (9.49)***		1.579 (5.71)***	3.692 (9.01)***
MDM*DEM*GL			-1.164 (5.94)***			-1.411 (6.86)***
Observations	1991	1991	1991	1563	1563	1563
Countries	107	107	107	80	80	80
R-squared	0.33	0.37	0.38	0.30	0.35	0.36
F-test country fixed effects, prob > F	0.00	0.00	0.00	0.00	0.00	0.00
F-test time fixed effects, prob > F	0.00	0.00	0.00	0.00	0.00	0.00
Ramsey Reset test prob > F	0.45	0.07	0.14	0.83	0.33	0.95

Robust t-statistics in parentheses. All regressions include a constant and country and time specific effects (not shown).

* significant at 10%; ** significant at 5%; *** significant at 1%. GL is the globalization variable. DEM refers to the democracy measure and MDM is the market-dominant minority dummy.

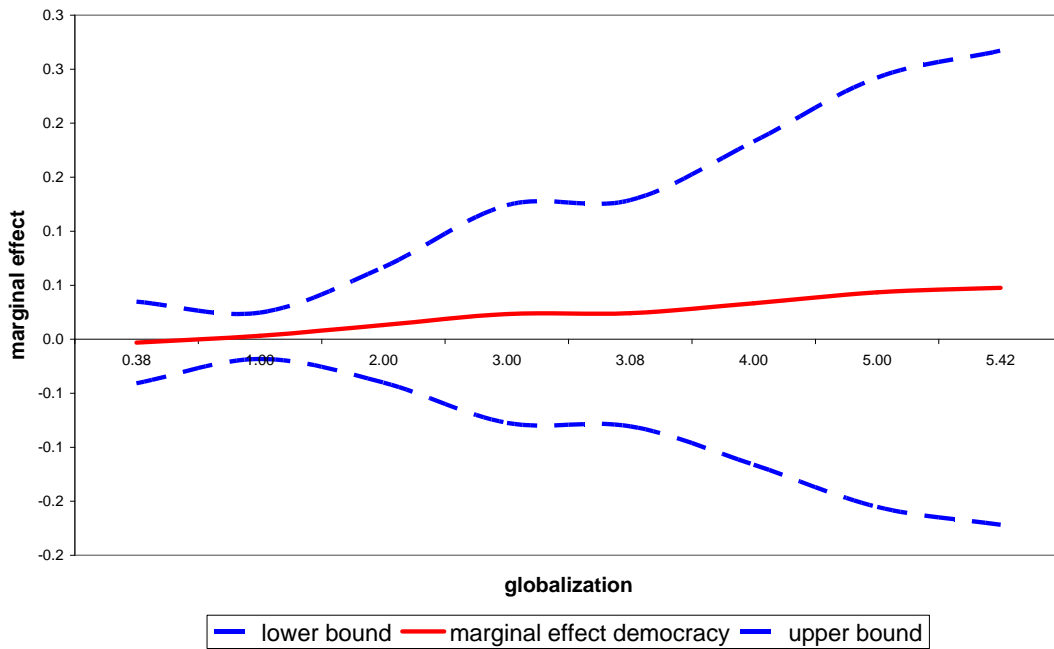
Table 4. Estimation results with additional control variables.

Dependent variable: ethnic violence	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
MDM variable:	MAR	MAR	MAR	MAR	MAR	MAR	MAR	MAR	MAR	chua
GL	4.178 (2.19)**	0.996 (0.54)	1.367 (0.46)	1.117 (0.60)	5.940 (2.06)**	0.912 (0.47)	1.577 (0.86)	2.799 (0.89)	2.906 (1.51)	0.009 (0.00)
DEM	-1.915 (8.63)***	-1.754 (8.02)***	-2.241 (5.83)***	-1.760 (8.06)***	-2.760 (8.24)***	-1.722 (7.25)***	-1.413 (6.53)***	-1.602 (3.59)***	-1.578 (6.79)***	-2.614 (6.65)***
MDM*GL	-7.408 (3.80)***	-6.882 (3.53)***	-13.982 (4.48)***	-6.799 (3.47)***	-16.829 (3.61)***	-7.594 (3.75)***	-6.839 (3.48)***	-12.685 (3.87)***	-6.659 (3.21)***	2.874 (1.30)
MDM*DEM	2.701 (8.95)***	2.864 (9.43)***	1.861 (2.36)**	2.895 (9.54)***	5.740 (6.04)***	3.133 (9.84)***	2.171 (6.77)***	2.146 (2.62)***	2.269 (6.84)***	2.355 (5.38)***
DEM*GL	1.049 (7.87)***	1.022 (7.93)***	1.092 (5.21)***	1.022 (7.96)***	1.398 (7.25)***	1.012 (7.48)***	0.765 (5.88)***	0.796 (3.31)***	0.920 (6.74)***	1.319 (7.13)***
MDM*DEM*GL	-1.057 (5.25)***	-1.214 (6.18)***	-0.667 (1.45)	-1.238 (6.29)***	-2.710 (4.09)***	-1.330 (6.31)***	-0.781 (3.78)***	-0.824 (1.77)*	-0.857 (3.82)***	-0.834 (3.73)***
ln(GDP per capita)	-16.514 (8.88)***							-11.753 (3.37)***	-15.885 (7.60)***	-16.549 (6.59)***
Real GDP growth		-0.106 (1.75)*						-0.073 (0.80)		
Unemployment			0.464 (3.88)***					0.147 (1.22)		
Inflation				0.000 (1.29)						
Wage Inequality					-3.441 (0.29)					
Corruption						1.541 (8.08)***		1.519 (5.81)***	1.654 (8.87)***	1.619 (7.28)***
Regional ethnic violence							0.269 (8.70)***	0.182 (4.49)***	0.269 (8.88)***	0.248 (6.97)***
Observations	1957	1972	1173	1975	1026	1956	1991	1163	1922	1515
Countries	106	107	94	107	95	107	107	94	106	79
R-squared	0.40	0.38	0.37	0.38	0.47	0.41	0.40	0.41	0.45	0.43
F-test fixed country effects, prob>F	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F-test fixed time effects, prob>F	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ramsey Reset test, prob >F	0.61	0.14	0.34	0.37	0.72	0.15	0.31	0.24	0.82	0.29

Robust t-statistics in parentheses. All regressions include a constant and country and time specific effects (not shown). GL is the globalization variable. DEM refers to the democracy measure and MDM is the market-dominant minority dummy.

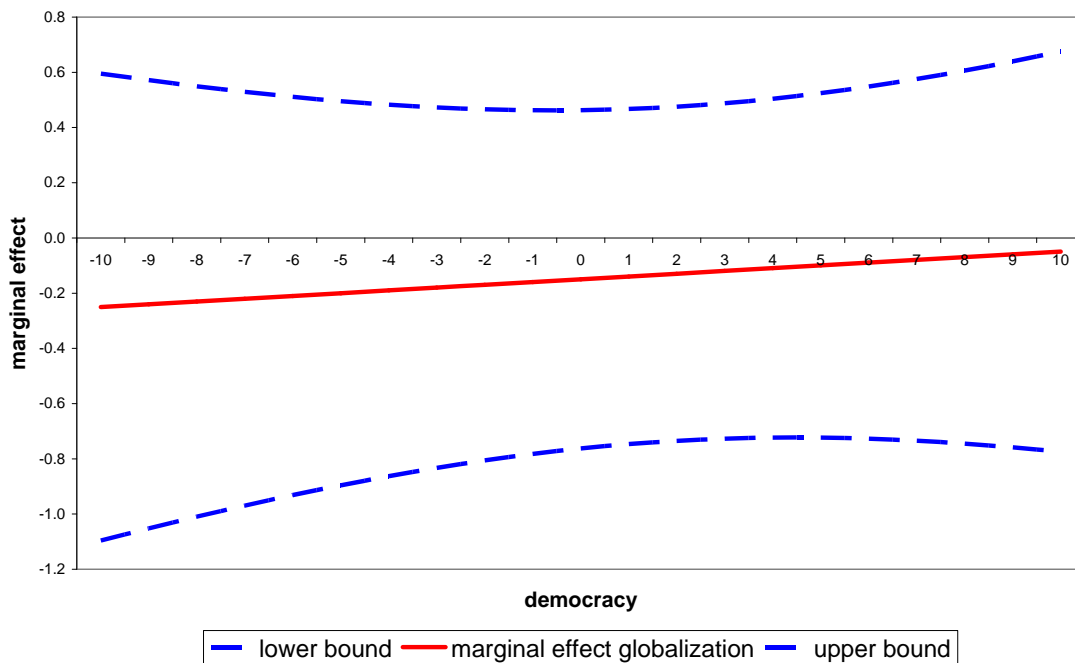
* significant at 10%; ** significant at 5%; *** significant at 1%

Figure 2a. Marginal effect on ethnic violence of democracy in MDM countries.



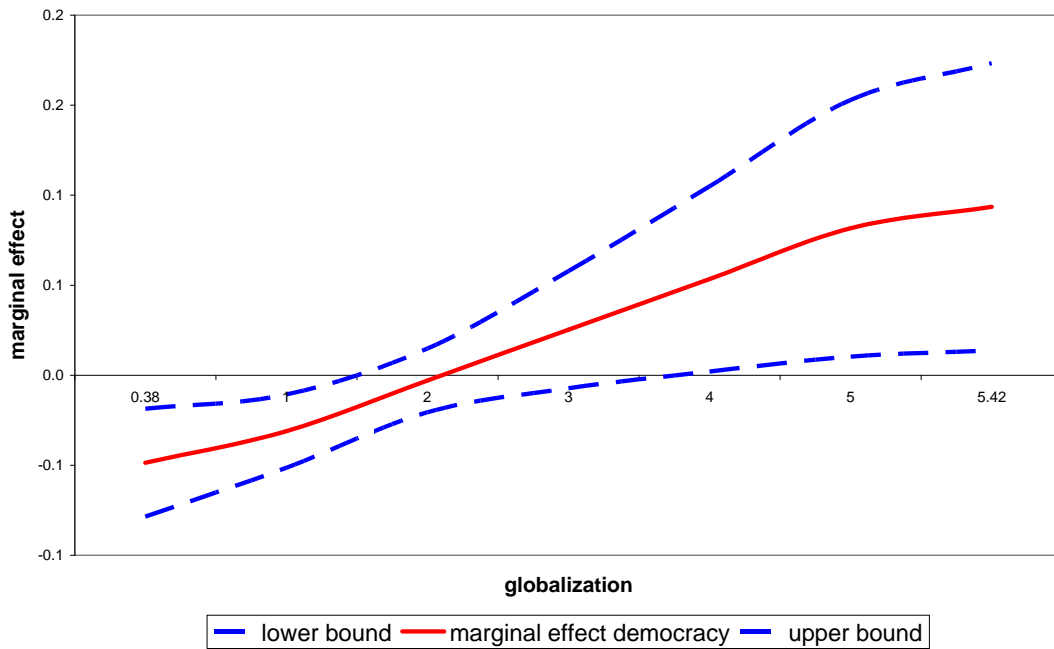
Note: The point estimates are calculated on the basis of model 9 in table 4. The lower and upper bound give the 95% confidence interval.

Figure 2b. Marginal effect on ethnic violence of globalization in MDM countries.



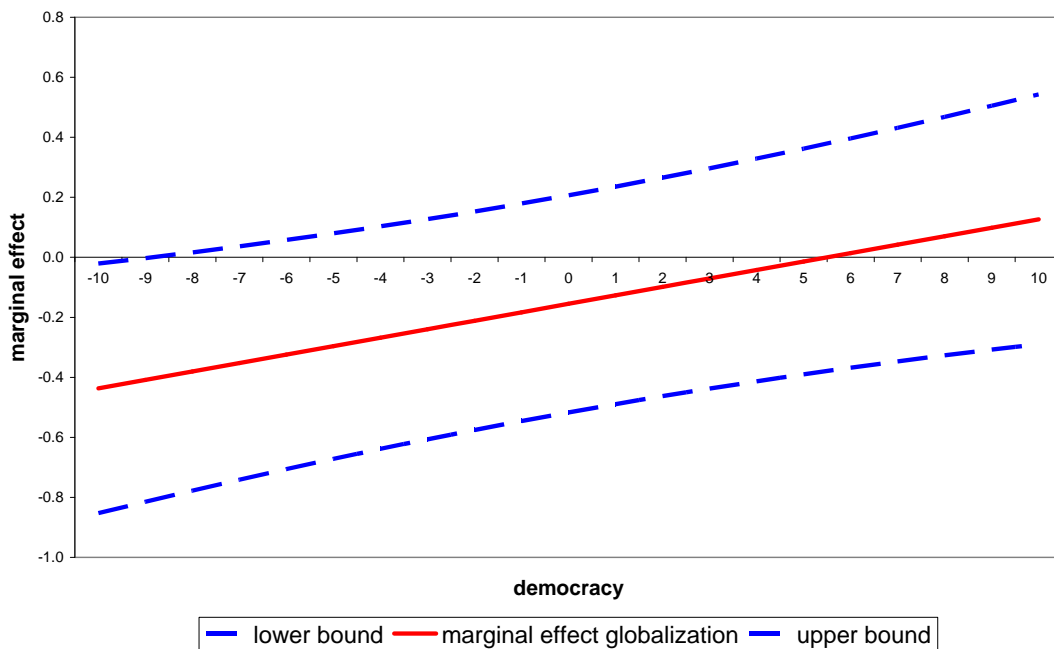
Note: The point estimates are calculated on the basis of model 9 in table 4. The lower and upper bound give the 95% confidence interval.

Figure 3a. Marginal effect on ethnic violence of democracy in non- MDM countries.



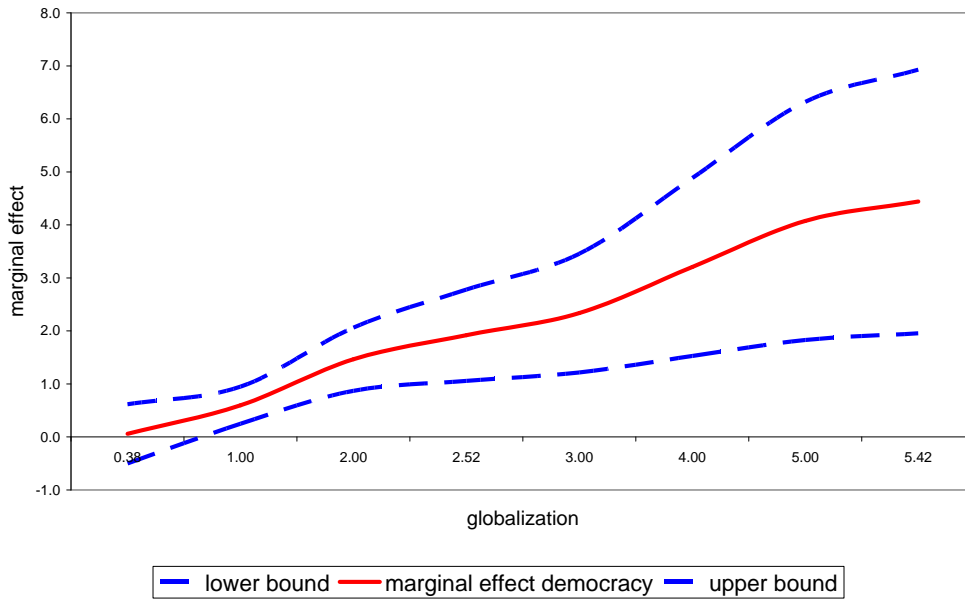
Note: The point estimates are calculated on the basis of model 9 in table 4. The lower and upper bound give the 95% confidence interval.

Figure 3b. Marginal effect on ethnic violence of globalization in non- MDM countries.



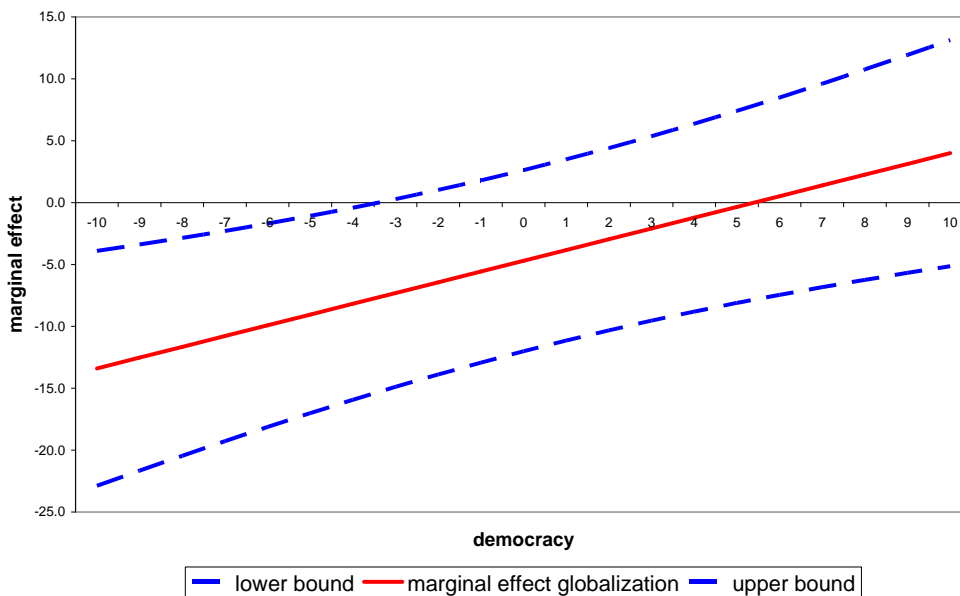
Note: The point estimates are calculated on the basis of model 9 in table 4. The lower and upper bound give the 95% confidence interval.

Figure 4a. Marginal effect on ethnic violence of democracy in Sub-Saharan African MDM countries.



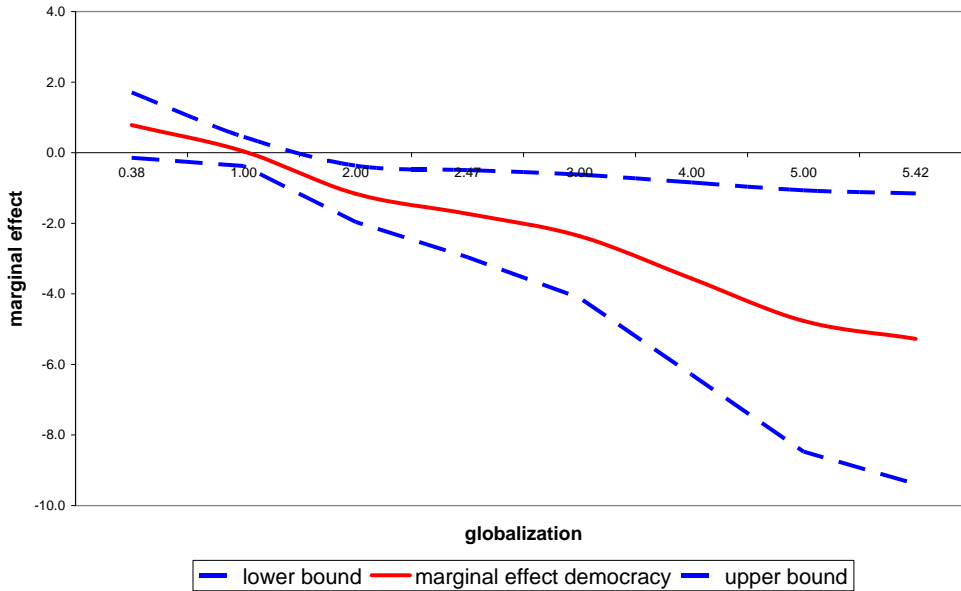
Note: The point estimates are calculated on the basis of model specification 9 in table 4 – for a sample of only Sub-Saharan African countries. The lower and upper bound give the 95% confidence interval.

Figure 4b. Marginal effect on ethnic violence of globalization in Sub-Saharan African MDM countries.



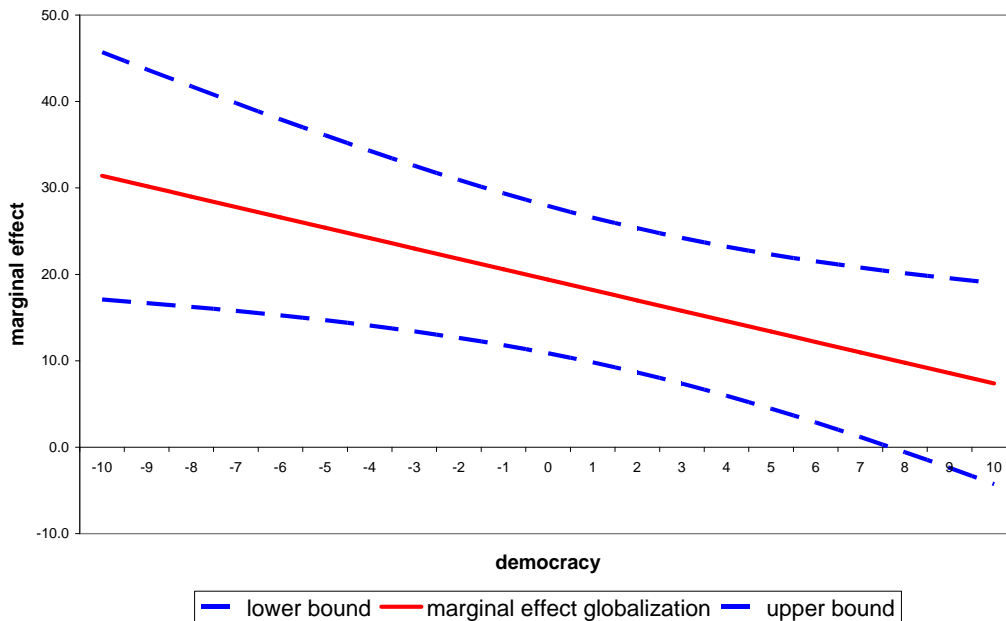
Note: The point estimates are calculated on the basis of model specification 9 in table 4 – for a sample of only Sub-Saharan African countries. The lower and upper bound give the 95% confidence interval.

Figure 5a. Marginal effect on ethnic violence of democracy in Sub-Saharan African non-MDM countries.



Note: The point estimates are calculated on the basis of model specification 9 in table 4 – for a sample of only Sub-Saharan African countries. The lower and upper bound give the 95% confidence interval.

Figure 5b. Marginal effect on ethnic violence of globalization in Sub-Saharan African non-MDM countries.



Note: The point estimates are calculated on the basis of model specification 9 in table 4 – for a sample of only Sub-Saharan African countries. The lower and upper bound give the 95% confidence interval.

Appendix A. Countries with and without MDM according to Chua (2003)

wdi	Countries with	MDM	wdi	Countries without
BDI	Burundi	Tutsi	ARE	UAE
BEN	Benin	Lebanese	ARG	Argentina
BFA	Burkina Faso	Lebanese	AUS	Australia
BHR	Bahrain	Sunni	AUT	Austria
BOL	Bolivia	Whites	BEL	Belgium
BRA	Brazil	Whites	BWA	Botswana
CIV	Cote d'Ivoire	Lebanese	CAN	Canada
CMR	Cameroon	Bamiléké	CHE	Switzerland
COL	Colombia	"foreign born"	CHL	Chile
CRI	Costa Rica	Whites	CHN	China
ECU	Ecuador	Whites	DEU	Germany
ETH	Ethiopia	Eritreans	DNK	Denmark
FJI	Fiji	Indians	DZA	Algeria
GHA	Ghana	Lebanese	EGY	Egypt
GIN	Guinea	Lebanese, Susu	ESP	Spain
GMB	Gambia, The	Lebanese	FIN	Finland
GNB	Guinea-Bissau	Lebanese	FRA	France
GTM	Guatemala	Whites	GBR	United Kingdom
HUN	Hungary	Jews	GRC	Greece
IDN	Indonesia	Chinese	IND	India
IRQ	Iraq	Sunni, Bahat	IRL	Ireland
KEN	Kenya	Whites, Indians,	IRN	Iran
KHM	Cambodia	Chinese	ITA	Italy
LAO	Laos	Chinese	JOR	Jordan
LBN	Lebanon	Christians	JPN	Japan
LBR	Liberia	Lebanese	KOR	Korea, Republic of
LTU	Lithuania	Jews	KWT	Kuwait
MEX	Mexico	Whites	LBY	Libya
MLI	Mali	Lebanese	LKA	Sri Lanka
MMR	Myanmar (Burma)	Chinese	MAR	Morocco
MYS	Malaysia	Chinese	NLD	Netherlands
NAM	Namibia	Whites	NOR	Norway
NER	Niger	Lebanese	NZL	New Zealand
NGA	Nigeria	Ibo, Lebanese	OMN	Oman
PAK	Pakistan	Mohadjir	PRT	Portugal
PAN	Panama	Jews	QAT	Qatar
PER	Peru	Whites	SAU	Saudi Arabia
PHL	Philippines	Chinese	SDN	Sudan
POL	Poland	Jews	SGP	Singapore
PRY	Paraguay	Whites	SWE	Sweden
RUS	Russia	Jews	TUN	Tunisia
RWA	Rwanda	Tutsi	TUR	Turkey
SEN	Senegal	Lebanese	URY	Uruguay
SLE	Sierra Leone	Lebanese	USA	United States
SYR	Syria	Alowyte	YEM	Yemen
TGO	Togo	Lebanese, Ewe		
THA	Thailand	Chinese		
TZA	Tanzania	Indians, Chagga		
UGA	Uganda	Indians, Baganda		
VEN	Venezuela	Whites		
ZAF	South Africa	Whites		
ZMB	Zambia	Indians		
ZWE	Zimbabwe	Whites		

Source: Chua (2003).

Appendix B. Countries with and without MDM according to MAR (2005)

wdi	Countries with MDM	MDM
AZE	Azerbaijan	Armenians, Russians
BDI	Burundi	Tutsi
BLR	Belarus	Russians
CMR	Cameroon	Bamileke
COG	Congo, Republic of	Lari
DZA	Algeria	Berbers
EST	Estonia	Russians
FJI	Fiji	East Indians
GEO	Georgia	Abkhazians, Adzhars, Russians
GHA	Ghana	Ewe
GIN	Guinea	Susu
GUY	Guyana	East Indians
IDN	Indonesia	Chinese
IRQ	Iraq	Kurds, Sunnis
KAZ	Kazakhstan	Russians
KEN	Kenya	Kalenjins
KGZ	Kyrgyzstan	Russians
LBN	Lebanon	Maronite Christians, Sunnis
MDG	Madagascar	Merina
MLI	Mali	Mande
MYS	Malaysia	Chinese
NAM	Namibia	Europeans, Basters
NER	Niger	Djerema-songhai
NGA	Nigeria	Ibo
PAK	Pakistan	Mohajirs
RUS	Russia	Avars, Kumyks
RWA	Rwanda	Tutsi
TGO	Togo	Ewe, Kabre
THA	Thailand	Chinese
TJK	Tajikistan	Russians
TKM	Turkmenistan	Russians
UGA	Uganda	Ankole, Baganda
UKR	Ukraine	Russians, Crimean Russians
UZB	Uzbekistan	Russians
ZAF	South Africa	Asians, Coloreds, Europeans, Zulus
ZAR	Congo, Dem. Rep.	Luba, Hutus, Ngbandi, Tutsi
ZWE	Zimbabwe	Europeans

wdi	Countries without MDM	wdi	Countries without MDM	wdi	Countries without MDM
AFG	Afghanistan	ETH	Ethiopia	MUS	Mauritius
AGO	Angola	FIN	Finland	MWI	Malawi
ALB	Albania	FRA	France	NIC	Nicaragua
ARE	UAE	GAB	Gabon	NLD	Netherlands
ARG	Argentina	GBR	United Kingdom	NOR	Norway
ARM	Armenia	GMB	Gambia, The	NPL	Nepal
AUS	Australia	GNB	Guinea-Bissau	NZL	New Zealand
AUT	Austria	GRC	Greece	OMN	Oman

BEL	Belgium	GTM	Guatemala	PAN	Panama
BEN	Benin	HND	Honduras	PER	Peru
BFA	Burkina Faso	HRV	Croatia	PHL	Philippines
BGD	Bangladesh	HTI	Haiti	PNG	Papua New Guinea
BGR	Bulgaria	HUN	Hungary	POL	Poland
BHR	Bahrain	IND	India	PRK	Korea North
BIH	Bosnia	IRL	Ireland	PRT	Portugal
BOL	Bolivia	IRN	Iran	PRY	Paraguay
BRA	Brazil	ISR	Israel	QAT	Qatar
BTN	Bhutan	ITA	Italy	ROM	Romania
BWA	Botswana	JAM	Jamaica	SAU	Saudi Arabia
CAF	Central African Republic	JOR	Jordan	SDN	Sudan
CAN	Canada	JPN	Japan	SEN	Senegal
CHE	Switzerland	KHM	Cambodia	SGP	Singapore
CHL	Chile	KOR	Korea, Republic of	SLE	Sierra Leone
CHN	China	KWT	Kuwait	SLV	El Salvador
CIV	Cote d'Ivoire	LAO	Laos	SOM	Somalia
COL	Colombia	LBR	Liberia	SVK	Slovakia
COM	Comoros	LBY	Libya	SVN	Slovenia
CRI	Costa Rica	LKA	Sri Lanka	SWE	Sweden
CUB	Cuba	LSO	Lesotho	SWZ	Swaziland
CYP	Cyprus	LTU	Lithuania	SYR	Syria
CZE	Czech Republic	LVA	Latvia	TCD	Chad
DEU	Germany	MAR	Morocco	TTO	Trinidad & Tobago
DJI	Djibouti	MDA	Moldova	TUN	Tunisia
DNK	Denmark	MEX	Mexico	TUR	Turkey
DOM	Dominican Rep	MKD	Macedonia	TZA	Tanzania
ECU	Ecuador	MMR	Myanmar (Burma)	URY	Uruguay
EGY	Egypt	MNG	Mongolia	USA	United States
ERI	Eritrea	MOZ	Mozambique	VEN	Venezuela
ESP	Spain	MRT	Mauritania	YEM	Yemen

Source: Minorities at Risk Project (2005)

Appendix C. Descriptive Statistics

Variable	N	mean	st. dev.	min	max
<i>Violence</i>					
Ethnic violence	2385	-35.67	20.48	-72	0
Ethnic tensions	2385	-3.88	1.54	-6	0
Internal conflict	2385	-8.47	2.85	-12	0
Terror events	4850	3.45	17.41	0	536
Deadly terror events	4850	1.18	6.53	0	216
Guerilla warfare	4780	0.21	0.81	0	34
Political revolutions	4780	0.21	0.54	0	9
Civil war	4798	0.05	0.22	0	1
Small communal conflict	4798	0.05	0.21	0	1
<i>Market dominant minority</i>					
MDM (MAR, 2005)	4726	0.22	0.41	0	1
MDM (Chua, 2003)	3289	0.54	0.50	0	1
<i>Globalization</i>					
KOF globalization index (total)	3717	1.85	0.85	0.38	5.42
Economic globalization	3479	3.01	1.11	0.64	6.15
Political globalization	3717	1.76	1.04	0.00	5.72
Social globalization	3717	0.84	0.88	0.01	6.25
<i>Democracy</i>					
polity2	4760	0.23	7.56	-10	10
polity dummy	4737	0.46	0.50	0	1
Przeworsky et al.	4247	0.38	0.49	0	1
Vanhanen	4301	0.43	0.50	0	1
Freedomhouse	4569	-4.15	2.01	-7	-1
<i>Control variables</i>					
ln GDP per capita	4284	7.37	1.57	4.03	10.88
Real GDP growth	4323	1.36	6.38	-50.49	89.83
Inflation	4323	61.66	616.03	-29.17	26762.02
Wage inequality	2347	0.06	0.06	0.00	1.03
Unemployment	1433	8.97	5.68	0.30	43.50
Corruption	2384	-6.42	2.62	-12	-0.17

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