

Welfare Spending and Political Conflict¹

Patricia Justino and Bruno Martorano

HiCN Working Paper 256

September 2017

Abstract: We study an age-old question in political economy: does government spending on welfare ensure peace? This question was at the heart of the European Welfare State model of the early 20th century, and remains relevant today in face of rising inequalities and political conflict. Yet there is limited empirical evidence about this question. We make use of a panel of 12 Latin American countries over the period between 1970 and 2010 to show that government welfare spending has led to substantial reductions in political conflict across the region. This effect is more pronounced when associated with reductions in inequality and increasing social and institutional trust.

JEL codes: D31, D74, H53, I30, N16

Keywords: welfare; government expenditure; inequality; conflict; Latin America

¹ **Acknowledgements:** The authors are grateful to comments and suggestions from the participants of the “States, Markets and Society - IDS 50th Conference” (IDS, University of Sussex, Brighton, July 2016) and the participants of the “Models and Policies for Human Development and Sustainable Growth - Third SITES/IDEAs Annual Conference” (University of Florence, September 2016).

1. Introduction

The relationship between government welfare spending and political conflict has deep historical roots. Chancellor Otto von Bismarck famously implemented the world's first social insurance programme in the late nineteenth century in Germany as a response to social demands, increasingly stronger workers unions' movements and the threat of political violence. The idea of using government transfers to ensure political stability spread rapidly across Europe (Esping-Andersen 1990). This was accompanied by the extension of voting rights in Western societies during the late 19th and early 20th centuries, viewed by many also as a response to the threat of civil unrest (Acemoglu and Robinson 2000, Meltzer and Richard 1981). Yet, to date, there is limited empirical evidence on the effectiveness of government welfare spending to prevent or reduce political conflicts, or on the mechanisms that may shape such effects. This paper contributes to filling this gap. We address this important empirical question in the context of Latin America, where political conflict has been rife over the past century.

A substantial body of literature has attributed the causes of political conflict in Latin America to the historically high levels of inequality experienced in the region (see Machado et al. 2008). The debt crisis in the 1980s is a case in point where adjustment policies worsened income distribution, fuelling violence in many parts of the region (Arias and Goldstein 2010, Voth 2011). As a result, distributional considerations became central to policy agendas across Latin America (Cornia 2014). One of the most significant changes in that period was related to social welfare spending, which started to increase in the 1990s, and kept on rising throughout the 2000s. Over the same period, the region experienced a gradual and persistent reduction in violence. Whether these two trends are related remains an open question.

We exploit this historical variation in government social policies and political conflict to investigate empirically the effect of government welfare spending on the incidence of internal political conflict. The analysis uses a longitudinal dataset compiled across 12 Latin American countries over the period 1970-2010.

Identifying the effect of government welfare expenditure on political conflict is a challenging task because standard OLS estimates may be biased due to reverse causality and omitted variable biases. The direction of potential biases is a-priori ambiguous. OLS estimates could

be biased upwards if, for instance, political conflict increases social demands for government welfare expenditure – something that is quite plausible in contexts where conflicts are driven by inequalities and grievances, as in many parts of Latin America. Other shocks, such as the financial crises that took place across the region in the period under consideration, may also lead to upward biases in the OLS estimates since they may result in increases in both political conflict and government expenditure in the form of populist policies (e.g. Sachs 1989). OLS estimates could be biased downwards if, for instance, governments restrain welfare expenditure in areas more heavily affected by conflict (in fear of funds being appropriated, or as a form of punishment against insurgent groups and their support bases), or are not able to raise enough revenue to fund social policies in face of the economic destruction caused by the conflict.

We adopt several empirical strategies to address these concerns. The first is the use of a country-fixed effects model, which controls for time-invariant differences between countries. This is useful because there is a large variation in conflict experiences across the countries in the sample. The second strategy is the use of instrumental variable models that exploit exogenous variation in the value of welfare spending in neighbouring countries to proxy for government welfare expenditure. This strategy is based on the assumptions that fiscal design has had spill-over effects across the region, and that welfare spending in neighbouring countries has no impact on political conflict other than through its influence on domestic fiscal policy. We test also an alternative instrumental variable in the form of an exogenous impact of natural disasters. Third, we make use of the long-time dimension of the data to address potential endogeneity using regression models with instruments generated by applying Lewbel (2012)'s method and the Hausman-Taylor estimator (which is based on an instrumental variable estimator that uses both between and within variation in exogenous instruments). We find across all model specifications a strong and statistically significant negative effect of government welfare spending on the incidence of political conflict across Latin America in the period between 1970 and 2010.

While all the empirical strategies we employ have inherent weaknesses, the consistency of the results across all models – in terms of size and significance of the estimated coefficients – reassures us about the strength of our main result. This analysis is further supported by the empirical testing of four mechanisms that may shape the relationship between government welfare spending and political conflict: absolute levels of inequality, perceptions of

inequality, trust in government institutions and social trust. We find that the conflict-reducing effect of government welfare spending is more pronounced in countries that experienced reductions in the levels and perceptions of inequality, as well as in countries with increasing levels of social trust and trust in state institutions. Additional results show that only welfare spending has an effect on political conflict. All other forms of expenditure do not affect political conflict, while high levels of expenditure on the military are associated with increases in political conflict across Latin America.

These results entail important contributions to several bodies of literature. Although a number of political science papers have examined the effect of government spending on political violence (Barakat and Urdal 2009, De Juan and Bank 2015, Fjelde and de Soysa 2009, Ostby and Urdal 2010, Taydas and Peksen 2012, Thyne 2006), this is, to the best of our knowledge, one of the first studies to analyse which specific forms of expenditure and which mechanisms may shape the relationship between government spending and political conflict. The paper contributes also to a growing economics and political science literature on the effects of counterinsurgency and aid interventions in modern political conflicts. Several studies have shown how improved provision of social services and public goods may have contributed to reducing insurgent violence in Iraq (Berman, Shapiro and Felner 2009), India (Khanna and Zimmermann 2015) and Afghanistan (Beath, Christia and Enikolopov 2012). However, literature on the effects of aid on political conflict has portrayed a different picture. Crost et al. (2014) show that aid in the form of a community-driven development programme in the Philippines led to increases in conflict among communities that were eligible to receive the programme, while Nunn and Qian (2014) find that increases in US food aid increase both the incidence and duration of armed conflicts among recipient countries. Theoretically, there is no reason to expect external aid flows and internal government expenditures to have similar effects on political conflict. This is because internal government expenditures are a direct reflection of the social contract between governments and citizens, while external aid may be implemented without affecting this relationship. The result in this paper suggests that this mechanism may have been strongly at play in Latin America in the period being considered. Finally, the paper offers also an important contribution to recent literature on state capacity. Several studies have argued that state capacity is key to political stability and successful economic development (Besley and Persson 2009b, 2010, Acemoglu et al. 2015). In the case of Latin America, Centeno (2002) has linked economic failure and political conflict to limited state capacity. This paper contributes to this literature by showing how increased capacity of

states to provide public goods in the form of social welfare programmes may improve political stability, which in turn may strengthen state capacity in the future as state institutions will be better able to focus on social development rather than military expansion.

2. The relationship between government welfare spending and political conflict

The relationship between redistribution, government expenditure and political conflict is not a new concern in the political economy literature. In a series of influential papers, Grossman (1994, 1995) modelled formally how redistributive policies, such as wage subsidies, lump-sum transfers or land reforms, may reduce the probability of extra-legal appropriative activities. Azam (1995, 2001) showed subsequently that public expenditure with a strong redistributive content (for instance, in education and health) may strengthen the social contract and prevent the outbreak of political violence. This theoretical literature has provided important insights about the relationship between government redistributive policies and political conflict; empirical evidence is in contrast weaker.

A small literature in political science has examined correlations between government social expenditures – education expenditure, in particular – on the incidence of armed conflict (Taydas and Peksen 2012, Fjelde and de Soysa 2009, Barakat and Urdal 2009, Ostby and Urdal 2010, Thyne 2006). De Juan and Bank (2015) show that the risk of violence in the recent conflict in Syria between March 2011 and November 2012 was lower in sub-districts where government provision of electricity was higher. A related body of literature has attempted to isolate the causal effects of government transfers on crime reduction. Chioda et al. (2012) show that the Brazilian *Bolsa Família* has had a strong negative effect on urban crime in São Paulo due to increases in household income and changes in peer group membership. Camacho and Mejía (2014) report similar results for the *Familias en Acción* programme in Bogota, Colombia. Closer to our paper are the studies of Voth (2011) and Justino (2015). Voth (2011) provides evidence that cuts on public spending increased social unrest and instability across eleven South American countries between 1937 and 1995. Justino (2015) shows that government expenditure on social services contributes to the reduction of rioting in India using state-level data over the period between 1960 and 2011. These papers do not, however, identify what mechanisms may explain the relationship between government welfare spending and political conflict, and questions remain open about when and under which conditions government spending on social welfare policies may

reduce political conflict. We discuss below three potentially relevant mechanisms, which we test in subsequent sections: changes in inequality, social trust and the commitment and quality of state institutions.

Changes in inequality. The large majority of existing studies on government expenditure and conflict/crime implicitly assume that welfare spending will reduce political conflict because it wins the hearts and minds of the people, addresses grievances that may have led to the initial conflict and increases the opportunity costs of engaging in violence (Azam 2001, Grossman 1995). In a seminal paper, Meltzer and Richard (1981) argue that policy-induced shifts in the median voter towards the poorer and disenfranchised (for instance, through the extension of the voting franchise) may result in higher demands for redistribution and lower inequality. Democratic governments in turn respond to social demands to reduce inequalities in order to maintain stability (Acemoglu and Robinson 2000). States which are better able to allocate more resources to reforms that address grievances (or are better able to buy-out opposing elites) are less likely to experience violent political conflict (Buhaug 2006).

However, the assumption that government welfare spending will reduce political conflict because it leads to reductions in inequality has been at the centre of an unsolved empirical debate. An older body of literature reported a close correlation between armed conflict, levels of relative deprivation and asset and income inequality (for instance, Gurr 1970, Muller and Seligson 1987, Schock 1996). However, recent studies of civil wars have consistently failed to find evidence for a statistical association between standard measures of vertical income inequality (the Gini coefficient) and the onset of civil wars (see Collier and Hoeffler 2004). Some studies have argued that this may be because armed conflict responds to differences between social groups rather than vertical forms of inequality (Cederman et al. 2013, Esteban and Ray 1994, Montalvo and Reynal-Querol 2008, Murshed and Gates 2005, Østby 2006, Stewart 2002), but there is no agreement to date as to which inequalities and what levels of inequality between groups may affect (and how) the risk of political conflict.

The reason for these diverging results may have to do with the fact that government welfare expenditures reduce the risk of political conflict for reasons not related to changes in absolute levels of inequality. In fact, there is no a-priori reason to believe that redistributive policies will result in lower levels of inequality (Bénabou 2001, Piketty 1995, 1998), and welfare programmes may be associated with rises in inequality when the political system is captured

by elites to pursue their own interests and buy-out voters through forms of clientelism – as it was the case of much of Latin America throughout its recent history (Centeno 2002, Diaz-Cayeros et al. 2012). Redistributive policies in these settings are used to allocate rents to powerful groups that may threaten the stability of the state and the elites that control it, rather than providing public goods more generally or improving the social conditions of the poor (Acemoglu et al. 2004, Bueno de Mesquita et al. 2002, 2003, Piketty 1995).

Even if government welfare spending has no effect on absolute levels of inequality, the likelihood of political conflict may be still reduced if increased welfare spending affects people's perceptions about future levels of inequality. Several studies have reported significant discrepancies between perceived and actual levels of wealth inequality in the US (Norton and Ariely 2011), Argentina (Cruces, Perez-Truglia and Tetaz 2013) and in cross-sectional samples (Niehues 2014, Gimpelson and Treisman 2015). It is therefore possible that people may respond to government policy through its effects on their perceptions about inequality rather than about objective levels of inequality per se. Thus, even if redistributive policies do not necessarily change levels of inequality (at least in the short-term), they may offer signals that affect perceptions of inequality – and therefore the levels of social discontent that may drive political conflict.

Social trust. An alternative mechanism may have to do with the effects of welfare policies on levels of social trust within a given society. A body of literature has argued that social welfare policies may reduce the ability of people to trust and cooperate with one another because they increase social dependence on the state and crowd-out collective action (De Swaan 1998, Fukuyama 2000). However, this largely theoretical literature has had limited empirical traction. Several empirical studies have shown that government welfare policies tend improve social trust because they strengthen the integration of individuals in society (Knack and Zak 2001, Kumlin and Rothstein 2005) and foment reciprocity ties and fairness beliefs (Finan and Schechter 2011, Rothstein 1998). Alesina and LaFerrara (2002a, 2002b) show that social trust is higher in communities with lower levels of inequality. Therefore, government welfare policies may improve social trust when they reduce inequalities between social groups. Higher levels of social trust are, in turn, seen to be central to social order and the reduction of political conflict (Colletta and Cullen 2000, World Bank 2011), because social trust is generally associated with higher levels of economic development and social cohesion (Akerlof 1976, Ostrom 1990, Putnam 1993). Empirical evidence on the link

between social trust and violent conflict has, however, been mixed. Trust among community members has been found to reduce crime levels, largely due to reductions in the cost of social transactions (Lederman, Loayza and Menendez, 2002). In India, Varshney (2002) has shown that high levels of civic associations (which require high levels of interaction and trust between community members) play an important role in mitigating the risk of civil unrest. But other studies have shown that high levels of inter-group trust and cooperation may in some cases create the basis for violence between ethnic and religious groups (Pinchotti and Verwimp 2007, Sambanis 2001), due to the rise of parochial attitudes against outsiders (Bauer et al. 2011). Although these findings cast doubts on the generally assumed negative relationship between social trust and political violence, they may be of less relevance to Latin America where there is little evidence for a link between political violence, ethnicity or religion (Solimano 2004).

Commitment and quality of state institutions. The relationship between government welfare policy and political conflict may be also mediated by institutional mechanisms. Several studies have argued that welfare spending, even if not redistributive, may signal the ability of the state to credibly commit to the social contract (Acemoglu and Robinson 2006), or at the very least to commit to the political inclusion of groups that may affect stability (Bueno de Mesquita et al. 2002, 2003). This commitment may, in turn, increase trust in government institutions and reduce the likelihood of conflict when increased welfare spending signals that the distributional commitment of the government will carry into the future (Acemoglu and Robinson 2000, 2006, North and Weingast 1989). Spending on welfare programmes is a particularly strong commitment device because “social security entitlement programs appear to be more difficult to cut than other redistributive programs” (Acemoglu and Robinson 2000: 1194). But in settings where government programmes are part of strong patronage systems, trust in government institutions and the capacity of the government to solve social conflicts may be reduced (Besley and Persson 2009a, Ferejon 1974), leading to increases in the risk of violent conflict (Besley and Persson 2010, North, Wallis and Weingast 2009). Empirical evidence on these mechanisms is mixed. Several studies have found that cash transfer programmes have led to increases in political support for incumbent governments in countries such as Brazil (Zucco 2013), Colombia (Nupia 2011), Honduras (Linos 2013), Mexico (Diaz-Cayeros et al. 2012, De La O 2013), and Uruguay (Manacorda et al. 2011). But only a few studies find that voters are equally likely to vote for parties not associated with the initial implementation of the programmes (De La O 2013, Zucco 2013). In the case of Latin

America, Centeno (2002) has attributed the persistence of political conflicts to limited state capacity to uphold the social contract beyond short-term elite bargains, but recent evidence suggests that this situation may be changing with the advent of conditional cash transfer programmes when these are implemented through non-partisan processes (Diaz-Cayero et al. 2012, De La O 2013, Zucco 2013).

The direction of the three mechanisms discussed above is therefore a-priori ambiguous. Government welfare transfers may lead to lower risk of political conflict when they reduce inequalities, strengthen social trust and signal an improvement in the capacity and commitment of the government to uphold the social contract. However, government welfare policies that reinforce existing social disparities, promote the power of elites and are perceived as unfair may increase the risk of political conflict. We will explore further the role of these mechanisms in shaping the relationship between government welfare spending and political conflict in Latin America in section 5.

3. Government welfare spending and political conflict in Latin America

Between the late 1950s and the late 1980s, Latin America witnessed large increases in political conflict. Table 1 summarises some of the most notorious conflicts in that time period. Several were the outcome of exacerbated political tensions following the Cuban revolution and the Cold War, which resulted in widespread rural guerrilla insurgencies in the 1960s and several instances of urban violence during the following decade. Armed violence was used both by rebel groups and the state military, with right-wing military regimes during the 1970s condoning state-sponsored terror and violence (Solimano 2004). Political conflict reached particularly high levels during the period of the ‘third wave of democratization’ in the late 1970s and early 1980s. These episodes were almost exclusively internal and included guerrilla movements, terrorism, civil wars and state-led violence. Central America has been in general the area most affected by political conflict, but longstanding traditions of political violence and armed conflict have persisted across the Andean and Southern regions.

[Table 1 about here]

Although the number of political conflicts has decreased in recent years across most of Latin America, their legacy remains in many parts of the region in the form of high crime rates,

drug-related violence and political instability. Different factors have been proposed in the literature to explain these trends. Centeno (2002) and Grassi (2010) have emphasized the role of persistently weak institutions and state capture, whereby strong ties between economic elites and non-democratic regimes have prevented the majority of people from participating in the political process and led to widespread social discontent. Polarized ideological debates at the international level – the ‘communist threat’ versus ‘capitalism’ – have also influenced domestic politics and provided insurgent groups with a socio-revolutionary discourse (Art and Richardson 2007). Several scholars have emphasised the role of progressive dissatisfaction with economic outcomes and sharp increases in inequality (Solimano 2004).

Violence reached a peak in Latin America in the late 1980s (Figure 1). Many governments across the region moved then to new rounds of economic reforms, and important changes took place in terms of improving social assistance programmes (Gough et al. 2004). In the 1990s, many governments introduced or extended workfare programmes, and social pensions targeted to selected groups not covered by social insurance schemes became widespread in the 1990s and in the 2000s. The most important innovation was related to the introduction of conditional cash transfer programmes: originally implemented in Brazil and Mexico in the mid-1990s, these programmes represent nowadays the prevalent model of social welfare protection across the entire region (Gough et al. 2004, Ferreira and Robalino 2010). As a result, social welfare spending started to increase in the 1990s, and kept on rising throughout the 2000s. Coincidentally (or not), the region experienced a gradual and constant reduction in armed violence over the same period.

Figure 1 illustrates these two trends using the dataset we have compiled for this paper for Latin American countries.¹ The measure of political conflict was extracted from the UCDP/PRIIO Armed Conflict Dataset (Gleditsch et al. 2002),² which defines political conflict events as “contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths.”³ Following standard conventions in the literature, we recoded the original variable into a binary indicator which assumes value 1 if the country has

¹ The sample includes the following countries: Argentina, Chile, Colombia, El Salvador, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

² Available at: <http://www.pcr.uu.se/research/ucdp/definitions/>.

³ Under this definition, ‘political violence’, ‘armed conflict’ and ‘violent conflict’ are terms used interchangeably throughout the paper. In later sections, we will consider more restrictive definitions of political conflict such as smaller internal conflicts, civil wars and guerrilla wars.

experienced in a given year violent conflict between an internal opposition group and the government.

[Figure 1 about here]

Welfare spending is measured by the ratio of government social expenditures to GDP.⁴ This variable was obtained from the Latin American Welfare Dataset 1960-2014 database constructed by Huber and Stephens (2015).⁵ This is one of the most comprehensive and publicly available government expenditure databases on Latin America countries. Information is collected mainly from the IMF Government Financial Statistics Yearbook.⁶ These data show that welfare spending and political conflict have followed two opposite trends since the 1980s (Figure 1), which we will explore in the empirical analysis below.

4. Empirical approach

4.1. Econometric model

In this section, we test empirically the effect of government welfare spending on the incidence of political conflicts in Latin America. We estimate the following baseline model:

$$political\ conflict_{it} = \alpha_0 + \alpha_1 welfare\ spending_{it} + \alpha_2 Z_{it} + \eta_i + u_{it} \quad (1),$$

where i and t identify the country and year. η_i and u_{it} are, respectively, the time-invariant country fixed effects and the idiosyncratic error term. The dependent variable is a binary indicator with value 1 if the country experienced in any given year a case of political conflict as defined in the UCDP/PRIO Armed Conflict Dataset. The main explanatory variable is the ratio of government welfare spending on GDP.

⁴ Includes government expenditure on safety nets, social assistance and social insurance. Education and health are included in the database as separate expenditures and will be analysed in a later section.

⁵ Access to these data and more detailed information can be found on <http://huberandstephens.web.unc.edu/common-works/data/>.

⁶ We compiled also additional information from the annual CEPAL publication, *Social Panorama*. We used data from different sources for two countries – Colombia and Paraguay – in order to ensure the broadest possible country coverage. In this, we used data, respectively, from IFPRI's Statistics of Public Expenditure for Economic Development (SPEED) and from Easterly (2001). These two datasets are also based on the IMF Government Financial Statistics. We used data from CEPALSTAT in order to extend data on social spending for Mexico until 2010.

Z identifies a set of variables that control for a number of economic, institutional and political factors that may have affected the incidence of political conflict in Latin America between 1970 and 2010. The first control is the level of GDP per capita. This is a widely used variable in conflict analysis to proxy for factors that shape state capacity (Fearon and Laitin 2003), or the cost of the economic opportunity of wars (Collier and Hoeffler 2004). Another reason to include this variable is the expectation, in line with the existing literature, that the risk of conflict decreases with income levels (Hegre and Sambanis 2006).

Three additional control variables account for the institutional framework that underlies the political systems of each country. The first is the share of votes of smaller parties in total votes. This variable was compiled from Teorell et al. (2015) and Vanhanen and Lundell (2014) and provides information on the spread of plurality of expression within the political landscape of each country. We expect less power concentration and more plurality to be associated with a reduction in the risk of conflict (Fearon and Latin 2003, Cederman et al. 2013). The second institutional variable is the share of the population who voted in the last presidential election. This variable, compiled from the same sources, is used to proxy for the participation of citizens in the political process. The expectation is that exclusion from the policy process may make conflict more appealing for some (Machado et al. 2009, Tilly and Tarrow 2015). This variable may be problematic because there is evidence that government transfers in Latin America may have been used to mobilise voters (Diaz-Cayeros et al. 2012, Zucco 2013). In order to reduce potential collinearity concerns, we measure whether citizens voted in past presidential elections, as it is unlikely that current welfare transfers would have affected voting behaviour in the past. Finally, we have introduced a dummy variable, which assumes value 1 during years of political elections, following Teorell et al. (2015). This is because the proximity of political elections may increase the outbreak of social and political tensions (Wilkinson (2005)).⁷

4.2. Empirical results

The baseline estimation of equation (1) above is derived from a least-squares dummy variable model (LSDV) with country fixed effects in order to capture structural differences across

⁷ Summary statistics and correlations for these variables are reported in Tables A1 and A2 in the online appendix.

countries. The main results are presented in Table 2. Model 1 shows the baseline regression with country fixed effects and no controls. Model 2 estimates the same regression while controlling for the gross domestic product per capita of each country in each year. Model 3 introduces the full set of controls discussed above. In line with our prior expectations, the results show that the coefficient for government welfare spending is negative and statistically significant across the three specifications. The coefficient increases as further controls are included in the model. According to our preferred specification (Model 3), increasing government welfare spending by one percentage point of GDP reduces the probability of conflict by around five per cent.

It is also to note that the coefficient for the GDP per capita variable is negative and statistically significant. This result is in line with other literature, suggesting that countries with higher national income levels are less likely to experience violent conflict (Fearon and Laiton 2003, Collier and Hoeffler 2004). The remaining controls are not statistically significant.

[Table 2 about here]

Although the use of country-fixed effects in Table 2 may go some way towards addressing some of the omitted variable concerns, there are additional reasons why the estimators above may yield inefficient and spurious estimates, as discussed in the introduction. To overcome these problems, we use a series of alternative estimators. The first alternative strategy is the use an instrumental variables (IV) estimator, where we regress government welfare spending on the value of government welfare spending in neighbouring countries. This is similar to the strategy proposed in Collier and Hoeffler (2004), who use the level of military spending in neighbouring countries to instrument for national level of military spending. Bodea et al. (2015) use a similar strategy to investigate the impact military spending on the risk of violent conflict related to oil wealth. Ebeke and Ngouana (2015) use the level of subsidies in neighbouring countries in order to instrument the level of spending on subsidies in a given country. In order to construct our instrumental variable, we calculated for each country the average value of government welfare spending in countries sharing the same borders. For example, in the case Argentina, the average value of government welfare spending was computed from neighbouring Bolivia, Brazil, Chile, Paraguay and Uruguay.

As with any instrumental variable, this variable needs to be strongly correlated with the share of government welfare spending in each country. Table 3, Model 1 confirms that this is the case. Furthermore, the F-statistic associated with the first stage results is above 10 confirming the strength of the instruments, while the Kleibergen-Paap F-statistic for weak identification exceeds the Stock and Yogo critical values rejecting the null that the instrument is weak. The strength of this variable as a valid instrument is also justified by the significance of fiscal spill-over effects in policy design across Latin America (see De Ferranti et al. 2004, Ferreira and Robalino 2010). Notably, the choice of this instrument is based on the intuition that governments are more likely to increase their welfare spending if other countries in the neighbourhood do the same. A large literature has documented how welfare spending in Latin American countries followed similar trends across time (Cornia 2014). In the 1970s, Latin American countries exhibited low levels of welfare spending (Fiszbein 2005). Under the aegis of the “Washington Consensus” welfare systems across the region were further restricted (De Ferranti et al. 2004). In the 1990s, these trends were reversed – yet again across the entire region – by the ‘social assistance revolution’ (Ferreira and Robalino 2010). Several examples illustrate the significance of these fiscal spill-over effects in fiscal policy design across Latin America, including the spread of old-age pension systems during the 1990s following the first programme implemented in Chile, and the rapid diffusion of conditional cash transfers following the *Bolsa Escola* in Brazil and *Progresas* in Mexico (Fiszbein and Schady 2009, Calvo et al 2010, Stampini and Tornarolli 2012, Rofman et al. 2013).

In addition, we need to ensure that the instrumental variable is correlated with the dependent variable (incidence of political conflict) only through its impact of the endogenous variable or through any other control variable already included in the econometric specification. One key threat here is the fact that government welfare spending in neighbouring countries may simply capture common shocks that may affect all countries. We control for this possibility by including GDP per capita as a control in all regressions in Table 3 since any change in local economic conditions that may affect the likelihood of conflicts in neighbourhood countries will be absorbed by variation in GDP (Miguel et al. 2004).

We test further the validity of the main instrumental variable using three additional strategies. First, we replace our main instrument with the average value of government welfare spending in the previous three years in countries sharing the same borders (Table 3, Model 2). The idea is that governments may take a while before they are able or willing to mirror policies

introduced in neighbouring countries. Second, we replace our main instrument with an alternative instrument on natural disasters (Table 3, Model 3). Exogenous natural disasters in the case of Latin America (as elsewhere) have been closely associated with increases in government social spending given associated social and economic costs that require government intervention (IADB 2000, Strobl 2012). The data we used were extracted from Emergency Events Database (EM-DAT).⁸ This dataset contains information on different types of natural disasters, since 1900. For each of them, the database reports information on the number of persons affected, as well as on the number of deaths. In order to measure major disasters (those more likely to have wider exogenous effects), we have used a dummy variable assuming value 1 if at least 100 people died or at least 100 persons were affected by the natural disaster. Finally, we estimated also the main instrument and the disasters instrument in the same equation in order to avoid the model being exactly identified and to test the validity of the instruments (Table 3, Model 4).

These alternative instrumental variables are also strongly correlated with the dependent variable (Table 3). F-statistics associated with the first stage are above 10, and the Kleibergen-Paap F-statistics for weak identification exceed the Stock and Yogo critical values. The over-identification test (J statistic) (Hansen 1982) associated to the Model 4 shows that instruments can be considered valid. However, it is important to notice that endogeneity test show that the null hypothesis could be not rejected generating doubts about the assumed endogenous nature of the welfare spending variable. Therefore, it is important to interpret the IV results with care as these can potentially generate less than efficient coefficients.

[Table 3 about here]

Table 4 reports the main IV estimates in column 2 and the alternative IV estimates in columns 3, 4 and 5, respectively. The coefficients for government social spending remain negative and statistically significant. Using our main instrument, results show that an increase of one point in the ratio of welfare spending would reduce the probability of political conflict by almost 7.5 percent, which is two and a half percentage points higher than our baseline model (column 1). The GDP per capita coefficient remains negative and statistically

⁸ Data are available on: <http://www.emdat.be/>.

significant. The coefficients for government social spending are higher including the proxy for major natural disasters but remain statistically significant. These magnitudes must, however, be interpreted with care as the IV estimators may be inefficient in the presence of a non- or weakly endogenous variable.

[Table 4 about here]

In addition to the instrumental variable models above, we have estimated alternative models. The first uses an instrumental variables regression model with instruments generated applying Lewbel (2012)'s method. This method estimates regression models with endogenous or mis-measured regressors in the absence of proper instruments (Baum and Schaffer 2012). Internal instruments are generated as functions of the model's data using heteroscedastic covariance restrictions. The rationale for employing this strategy is that identification is achieved when employing regressors that are not correlated with the product of the heteroskedastic errors (Mishra and Smith, 2015: 168). This strategy can also be applied by combining internal instruments with external instruments, when they are available (Lewbel 2012), which we do in Table 4. The results for these models are shown in columns 6 and 7 of Table 4. Column 6 shows the Lewbel model using only internal instruments (i.e. valid instruments from within the model considering the heteroscedasticity of the error terms), while column 7 shows the same results using both internal and external instruments (i.e. welfare spending in neighbouring countries). These regressions estimate coefficients that are only slightly lower than those of the LSDV estimator and confirm that an increase in government welfare spending is associated with statistically significant reductions in conflict across Latin America in the period between 1970 and 2010.

In column 8 of Table 4 we re-estimate the baseline model using the Hausman-Taylor estimator. This estimator allows us to deal with endogenous regressors using valid instruments from within the model. This approach also allows us to estimate time-invariant variables using the means of exogenous time variant regressors (Wooldridge 2002). Thus, we introduce an index of ethnic fractionalization in order to test if ethnic differences affect the probability of political conflict in Latin America.⁹ We were not able to introduce this variable before due to its time invariance, but a body of literature has postulated that ethnic

⁹ This index measures the probability that two individuals selected randomly belong to two different groups. This variable ranges from 0 – i.e. perfectly homogeneous - to 1 – i.e. highly fragmented.

fragmentation is a key variable explaining violent conflict, particularly in Africa (Easterly and Levine 1997). The results (column 8) remain consistent. The point estimator of the effect of government welfare spending on political conflict is only slightly lower than the baseline model. The new index of ethnic fractionalization introduced in this specification is positive and statistically significant, in line with other findings (Easterly and Levine 1997).

In summary, all model specifications show a strong and statistically significant negative effect of government welfare spending on the incidence of political conflict across Latin America in the period between 1970 and 2010. As discussed above, all empirical strategies we employed have specific weaknesses. However, their consistency – in terms of size and significance of the estimated coefficients – reassures us about the strength of this result.

5. Robustness tests

We have implemented a series of robustness tests to check the validity of the results discussed above. These include (i) the effect of welfare spending on the onset and duration of conflict, (ii) the use of alternative data sources, (iii) changes in control variables, (iv) robustness to country sample selection, and (v) the use of alternative government expenditure measures.

Impact of government welfare spending on the onset and duration of conflicts. The results discussed above refer to the effect of government welfare spending on the probability of a country experiencing armed conflict in any given year. We here the effect of government welfare spending on the probability of an armed conflict starting (conflict onset) using the approach suggested by Collier and Hoeffler (2004). According to this approach, observations that refer to continued conflict periods are dropped generating a new sample, which includes only conflict onset (with value one) or no conflict periods. We take into account also how government welfare spending may influence conflict duration. In this case, we constructed a dependent variable with only periods of continued conflict until the end of the conflict and excluding all other observations. The effect of government welfare spending on the onset of political conflict is negative and smaller (-0.014) than our baseline result (Table A3 in online appendix). This is expected given that we are now restricting the sample to only the first period of the conflict. Government welfare spending does not have an effect on conflict duration.

Alternative dependent variables. We were able to compute alternative measures of political conflict that distinguish between civil wars with at least 1,000 annual battle-related deaths, and low-intensity internal conflicts that resulted in between 25 and 999 annual battle-related deaths. We considered also an alternative source of data using the conflict list produced by the Center for Systemic Peace (CSP) Major Episodes of Political Violence (MEPV), 1946-2013.¹⁰ The main difference between these two sources is related to the intensity threshold used to qualify episodes of violence as conflicts. The MEPV dataset reports conflicts with at least 500 deaths with no yearly minimum. The UCDP/PRIO datasets count all reports of combatants and civilians killed directly in combat (Burbach and Fettweis 2015: 427), while in the MEPV dataset the number of deaths are based on estimates. We consider in addition the effect of government welfare spending on a specific type of conflict that has been common across all of Latin America: guerrilla warfare. These data are provided in Bazzi and Blattman (2014). The sign and statistical significance of the coefficients shown across all these specifications are similar to those reported in section 4 (Table A4 in online appendix). These results suggest that government welfare spending has a stronger effect on the reduction of smaller internal conflicts than on civil wars: an increase of one point in the ratio of government spending reduces the probability of civil war by 1.5 per cent, but by 6.5 percent in the case of lower intensity conflicts. The magnitude in the coefficient changes only slightly when we use of the MEPV dataset, and when we define political conflict in terms of guerrilla warfare.

Alternative specifications. In order to test further for the correct specification of the models and potential omitted variable biases, we used three alternative specifications (Table A5 in online appendix). First, we included year dummy variables in the baseline specification. The coefficient of government welfare spending remains negative and statistically significant. In a second specification, we introduced a dummy variable for years of economic crises, defined as years when GDP per capita growth was below zero. The rationale for the introduction of this control is the fact that economic crises could potentially have an important effect of conflict (see Miguel et al. 2004). Introducing this variable increases the welfare coefficient by one percentage point in relation to the baseline model in column 1. Finally, we tested the

¹⁰ Political conflict cases are defined by “the systematic and sustained use of lethal violence by organized groups that result in at least 500 directly-related deaths over the course of the episode” (Marshall and Cole, 2014: 2). Available at: www.systemicpeace.org/warlist/warlist.htm.

validity of the previous results to the introduction of additional controls: the share of the population aged 15-64 years old using data extracted from the World Development Indicators database (Østby et al. 2011); and the share of the population aged 25 years old and over with secondary and tertiary education (Barro-Lee 2011, Thyne 2006). The introduction of these additional controls reduces the welfare spending coefficient to 0.031 (in comparison to 0.050 in the baseline specification) but these variables do not affect directly the probability of conflict.

Sensitivity to sample selection. Due to the wide variation in the history of political conflicts across Latin America, we removed from the sample potential outliers in the form of countries that have experienced very long conflicts. This is because it is possible that governments may have a higher propensity of providing welfare programmes in situations of protracted conflicts that cannot be resolved through military means alone. We started by removing Colombia, which is the country with the longest conflict duration in our sample. We then removed Peru and Guatemala, two countries with very long and complex conflicts during the period of analysis. We tested also the sensitivity of the estimates in section 4 to the period of analysis by running the original regressions for the time period after the peak of violence in 1989 (Figure 1). The results remain consistent across these new model specifications, with only small variations in the magnitude of the coefficients (Table A6 in online appendix).

Other government expenditure. A final important question is whether the results we have discussed in the paper so far indicate a specific effect of welfare spending or reflect the effects of government capacity more generally (Besley and Persson 2010). In order to isolate the effect of welfare spending, we have re-estimated the baseline regressions by substituting welfare spending with other types of government expenditure: agriculture and mining, defence, education, health, transport and communication.¹¹ Almost none these coefficients are statistically significant (Table A8 in online appendix). The only exception is government expenditure on defence. This coefficient is *positive* (and statistically significant at conventional levels), suggesting that the probability of political conflict incidence is higher in countries across Latin America that invest more in their military sector. These results confirm that it is specifically welfare spending that is associated with reductions in political conflict.

¹¹ Descriptive statistics on the different types of expenditures are provided in Table A8 in the online appendix.

6. When does government welfare spending affect political conflict?

In the sections above we discussed the negative effect of government welfare spending on the incidence of political conflict across Latin America in the period between 1970 and 2010. We showed further that this result pertains exclusively to welfare spending and not to other forms of government expenditure. In this section, we investigate the conditions under which government welfare spending may reduce political conflict, following the discussion in section 2. The first mechanism we examine is whether the relationship between government welfare spending and political conflict we observed above is mediated by changes in inequality. Government transfers that have a strong redistributive element may reduce inequalities, thereby addressing possible existing grievances that led to the conflict (Azam 1995, 2001). However, government welfare spending may not have a strong redistributive component, as is the case when such transfers are used to reinforce systems of patronage, as has been the case in much of Latin America over the last decades (Centeno 2002, Diaz-Cayero et al. 2012). In order to test this mechanism, we separated our initial sample between countries that experienced increasing inequality and those that experienced decreasing inequality in the period under analysis, following Hansen (2000). Data were obtained from the Global Consumption and Income Project (GCIP).¹² Table 5 shows that government welfare spending is more effective in reducing political conflict in countries with decreasing inequality (column 2). We tested further this result by restricting the sample to the period after 1989, when government welfare spending increased the most across the Latin America region.¹³ Again the results show that in this period government welfare spending reduced the probability of political conflict (by nearly eight per cent) in countries with decreasing inequality (column 4), but not in countries with increasing inequality (column 5).

[Table 5 about here]

¹² Data are available at <http://gcip.info/>. This database is one of the most comprehensive source of information on inequality for more than 140 countries over the period between 1960 and 2013. Gini coefficients were computed following a standardized approach that extracted information from national household surveys. Countries with decreasing inequality over the period 1970-2010 were Colombia, El Salvador, Guatemala, Paraguay, Peru, Uruguay and Venezuela. Other countries experienced rising levels of inequality in the same period.

¹³ The countries that experienced decreasing inequality between 1989 and 2010 were Argentina, Chile, El Salvador, Guatemala, Nicaragua, Panama and Peru.

We discussed also in section 2 whether perceptions of inequality may also influence the effectiveness of government welfare spending in reducing political conflict. In order to test this hypothesis, we compiled data from different waves of *Latinobarometro*,¹⁴ where people (aged 18 years and more) were asked for their opinion about the distribution of incomes in their country. The specific question asks: “How fair you think that income distribution is in (country)?”. We interpret answers ‘very fair’ as indicating that people perceive inequality in their country to be low. These data are available only since 1997. We split the sample into countries with increasing and decreasing percentages of people who considered that income distribution is very fair. The former group is composed of Argentina, Panama and Venezuela. Table 5 shows that welfare spending reduces the probability of political conflict in both groups (columns 6 and 7). However, and in line with the inequality mechanism above, the magnitude of the coefficient is higher in countries where people were increasingly more likely to perceived the income distribution as fair (column 6). Taken together, the results suggest that government welfare spending is useful in mitigating political violence when it is associated with parallel reductions in income inequality and in perceptions about income inequality.

The impact of government welfare spending may be also mediated by factors other than inequality or the perception of inequality. Two key mechanisms discussed in section 2 were the levels of social trust and perceptions about the commitment and quality of state institutions. The direction of these mechanisms is also theoretically ambiguous. Government welfare policies that generate feelings of reciprocity among citizens and signal a strong commitment of the government to uphold the social contract may increase social trust in society, as well as trust and support for government institutions (Acemoglu and Robinson 2006, Rothstein 1998). Both effects would reduce the likelihood of political conflict. However, welfare policies that are perceived as part of patronage systems and reinforce social disparities may break social trust, as well as trust in government institutions. These effects would increase the risk of political conflict (Besley and Persson 2010, North, Wallis and Weingast 2009).

We measure these two mechanisms using information from different waves of *Latinobarometro*. Regarding social trust, people were asked: “Generally speaking, would you say that you can trust most people, or that you can never be too careful when dealing with

¹⁴ Data, questionnaires and support documents are available at <http://www.latinobarometro.org/lat.jsp>.

others?”. We split the sample into countries with increasing and decreasing percentages of people who report that can trust most people during the period of analysis.¹⁵ Table 5 shows that government welfare spending is effective in reducing the probability of conflict only when associated with increasing levels of social trust (column 8). The question we use to proxy for trust in government institutions asks about the confidence of individual citizens towards their government. Again we split the sample into countries with increasing and decreasing percentages of people who report some or a lot of confidence in their government. Table 5 shows that welfare spending contributes to reducing the probability of political conflict only when associated with increasing trust in government institutions (column 10).¹⁶

7. Discussion and conclusions

Over the past century, countries across Latin America have experienced an increase in political conflict in the forms of guerrilla movements, episodes of terrorism and civil wars. Violence reached a peak in 1989 and decreased in the 1990s and 2000s. This paper shows that government interventions in the form of welfare spending have played a key role in reducing the risk of political conflict in the region. Using data for Latin American countries over the period between 1970 and 2010, we showed that (in our preferred specification) increases of government welfare spending by one percentage point reduce the probability of conflict on average by around five per cent. The results also show that government welfare spending has a stronger effect on the reduction of smaller internal conflicts and guerrilla insurgencies, and on the probability of conflict onset. The impact of government welfare spending on political conflicts of larger intensity or on the duration of conflicts is weaker. The results show further that this effect is related only to welfare spending. Other forms of government expenditure do not affect the incidence of political conflict, but the probability of conflict is higher in countries investing more on their military sector.

The regressions results highlight in addition that the effectiveness of government welfare spending in promoting political stability is mediated by key mechanisms. Notably, government welfare spending is particularly effective in reducing the incidence of political conflict when associated with reductions in absolute and perceived inequality, and increasing

¹⁵ The former group includes Argentina, Chile, El Salvador, Mexico, Peru and Venezuela.

¹⁶ These were Argentina, Chile, Colombia, El Salvador, Mexico, Nicaragua, Panama, Paraguay, Uruguay and Venezuela

levels of social trust and trust in government institutions. Overall, these results suggest that social welfare spending is a useful tool to reduce social tensions and avoid the escalation of conflicts when it addresses unequal distributions of resources, and improves the trust of citizens on formal institutions and on each other. Improved political stability is likely in turn to strengthen state capacity in the future as state institutions will be better able to focus on social development rather than military expansion.

References

- Acemoglu, D. and Robinson, J. A. 2000. "Why Did the West Extend the Franchise? Democracy, Inequality and Growth in Historical Perspective", *Quarterly Journal of Economics*, 115: 1167-1199.
- Acemoglu, D. and Robinson, J. 2006. *Economic Origins of Dictatorship and Democracy*, New York: Cambridge University Press.
- Acemoglu, D., Garcia-Jimeno, C. and Robinson, J. 2015. "State Capacity and Economic Development: A Network Approach", *American Economic Review* 105 (8): 2364-2409.
- Acemoglu, D., Robinson, J. and Verdier, T. 2004. "Kleptocracy and Divide-and-Rule: A Model of Personal Rule", *Journal of the European Economic Association* 2 (2-3): 132-192.
- Akerlof, G. A. 1976. "The Economics of Caste and of the Rat Race and Other Woeful Tales", *Quarterly Journal of Economics* 90 (4): 599-617.
- Alesina, A. and LaFerrara, E. 2002a. "Who Trusts Others?", *Journal of Public Economics* 85: 207-234.
- Alesina, A. and LaFerrara, E. 2002b. "Participation in Heterogenous Communities", *Quarterly Journal of Economics* 115 (3): 847-858.
- Arias, E. D. and Goldstein, D. M. 2010. "Violent Pluralism: Understanding the New Democracies of Latin America". In Enrique Desmond Arias and Daniel Goldstein (eds.). *Violent Democracies in Latin America*, 1-34. Durham, NC: Duke University Press.
- Art, R. J. and Richardson, L. (2007). *Democracy and Counterterrorism: Lessons from the Past*. US Institute of Peace Press.
- Azam, J-P. 1995. "How to Pay for the Peace? A Theoretical Framework with References to African Countries", *Public Choice* 83 (1-2): 173-184.

Azam, J-P. 2001. "The Redistributive State and Conflicts in Africa", *Journal of Peace Research* 38: 429-444.

Barakat, M. and Urdal, H. 2009. "Breaking the Waves: Does Education Mediate the Relationship between Youth Bulges and Political Violence?", World Bank Policy Research Working Paper 5114.

Barro, R. and Lee, J-W. 2013. "A New Data Set of Educational Attainment in the World, 1950-2010", *Journal of Development Economics* 104: 184-198.

Bauer, M., Cassar, A., Chytilova, J., Henrich, J. 2011. "Warfare during Ontogeny Increases Egalitarian and Parochial Motivations", Working Paper, University of San Francisco.

Baum, C. F. and Schaffer, M. E. 2012. "IVREG2H: Stata Module to Perform Instrumental Variables Estimation using Heteroskedasticity-Based Instruments", Statistical Software Components S457555, Boston College Department of Economics, revised 02 April 2015.

Bazzi, S. and Blattman, C. 2014. "Economic Shocks and Conflict: Evidence from Commodity Prices", *American Economic Journal: Macroeconomics* 6 (4): 1-38.

Beath, A., Christia, F. and Enikolopov, R. 2012. "Winning Hearts and Minds through Development: Evidence from a Field Experiment in Afghanistan", MIT Political Science Department Working Paper 2011-14.

Benabou, R. 2001. "Unequal Societies: Income Distribution and the Social Contract", *American Economic Review* 90: 96-129.

Berman, E., Shapiro, J. and Felter, J. 2009. "Can Hearts and Minds Be Bought? The Economics of Counterinsurgency in Iraq", NBER Working Paper 14606.

Besley, T. and Persson, T. 2009a. "Repression or Civil War?", *American Economic Review* 99 (2): 292-297.

Besley, T. and Persson, T. 2009b. "The Origins of State Capacity", *American Economic Review* 99 (4): 1218-1244.

Besley, T. and Persson, T. 2010. "State Capacity, Conflict, and Development", *Econometrica* 78 (1): 1-34.

Bodea, C., Higashijima, M. and Singh, R. J. 2015. "Oil and Civil Conflict: Can Public Spending Have a Mitigation Effect?", *World Development* 78: 1-12.

Boix, C. Miller, M. K. and Rosato, S. 2014. "Boix-Miller-Rosato Dichotomous Coding of Democracy, 1800-2010". doi:10.7910/DVN/28468, Harvard Dataverse, V1

Bueno de Mesquita, B., Morrow, J. D., Siverson, R. M. and Smith, A. 2002. "Political Institutions, Policy Choice and the Survival of Leaders", *British Journal of Political Science* 32 (4): 559-590.

Bueno de Mesquita, B., Smith, A., Siverson, R. And Morrow, J. D. 2003. *The Logic of Political Survival*. MIT Press.

Buhaug, H. 2006. "Rebel Capability and Rebel Objective in Civil War", *Journal of Peace Research* 43 (6): 691-708.

Burbach, D. T., and C. J. Fettweis (2014), "The Coming Stability? The Decline of Warfare in Africa and Implications for International Security", *Contemporary Security Policy*, 35(3), 421-445.

Calvo, E., Bertranou, F. and E. Bertranou (2010), "Are Old-age Pension System Reforms Moving Away from Individual Retirement Accounts in Latin America?", *Journal of Social Policy*, 39 (2): 223-234.

Camacho, A. and Mejia, D. 2014. "The Externalities of Conditional Cash Transfer Programs on Crime: The Case of Bogotá's *Familias en Accion* Program", Available at: http://lacer.lacea.org/bitstream/handle/123456789/12539/lacea_2013_cash_transferes_crime.pdf?sequence=1

Cederman, L. E., Gleditsch, K. S. and Buhaug, H. 2013. *Inequality, Grievances, and Civil War*. Cambridge University Press.

Centeno, M. A. 2002. *Blood and Debt: War and the Nation-State in Latin America*. Penn State Press.

CEPAL 2009. América Latina y el Caribe Series Históricas de Estadísticas Económicas 1950-2008, Cuadernos estadísticos, http://interwp.cepal.org/cuaderno_37/index.htm.

Chioda, L., De Mello, J. and Soares, R. 2012. “Spillovers from Conditional Cash Transfer Programs: Bolsa Família and Crime in Urban Brazil”, IZA Discussion Paper 6371, Bonn: Institute for the Study of Labor (IZA).

Colletta, N. J. and Cullen, M. L. 2000. *Violent Conflict and the Transformation of Social Capital: Lessons from Cambodia, Rwanda, Guatemala, and Somalia*, Conflict Prevention and Post-Conflict Reconstruction, World Bank, Washington D. C.

Collier, P. and Hoeffler, A. 2004. “Greed and Grievance in Civil War”, *Oxford Economic Papers* 56 (4): 563-595.

Cornia, G. A. 2014. *Falling Inequality in Latin America: Policy Changes and Lessons*. Oxford University Press.

Crost, B., Felter, J. and Johnston, P. 2014. “Aid Under Fire: Development Projects and Civil Conflict”, *American Economic Review* 104 (6): 1833-1856.

Cruces, G., Perez-Truglia, R. and Tetaz, M. 2013. “Biased Perceptions of Income Distribution and Preferences for Redistribution: Evidence from a Survey Experiment”, *Journal of Public Economics* 98: 100-112.

De Ferranti, D., Perry, G., Ferreira, F. and M. Walton. 2004. *Inequality in Latin America: Breaking with History?*, World Bank, Washington, D.C.

De La O, A. L. 2013. “Do Conditional Cash Transfers Affect Electoral Behavior? Evidence from a Randomized Experiment in Mexico”, *American Journal of Political Science* 57 (1).

De Juan, A. and Bank, A. 2015. “The Ba’athist Blackout? Selective Goods Provision and Political Violence in the Syrian Civil War”, *Journal of Peace Research* 52 (1): 91-104.

De Swaan, A. 1998. *In Care of the State: Health Care, Education and Welfare in Europe and the USA in the Modern Era*. Polity Press and Oxford University Press.

Diaz-Cayeros, A., Estevez, F. and Magaloni, B. 2012. *Strategies of Vote Buying: Democracy, Clientelism and Poverty Relief in Mexico*. Cambridge University Press, forthcoming. Draft at <http://web.stanford.edu/~magaloni/dox/2012strategiesvotebuying.pdf>. Accessed on 21/10/16.

Easterly, W. 2001. Global Development Network Growth Database, available at: <http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20701055~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html>.

Easterly, W., and Levine, R. 1997. “Africa’s Growth Tragedy: Policies and Ethnic Divisions”, *Quarterly Journal of Economics* 1203-1250.

Ebeke, M. C. and Ngouana, M. C. L. 2015. “Energy Subsidies and Public Social Spending: Theory and Evidence”, Paper 15-101, International Monetary Fund.

Esping-Andersen, G. 1990. *The Three Worlds of Welfare Capitalism*. London: Polity.

Esteban, J.M. and Ray, D. 1994. “On the Measurement of Polarisation”, *Econometrica* 62: 819-851.

Fearon, J. D. and Laitin, D. D. 2003. “Ethnicity, Insurgency, and Civil War”, *American Political Science Review* 97 (1): 75-90.

Ferejohn, J. 1974. *Pork Barrel Politics*. Stanford: Stanford University Press.

Ferreira, F. and Robalino, D. 2010. "Social Protection in Latin America: Achievements and Limitations", World Bank Policy Research Working Paper Series # 5305.

Finan, F. and Schechter, L. 2011. "Vote-Buying and Reciprocity", NBER Working Paper 17411. Cambridge M. A.: National Bureau of Economic Research.

Fiszbein, A. 2004. "Beyond Truncated Welfare States: Quo Vadis Latin America?", Washington D. C.: The World Bank.

Fiszbein, A. and Schady, N. 2009. "Conditional Cash Transfers: Reducing Present and Future Poverty", World Bank, Washington, D.C.

Fjelde, H, and de Soysa, I. 2009. "Coercion, Co-optation, or Cooperation: State Capacity and the Risk of Civil War 1961-2004", *Conflict Management and Peace Science* 26 (1): 5-25.

Fukuyama, F. 2000. "Social Capital and Civil Society", IMF Working Paper 00/74.

Gimpelson, V. and Treisman, D. 2015. "Misperceiving Inequality", IZA Discussion Paper 9100.

Gleditsch, N. P., Wallensteen, P., Eriksson, M., Sollenberg, M. and Strand, H. 2002. "Armed Conflict 1946–2001: A New Dataset", *Journal of Peace Research* 39 (5): 615-637.

Gough, I., Wood, G., Barrientos, A., Bevan, P., Davis, P. and Room, G. 2004. *Insecurity and Welfare Regimes in Asia, Africa and Latin America: Social Policy in Development Contexts*. Cambridge University Press, Cambridge.

Grassi, D. 2010. "The Impact of Democratization: A Preliminary Investigation on Social Policies and Political Violence in Latin America".

Available at: <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.631.8505>

Grossman, H. I. 1994. "Production, Appropriation, and Land Reforms", *American Economic Review* 84: 705-712.

Grossman, H. I. 1995. "Robin Hood and the Redistribution of Property Income", *European Journal of Political Economy* 11: 399-410.

Gurr, T. R. 1970. *Why Men Rebel*. Princeton University Press.

Hansen, B. 2000. "Sample Splitting and Threshold Estimation", *Econometrica* 68 (3): 575-603.

Hansen, L. P. 1982. "Large Sample Properties of Generalized Method of Moments Estimators", *Econometrica* 50: 1029-1054.

Hegre, H. and Sambanis, N. 2006. "Sensitivity Analysis of Empirical Results on Civil War Onset", *Journal of Conflict Resolution* 50 (4): 508-535.

Huber, E. and Stephens, J. D. 2014. "Latin American Welfare Dataset, 1960-2014", University of North Carolina at Chapel Hill.

Huber, E., Nielsen, F., Pribble, J. and Stephens, J. 2006. "Politics and Inequality in Latin America and the Caribbean", *American Sociological Review* 71 (6): 943-963.

IADB. 2000. *Natural Disasters in Latin America and the Caribbean: An Overview of Risk*. Inter-American Development Bank.

Justino, P. 2015. "Civil Unrest and Government Transfers in India", IDS Evidence Report 108, Institute of Development Studies at the University of Sussex, Brighton, UK.

Khanna, G. and Zimmermann, L. 2015. "Guns and Butter? Fighting Violence with the Promise of Development", IZA Working Paper 9160.

Knack, S. and Zak, P. 2001. "Building Trust: Public Policy, Interpersonal Trust, and Economic Development", *Supreme Court Economic Review* 12: 134:151.

Kumlin, S. and Rothstein, B. 2005. "Making and Breaking Social Capital: The Impact of Welfare State Institutions", *Comparative Political Studies* 38 (3): 339-365.

- Lederman, D., Loayza, M. and Menendez, A. 2002. "Violent Crime: Does Social Capital Matter?", *Economic Development and Cultural Change* 50 (3): 509-539.
- Lewbel, A. 2012. "Using Heteroscedasticity to Identify and Estimate Mismeasured and Endogenous Regressor Models", *Journal of Business & Economic Statistics* 30 (1): 67-80.
- Lindert, K., Skoufias, E. and Shapiro, J. 2006. "Redistributing Income to the Poor and the Rich: Public Transfers in Latin America and the Caribbean", Social Safety Nets Primer Series.
- Linos, E. 2013. "Do Conditional Cash Transfer Programs Shift Votes? Evidence from the Honduras", *Electoral Studies* 32 (4): 864-874.
- Machado, F., Scartascini, C. and Tommasi, M. 2009. "Political Institutions and Street Protests in Latin America", IDB Working Paper Series 110.
- Manacorda, M., Miguel, E. and Vigorito, A. 2011. "Government Transfers and Political Support", *American Economic Journal: Applied Economics* 3 (3): 1-28.
- Marshall, M. G. and Cole, B. R. 2014. *Global Report 2014: Conflict, Governance, and State Fragility*. Vienna, VA: Center for Systemic Peace. Serial report; also published in 2007, 2008, 2009, and 2011.
- Meltzer, A. and Richard, S. 1981. "A Rational Theory of the Size of Government", *Journal of Political Economy* 89 (5): 914-927.
- Miguel, E., Satyanath, S. and Sergenti, E. 2004. "Economic Shocks and Civil Conflict: An Instrumental Variables Approach", *Journal of Political Economy* 112 (4): 725-753.
- Montalvo, J. G. and Reynal-Querol, M. 2008. "Discrete Polarisation with an Application to the Determinants of Genocides", *Economic Journal* 118 (533): 1835-1865.

Mishra, V. and Smyth, R. 2015. “Estimating Returns to Schooling in Urban China Using Conventional and Heteroskedasticity-Based Instruments”, *Economic Modelling* 47: 166-173.

Muller, E. N. and Seligson, M.A. 1987. “Inequality and Insurgency”, *American Political Science Review* 81: 425-451.

Murshed, S. M. and Gates, S. 2005. “Spatial–Horizontal Inequality and the Maoist Insurgency in Nepal”, *Review of Development Economics* 9 (1): 121-134.

Niehues, J. 2014. “Subjective Perceptions of Inequality and Redistribute Preferences: An International Comparison”, Discussion Paper, Cologne Institute for Economic Research.

North, D., Wallis, J. and Weingast, B. 2009. *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History*. Cambridge University Press.

North, D. and Weingast, B. 1989. “Constitutions and Commitment: Evolution of the Institutions Governing Public Choice in 17th Century England”, *Journal of Economic History* 49: 425-451.

Norton, M. and Ariely, D. 2011. “Building a Better America – One Wealth Quintile at a Time”, *Perspectives on Psychological Science* 6: 9-12.

Nunn, N. and Qian, N. 2014. “US Food Aid and Civil Conflict”, *American Economic Review* 104 (6): 1630-1666.

Nupia, O. 2011. “Anti-Poverty Programs and Presidential Election Outcomes: Familias En Acción in Colombia”, Documento CEDE No. 2011-14.

Østby, G., Urdal, H., Tadjoeeddin, Z., Murshed, S. M. and Strand, H. 2011. “Population Pressure, Horizontal Inequalities and Political Violence: A Disaggregated Study of Indonesian Provinces, 1990-2003”, *Journal of Development Studies* 47 (3): 377-398.

Østby, G. 2006. “Horizontal Inequalities, Political Environment and Civil Conflict: Evidence from 55 Developing Countries”, CRISE Working Paper 28, Oxford: Centre for Research on Inequality, Human Security and Ethnicity (CRISE), University of Oxford

Ostby, G. and Urdal, H. 2010. “Education and Civil Conflict: A review of the Quantitative, Empirical Literature”, Background paper prepared for the Education for All Global Monitoring Report.

Ostrom, E. 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press.

Pinchotti, S. and Verwimp, P. 2007. “Social Capital and the Rwandan Genocide: A Micro-Level Analysis”, HiCN Working Paper no. 30, Households in Conflict Network (www.hicn.org).

Piketty, T. 1998. “Theories of Persistent Inequality and Intergenerational Mobility”, in A. Atkinson and F. Bourguignon (eds.), *Handbook of Income Distribution*, chapter 6.

Piketty, T. 1995. “Social Mobility and Redistributive Politics”, *Quarterly Journal of Economics* 110: 551-585.

Putnam, R. 1993. *Making Democracy Work*. Princeton University Press, Princeton NJ.

Rofman, R., Apella, I. and Vezza, E. 2013. “Mas Allá de las Pensiones Contributivas: Catorce Experiencias en América Latina”, World Bank, Washington DC.

Rothstein, B. 1998. *Just Institutions Matter: The Moral and Political Logic of the Universal Welfare State*. Cambridge: Cambridge University Press.

Sachs, J. D. 1989. “Social Conflict and Populist Policies in Latin America”, NBER Working Paper No. 2897.

Sambanis, N. 2001. "Do Ethnic and Non-Ethnic Civil wars Have the Same Causes? A Theoretical and Empirical Inquiry", *Journal of Conflict Resolution* 45 (3): 259-282.

Schock, K. 1996. "A Conjectural Model of Political Conflict: The Impact of Political Opportunities on the Relationship between Economic Inequality and Violent Political Conflict", *Journal of Conflict Resolution* 40: 98-133.

Solimano, A. (2004). *Political Violence and Economic Development in Latin America: Issues and Evidence*. United Nations Publications.

Stampini, M. and Tornarolli, L. 2012. "The Growth of Conditional Cash Transfers in Latin America and the Caribbean: Did They Go Too Far?". IDB Policy Brief 185.

Stewart, F. (2002) Horizontal Inequalities: A Neglected Dimension of Development, QEH Working Paper Series 81, Oxford: Centre for Research on Inequality, Human Security and Ethnicity (CRISE), Queen Elizabeth House, University of Oxford.

Strobl, E. 2012. "The Economic Growth Impact of Natural Disasters in Developing Countries: Evidence from Hurricane Strikes in the Central American and Caribbean Regions", *Journal of Development Economics* 97 (1): 130-141.

Taydas, Z., & Peksen, D. (2012). Can states buy peace? Social welfare spending and civil conflicts. *Journal of Peace Research*, 49(2), 273-287.

Teorell, J., Dahlberg, S., Holmberg, S., Rothstein, B., Hartmann, F. and Svensson, R. 2015. "The Quality of Government Standard Dataset", version Jan15. University of Gothenburg: The Quality of Government Institute, available at: <http://www.qog.pol.gu.se>

Thyne, C. 2006. "ABC's, 123s and the Golden Rule: The Pacifying Effect of Education on Civil War 1980-1999", *International Studies Quarterly* 50: 733-754.

Tilly, C. and Tarrow, S. 2015. *Contentious Politics*, 2nd Edition, Oxford University Press.

Vanhanen, T. and Lundell, K. 2014. *FSD1289 Measures of Democracy 1810-2012, version 6.0*. University of Tampere, Department of Political Science and International Relations.

Varshney, A. 2002. *Ethnic Conflict and Civic Life: Hindus and Muslims in India*. New Haven CT: Yale University Press.

Voth, H. 2011. "Tightening Tensions: Fiscal Policy and Civil Unrest in Eleven South American Countries, 1937-1995". In J. Gali (ed.), *Fiscal Policy and Macroeconomic Performance*. Central Bank of Chile, Santiago de Chile.

Wilkinson, S. 2005. *Religious Politics and Communal Violence*, New Delhi: Oxford University Press.

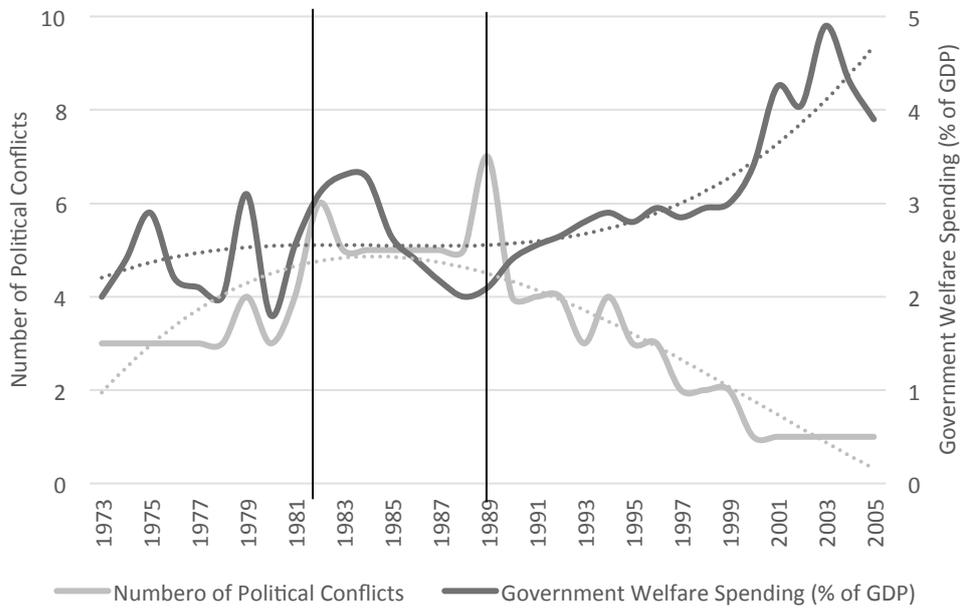
Wooldridge, J. M. (2002). *Econometric analysis of cross section and panel data*. MIT Press, Cambridge, Massachusetts, USA, 740 pp.

World Bank. 2013. *World Development Indicators Online*. Washington, D.C.: World Bank.

World Bank. 2011. *World Development Report 2011: Conflict, Security, and Development*. Washington, D.C.: The World Bank.

Zucco, C. 2013. "When Payouts Pay Off: Conditional Cash Transfers and Voting Behavior in Brazil 2002–2010", *American Journal of Political Science* 57: 810–22.

Figure 1. Political conflicts and social spending in Latin America



Source: Authors' calculations based on UCDP/PRIO, Huber and Stephens (2014), Easterly (2001) and SPEED database.

Note: The two vertical lines indicate changes in the trends of political conflicts and social spending and in their relationship.

Table 1. Major episodes of political violence in Latin America between 1957 and 2013

Begin	End	Type	States Directly Involved	Brief Description	Deaths
1957	1959	CW	Cuba	Civil war (Castro ousts Batista)	5000
1958	*	CV	Venezuela	Civil violence (popular revolt against President Perez Jimenez)	800
1965	*	CV	Dominican Republic	Civil violence	3000
1966	1996	EW	Guatemala	Repression of indigenous peoples	150000
1969	*	IW	El Salvador, Honduras	"Soccer War"	5000
1973	*	CV	Chile	Civil violence (army ouster of Allende)	5000
1974	1976	CW	Chile	Repression of dissidents ("disappeared")	20000
1975	2013+	CV	Colombia	Civil violence, land reform, and drug trafficking	57500
1976	1980	CW	Argentina	"The Dirty War" repression of dissidents	20000
1978	1979	CW	Nicaragua	Civil war (Sandinistas)	40000
1979	1992	CW	El Salvador	Civil war (FMLN)	75000
1980	*	CV	Brazil	Repression of dissidents (death squads)	1000
1981	1986	IV	Honduras, Nicaragua	International violence; Contra armed forces	2000
1981	1990	CW	Nicaragua	Civil war (Contras)	30000
1982	*	IW	Argentina, UK	Falklands-Malvinas War	1000
1982	1997	CV	Peru	Civil violence (Sendero Luminoso)	30000
1987	*	CV	Chile	Civil violence	3000
1989	*	IV	Panama, USA	International violence	1000
1994	1997	EV	Mexico	Ethnic violence (Chiapas)	1000
1995	*	IV	Ecuador, Peru	International violence (border dispute)	1000
2006	2013+	CV	Mexico	Federal Army and police offensive against entrenched drug cartels and corrupt police and officials, mainly in the northern region bordering the USA	75000

Source: Authors' compilation. Notes: Abbreviations are as follows: CV indicates civil violence defined as intrastate violent event involving different political groups; CW indicates civil war defined as intrastate violent event between distinct groups aiming at imposing a unilateral result to the dispute; EV indicates ethnic violence defined as intrastate violent event involving different ethnic groups; EW indicates ethnic war defined as intrastate violent event between distinct ethnic groups aiming at imposing a unilateral result to the dispute; IV indicates interstate violence defined as interstate violent event involving different states (two or more); IW indicates interstate war defined as interstate violent event between distinct states (two or more) aiming at imposing a unilateral result to the dispute.

Table 2. Effect of government welfare spending on incidence of political conflict in Latin America, 1970-2010

	Model 1	Model 2	Model 3
	(1)	(2)	(3)
Government welfare spending	-0.038*** [0.010]	-0.044*** [0.010]	-0.050*** [0.011]
Gross Domestic Product per capita		-0.069*** [0.014]	-0.088*** [0.020]
Share of votes of smaller parties			0.000 [0.001]
Share of population who voted in election			0.002 [0.002]
Years of political election			0.019 [0.043]
Constant	0.526*** [0.138]	0.886*** [0.180]	0.965*** [0.189]
Country dummies	Yes	Yes	Yes
Observations	386	386	386
R-squared	0.499	0.512	0.516

Notes: All models are computed using a least-squares dummy variable (LSDV) estimator with country fixed effects. Robust standard errors are included in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table 3. First-stage results

	Model 1	Model 2	Model 3	Model 4
Average government welfare spending neighbouring countries	0.390*** [0.089]			0.371*** [0.086]
Average government welfare spending neighbouring countries in the previous three years		0.388*** [0.094]		
Major disasters			0.630*** [0.155]	0.526*** [0.151]
Gross Domestic Product per capita	-0.789*** [0.133]	-0.779*** [0.138]	-0.562*** [0.126]	-0.797*** [0.130]
Share of votes of smaller parties	0.014*** [0.004]	0.013*** [0.004]	0.009* [0.005]	0.013*** [0.005]
Share of population who voted in election	0.006 [0.007]	0.005 [0.007]	0.015** [0.007]	0.004 [0.007]
Years of political election	-0.125 [0.144]	-0.196 [0.149]	-0.087 [0.160]	-0.082 [0.145]
Constant	5.127*** [0.709]	5.210*** [0.732]	4.157*** [0.695]	4.982*** [0.686]
Observations	374	377	386	374
F-statistics	19.20	17.00	16.45	15.14
Kleibergen-Paap Wald rk F statistic	19.20	14.65	16.45	15.14
Kleibergen-Paap rk LM statistic	17.97	17.00	16.28	25.32
Cragg-Donald Wald F statistic	29.54	20.00	17.28	21.77
Anderson-Rubin Wald test, F – pvalue	0.0561	0.0970	0.058	0.035
Anderson-Rubin Wald test, Chi-sq - pvalue	0.0498	0.0886	0.052	0.029
Stock-Wright LM S statistic, Chi-sq -pvalue	0.0074	0.0127	0.034	0.003

Notes: Robust standard errors are included in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table 4. Alternative estimators

	LSDV	IV1	IV2	IV3	IV4	IV-GI	IV-GI + EI	HTaylor
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Political conflict (t-1)								
Government welfare spending	-0.050*** [0.011]	-0.075** [0.036]	-0.079* [0.041]	-0.118* [0.061]	-0.096*** [0.035]	-0.037*** [0.014]	-0.038*** [0.015]	-0.043*** [0.012]
Gross Domestic Product per capita	-0.088*** [0.020]	-0.107*** [0.029]	-0.103*** [0.028]	-0.125*** [0.040]	-0.120*** [0.030]	-0.085*** [0.022]	-0.085*** [0.022]	-0.067*** [0.024]
Share of votes of smaller parties	0.000 [0.001]	0.001 [0.001]	0.001 [0.001]	0.001 [0.001]	0.001 [0.001]	0.000 [0.001]	0.000 [0.001]	-0.003* [0.002]
Share of pop who voted in election	0.002 [0.002]	0.002 [0.002]	0.002 [0.002]	0.003 [0.002]	0.002 [0.002]	0.001 [0.002]	0.001 [0.002]	0.002 [0.002]
Years of political election	0.019 [0.043]	0.013 [0.044]	0.008 [0.044]	0.010 [0.045]	0.010 [0.044]	0.019 [0.042]	0.019 [0.043]	0.038 [0.043]
Index of ethnic fractionalization								0.894** [0.446]
Constant	0.965*** [0.189]	0.741*** [0.196]	0.736*** [0.212]	0.893*** [0.295]	0.839*** [0.205]	0.569 [0.127]	0.574*** [0.127]	0.362 [0.223]
Country dummies	Yes							
Observations	386	374	377	386	374	374	374	292
R-squared	0.516	0.500	0.512	0.476	0.490	0.500	0.501	
Endogeneity test		0.538	0.528	0.236	0.264			
Tests of overidentifying restrictions (p-value)					0.359	0.000	0.001	
Sargan test								
AR (1)								
AR (2)								

Notes: Model abbreviations are as follows. LSDV is the least-squared dummy variable estimator with country fixed effects. IV is the instrumental variable model. The instrument in IV1 is the average value of government welfare spending in countries sharing the same borders. The instrument in IV2 is the average value of government welfare spending in countries sharing the same borders in the previous three years. The instrument in IV3 is a dummy variable for natural disasters. The instruments in IV4 are the average value of government welfare spending in countries sharing the same borders and a dummy variable for natural disasters. IV-GI is the instrumental variable model with instruments generated using Lewbel (2012). This variation uses only internal instruments. IV-GI + EI is the same model as in column 3 but using also external instruments. HTaylor is the Hausman-Taylor estimator. Robust standard errors are included in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table 5. Mechanisms

VARIABLES	Baseline model	Inequality 1970-2010		Inequality 1989-2010		Perceptions of that income distribution is fair		Social trust		Institutional trust on government	
		Decreasing	Increasing	Decreasing	Increasing	Increasing	Decreasing	Increasing	Decreasing	Increasing	Decreasing
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Government welfare spending	-0.050*** [0.011]	-0.041** [0.016]	-0.034** [0.017]	-0.078*** [0.016]	-0.008 [0.007]	-0.061** [0.025]	-0.046*** [0.011]	-0.074*** [0.016]	-0.003 [0.019]	-0.034*** [0.010]	-0.084 [0.084]
Gross Domestic Product per capita	-0.088*** [0.020]	-0.229*** [0.047]	-0.028 [0.023]	-0.145*** [0.030]	-0.023 [0.027]	-0.010 [0.037]	-0.099*** [0.024]	-0.115*** [0.026]	-0.097 [0.061]	-0.046** [0.019]	-1.428*** [0.275]
Share of votes of smaller parties	0.000 [0.001]	-0.000 [0.002]	-0.000 [0.001]	-0.000 [0.002]	0.001 [0.001]	-0.003* [0.002]	0.001 [0.002]	0.002 [0.002]	-0.001 [0.002]	-0.002 [0.001]	0.007** [0.003]
Share of pop. who voted in election	0.002 [0.002]	0.003 [0.002]	0.000 [0.002]	0.002 [0.003]	0.001 [0.001]	0.005* [0.003]	0.001 [0.002]	0.001 [0.002]	0.001 [0.003]	0.002 [0.001]	-0.005 [0.006]
Years of political election	0.019 [0.043]	0.018 [0.057]	0.026 [0.062]	-0.006 [0.069]	0.027 [0.044]	-0.030 [0.061]	0.035 [0.055]	-0.026 [0.062]	0.064 [0.058]	0.033 [0.041]	0.002 [0.113]
Constant	0.965*** [0.189]	1.365*** [0.255]	0.271** [0.114]	0.978*** [0.104]	0.157 [0.137]	0.290* [0.160]	0.209*** [0.069]	1.105*** [0.221]	0.137** [0.063]	0.144** [0.063]	4.009*** [0.582]
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	386	227	159	226	160	106	280	220	166	317	69
R-squared	0.516	0.524	0.080	0.373	0.795	0.138	0.521	0.302	0.688	0.562	0.470

Notes: Columns (2) and (3) replicate the baseline model in samples of countries that experienced, respectively, decreasing and increasing Gini coefficients between 1970 and 2010. Columns (4) and (5) replicate the same regressions as columns (2) and (3) for the period between 1989 and 2010. Columns (6) and (7) show the impact of government welfare spending on political conflict in countries with increasing low (below the median) and high (above the mean) decreasing percentages of people who considered that income distribution is fair or very fair. Columns (8) and (9) show the impact of government welfare spending on political conflict in countries with increasing and decreasing social trust. Social trust is defined as high (low) if the percentage of people in a given country and year that reported trusting others. Columns (10) and (11) show the impact of government welfare spending on political conflict in countries with increasing and decreasing trust in government. We split the sample into countries with increasing and decreasing percentages of people who report some or a lot of confidence in their government. All models are estimated using a least-squares dummy variable estimator with country fixed effects. Robust standard errors included in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Online Appendix

Table A1. Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Political conflict	738	0.2	0.4	0.0	1.0
Government welfare spending	558	3.7	3.5	0.0	16.8
Gross Domestic Product per capita	738	3.2	1.8	0.7	8.7
Share of population who voted in last presidential election	738	29.0	17.1	0.0	70.0
Share of votes of smaller parties	738	39.8	21.2	0.0	70.0
Years of political election	738	0.2	0.4	0.0	1.0
Index of ethnic fractionalization	738	0.4	0.2	0.1	0.7

Notes: Political conflict is a binary value with value 1 if the country experienced events that resulted in at least 25 annual battle-related deaths according to the UCDP/PRIOD database. Government welfare spending is the percentage of GDP spend by government in each country and in each given year on welfare programs, based on information compiled in the SPEED database. GDP per capita is calculated at constant 2005 US\$ based on information extracted from the World Bank Development Indicators. The share of the population who voted in the last presidential election and the share of votes of smaller parties (in overall votes) is calculated from the databases published in Teorell et al. (2015) and Vanhanen and Lundell (2014). Years of political election is from Teorell et al. (2015). The index of ethnic fractionalization is also from Teorell et al. (2015) and measures the probability that two people selected randomly belong to two different groups. This variable ranges from 0 – i.e. perfectly homogeneous - to 1 – i.e. highly fragmented.

Table A2. Correlation matrix

	Political conflict	Government welfare spending	Gross Domestic Product per capita	Share of population who voted in the election	Share of votes of smaller parties	Years of political election	Index of ethnic fractionalization
Political conflict	1.00						
Government welfare spending	-0.25	1.00					
Gross Domestic Product per capita	-0.22	0.35	1.00				
Share of population who voted in election	-0.20	0.35	0.34	1.00			
Share of votes of smaller parties	-0.03	-0.02	0.14	0.64	1.00		
Years of political election	0.03	-0.07	-0.05	0.12	0.10	1.00	
Index of ethnic fractionalization	0.18	-0.27	0.05	-0.20	0.06	0.04	1.00

Notes: Political conflict is a binary value with value 1 if the country experienced events that resulted in at least 25 annual battle-related deaths according to the UCDP/PRIO database. Government welfare spending is the percentage of GDP spend by government in each country and in each given year on welfare programmes, based on information compiled in the SPEED database. GDP per capita is calculated at constant 2005 US\$ based on information extracted from the World Bank Development Indicators. The share of the population who voted in the last presidential election and the share of votes of smaller parties (in overall votes) is calculated from the databases published in Teorell et al. (2015) and Vanhanen and Lundell (2014). Years of political election is from Teorell et al. (2015). The index of ethnic fractionalization is also from Teorell et al. (2015) and measures the probability that two people selected randomly belong to two different groups. This variable ranges from 0 – i.e. perfectly homogeneous - to 1 – i.e. highly fragmented

Table A3. Effects of government welfare spending on conflict onset and duration

	Baseline model	Onset	Duration
	(1)	(2)	(3)
Government welfare spending	-0.050*** [0.011]	-0.014* [0.008]	0.021 [0.091]
Gross Domestic Product per capita	-0.088*** [0.020]	-0.027 [0.018]	0.115 [0.220]
Incidence of conflict (t-1)			
Share of votes of smaller parties	0.000 [0.001]	-0.000 [0.001]	-0.004 [0.002]
Share of population who voted in election	0.002 [0.002]	0.001 [0.001]	0.008** [0.004]
Years of political election	0.019 [0.043]	0.032 [0.039]	-0.054 [0.103]
Constant	0.965*** [0.189]	0.285* [0.161]	-0.484 [1.540]
Country dummies	Yes	Yes	Yes
Observations	386	301	84
R-squared	0.516	0.026	0.273

Notes: Baseline model is the same as column (1) in Table 4. Onset uses Collier and Hoeffler (2004) to code conflict onset. Column (3) shows the impact of government welfare spending on conflict duration. All models are estimated using a least-squares dummy variable estimator with country fixed effects. Robust standard errors are included in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table A4. Alternative dependent variables

	Baseline model	Civil wars UCDP/PRIO	Internal conflicts UCDP/PRIO	Political conflict MEPV	Guerrilla warfare
	(1)	(2)	(3)	(4)	(5)
Government welfare spending	-0.050*** [0.011]	-0.015** [0.007]	-0.065*** [0.015]	-0.041*** [0.010]	-0.056** [0.022]
Gross Domestic Product per capita	-0.088*** [0.020]	-0.040*** [0.014]	-0.129*** [0.028]	-0.064** [0.027]	-0.066 [0.048]
Share of population who voted in election	0.002 [0.002]	0.000 [0.001]	0.002 [0.002]	-0.004** [0.002]	0.001 [0.004]
Share of votes of smaller parties	0.000 [0.001]	0.001 [0.001]	0.001 [0.002]	0.003** [0.001]	-0.001 [0.002]
Years of political election	0.019 [0.043]	0.004 [0.033]	0.024 [0.062]	0.029 [0.043]	0.051 [0.070]
Constant	0.965*** [0.189]	0.317*** [0.118]	1.282*** [0.252]	0.862*** [0.197]	1.129*** [0.413]
Country dummies	Yes	Yes	Yes	Yes	Yes
Observations	386	386	386	386	407
R-squared	0.516	0.199	0.447	0.483	0.245

Notes: The baseline model defines political conflict as all events that resulted in at least 25 annual battle-related deaths. Civil wars in column (2) are defined (by UCDP/PRIO) as events that resulted in at least 1,000 annual battle-related deaths. Internal conflicts in column (3) are defined (by UCDP/PRIO) as events that resulted in between 25 and 999 annual battle-related deaths. Political conflict in column (4) is defined (by MEPV) as the systematic use of violence by organised groups that result in at least 500 directly-related deaths over the course of the event. Guerrilla warfare in column (5) is the variable compiled in Bazzi and Blattman (2014). All models are estimated using a least-squares dummy variable estimator with country fixed effects. Robust standard errors are included in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table A5. Additional model specifications

	Baseline model	Year dummies	Years of economic crisis	Additional controls
	(1)	(2)	(4)	(5)
Government welfare spending	-0.050*** [0.011]	-0.033** [0.015]	-0.061*** [0.011]	-0.031*** [0.010]
Gross Domestic Product per capita	-0.088*** [0.020]	-0.019 [0.032]	-0.078*** [0.018]	-0.018 [0.031]
Share of votes of smaller parties	0.000 [0.001]	0.000 [0.001]	0.000 [0.001]	-0.002 [0.002]
Share of population who voted in election	0.002 [0.002]	0.002 [0.002]	0.002 [0.001]	0.002 [0.002]
Years of political election	0.019 [0.043]	0.008 [0.044]	0.013 [0.043]	0.018 [0.048]
Years of economic crisis			0.207*** [0.043]	
Share of population aged 15-64				-0.010 [0.015]
Share of adults with secondary or tertiary education				-0.005 [0.006]
Constant	0.965*** [0.189]	0.497 [0.364]	0.999*** [0.175]	1.355* [0.801]
Country dummies	Yes	Yes	Yes	Yes
Year dummies	No	Yes	No	No
Observations	386	386	386	292
R-squared	0.516	0.567	0.545	0.617

Notes: The model in column (2) re-estimates the baseline model by introducing year dummies. The model in column (3) introduces years of economic crisis (defined as years when GDP growth rates were negative) as an additional control to the baseline model. The model in column (4) introduces the share of population aged 15-64 and the share of adults with secondary and tertiary education as additional controls. All models are estimated using a least-squares dummy variable estimator with country fixed effects. Robust standard errors are included in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table A6. Alternative country samples and time periods

	Baseline model	Without Colombia	Without Colombia, Peru and Guatemala	After 1989
	(1)	(2)	(3)	(4)
Government welfare spending	-0.050*** [0.011]	-0.055*** [0.012]	-0.036*** [0.011]	-0.070*** [0.020]
Gross Domestic Product per capita	-0.088*** [0.020]	-0.097*** [0.021]	-0.050** [0.021]	-0.031 [0.028]
Share of votes of smaller parties	0.000 [0.001]	0.001 [0.001]	-0.001 [0.001]	-0.010*** [0.002]
Share of population who voted in election	0.002 [0.002]	0.002 [0.002]	0.002 [0.001]	-0.010** [0.005]
Years of political election	0.019 [0.043]	0.018 [0.048]	0.036 [0.047]	0.005 [0.049]
Constant	0.965*** [0.189]	1.056*** [0.205]	0.153** [0.065]	0.761*** [0.161]
Country dummies	Yes	Yes	Yes	Yes
Year dummies	No	No	No	No
Observations	386	357	288	185
R-squared	0.516	0.368	0.193	0.703

Notes: The model in column (2) replicates the baseline model excluding Colombia from the sample. The model in column (3) excludes Peru and Guatemala from the sample. The model in column (4) includes only the period after 1989, when political conflict started to decrease across Latin America. All models are estimated using a least-squares dummy variable estimator with country fixed effects. Robust standard errors in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table A7. Alternative government expenditure

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	(1)	(2)	(3)	(4)	(5)	(6)
Government welfare spending	-0.050*** [0.011]					
Government education spending		-0.001 [0.010]				
Government health spending			0.001 [0.018]			
Government defence spending				0.045*** [0.006]		
Government transport and communication spend					-0.009 [0.015]	
Government agriculture and mining spending						0.119 [0.073]
Gross Domestic Product per capita	-0.088*** [0.020]	-0.031** [0.014]	-0.064*** [0.020]	0.008 [0.011]	-0.031** [0.015]	-0.011 [0.019]
Share of votes of smaller parties	0.000 [0.001]	-0.004** [0.002]	-0.005*** [0.002]	-0.005** [0.002]	-0.004** [0.002]	-0.007*** [0.002]
Share of population who voted in election	0.002 [0.002]	0.003 [0.002]	0.003 [0.002]	0.004* [0.002]	0.003 [0.002]	0.004 [0.003]
Years of political election	0.019 [0.043]	0.048 [0.048]	0.037 [0.049]	0.038 [0.045]	0.048 [0.048]	0.008 [0.053]
Constant	0.965*** [0.189]	0.096 [0.082]	0.183*** [0.057]	-0.033 [0.086]	0.104 [0.081]	0.391* [0.230]
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	386	267	239	245	267	152
R-squared	0.516	0.609	0.583	0.663	0.610	0.564

Notes: All models are estimated using a least-squares dummy variable estimator with country fixed effects. Robust standard errors are included in brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table A8. Government expenditure on agriculture and mining, defense, education, health, transport and communication, welfare (% of GDP)

	Agriculture and mining	Defence	Education	Health	transport and communication	Welfare	
<i>1970</i>						2.78	
<i>1975</i>						3.30	
<i>1980</i>		0.58	2.05	3.48	2.60	1.78	3.97
<i>1985</i>		0.52	2.71	3.23	2.05	1.54	3.94
<i>1990</i>		1.13	2.80	2.73	1.39	1.26	3.02
<i>1995</i>		0.73	2.01	3.49	2.11	1.88	3.80
<i>2000</i>		0.95	1.58	4.05	1.60	1.42	4.30
<i>2005</i>		0.36	1.07	3.14	1.69	0.81	3.99
<i>2010</i>		0.35	1.22	3.26	2.05	1.25	4.12

Source: SPEED database.