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Full Length Article

The effect of terrorism on economic inequality in democracies and non-democracies

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ARTICLE INFO	A B S T R A C T
JEL classification: D31 D74	We examine the relationship between terrorism and economic inequality for 163 countries be- tween 1980 and 2018. We provide robust evidence that more terrorist activity results in higher levels of income inequality, where this relationship is especially pronounced for democratic
Keywords: Terrorism Income inequality Wealth inequality Democracy	countries. As an extension, we also study the role of terrorism in wealth inequality, uncovering similar linkages. Our findings imply that democracies see lower levels of income inequality in the absence of terrorism but increases in inequality as terrorist activity grows, while inequality in non-democratic countries is not affected by terrorism. Exploring potential transmission channels, we show that terrorism does not have distributional consequence by damaging the economy.
	Rather, in democracies terrorism leads to lower levels of redistribution via taxation and transfers. This finding is consistent with our theoretical argument that terrorism elicits a policy response in the form of lower levels of redistribution especially from democratic governments due to their
	dependence on broad electoral support to stay in power.

1. Introduction

The quintessential finding of several highly influential publications is that income and wealth inequality have risen in recent decades in many developing and developed countries (e.g., Atkinson et al., 2011; Piketty, 2014; Piketty and Saez, 2014; Alvaredo et al., 2017; Zucman, 2019; Chancel et al., 2022). What is more, empirical studies point to the potentially dire association between rising levels of inequality and a plethora of unfavorable socio-economic and political consequences such as lower rates of economic growth, increases in crime, protest and political violence, poorer health and educational outcomes, increases in social segregation and corruption as well as reduced political engagement (e.g., Aghion et al., 1999; Kelly, 2000; Gupta et al., 2002; Cramer, 2003; Neckerman and Torche, 2007; Solt, 2008; Pickett and Wilkinson, 2015; Alexeev and Zakharov, 2022).

Consequently, in recent years rising levels of inequality and their economic, social and political effects have sparked considerable academic and public interest in the topic of inequality. We contribute to this literature by assessing the role of *terrorism* in income inequality.¹ In so doing, we add to a small literature assessing the distributional consequence of violent conflict. Bircan et al. (2017) is the only empirical study to examine the distributional effects of civil war, showing that inequality rises during war and especially in the early period of post-war reconstruction. The distributional consequences of terrorism—and the channels through which such consequences may emerge—on which we focus in this study may, however, differ from those of large-scale civil conflict. For instance,

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¹ Terrorism is defined as the premeditated use of violence (or threat thereof) by non-state groups to obtain a political goal through the intimidation of a large audience (Enders et al., 2011: 321).

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terrorism is more common, also plaguing countries (such as Western democracies) that are usually untroubled by large-scale internal conflicts (e.g., Gaibulloev and Sandler, 2019,2023). Closest to our study, a recent empirical paper by McGauvran et al. (2024) is the only contribution to investigate the distributional effects of terrorism. Using a sample of 139 countries between 1994 and 2018, they find that higher levels of terrorist activity result in higher levels of income inequality. Studying potential mechanisms, they provide evidence that terrorism fuels income inequality by negatively affecting institutional stability, increasing military spending and reducing foreign investment.

We add to McGauvran et al. (2024) in several ways. First, we develop the theoretical argument that there are differences to the terrorism-inequality nexus between *democracies and non-democracies*, with democracies being more vulnerable to the distributional consequences of terrorism. For instance, as democracies are subject to greater levels of political accountability, they have greater incentives to respond to terrorism with political action; such a policy response may come in the form of tax cuts to win back popular support and avoid being punished at the ballot box for the failure to provide security. In addition to developing our theoretical argument as to why the distributional consequences of terrorism may be conditional on a country's regime type, we also empirically test this argument in our paper. In so doing, we contribute to the larger literature on the economic and political consequences of terrorism and the determinants of income inequality, respectively.²

Second, we propose a hitherto unappreciated mechanism that may account for the effect of terrorism on economic inequality: the *redistribution channel*. Here, we argue that terrorism may result in lower levels of redistribution by inducing tax cuts (to stimulate the economy) as well as cuts to government transfers (e.g., when government spending is shifted from transfers to security spending). We also empirically test this mechanism in our paper, contrasting our findings with those concerning another potential transmission mechanism: the *economic channel*. According to this latter channel, terrorism may weaken macroeconomic activity, which is more strongly felt by certain economic agents. For instance, terrorism may impair those economic sectors that are especially vulnerable to terrorism (e.g., tourism), consequently amplifying inequality.

Finally, we extend our study of the relationship between terrorism and economic inequality to the case of *wealth inequality*, i.e., inequality related to financial and non-financial assets such as equities, bonds, real estate and land. Similar to income inequality, the concentration of wealth in the hands of the few has received considerable attention in the academic literature and public policy arena (e.g., Zucman, 2019). At the same time, however, the unconditional and conditional (i.e., dependent on democratic institutions) relationship between terrorism and wealth inequality has received no attention in the empirical literature so far.

We study the terrorism-inequality nexus using data from a panel of 163 countries between 1980 and 2018. In addition to two-way fixed effects models, we also estimate instrumental-variable (IV) models to accommodate endogeneity concerns. For instance, such concerns may be due to feedback between terrorism and inequality, with inequality potentially also encouraging terrorist activity (e.g., Ezcurra and Palacios, 2016; Krieger and Meierrieks, 2019). For our IV approach, we instrument terrorist activity in the country of interest by domestic terrorism in neighboring countries. This instrument is relevant as terrorism in proximate countries influences local terrorism through contagion effects (e.g., via imitation or network effects). At the same time, we posit that this instrument is exogenous as domestic terrorism cannot—by definition—directly influence terrorism in other countries.³

We show that higher levels of terrorist activity are associated with higher levels of income inequality. This finding survives a series of robustness checks (related, e.g., to the measurement of terrorism). For the IV approach, we present a battery of additional robustness checks, given potential concerns about the strength of our instrument as well as the validity of the exclusion restriction. For example, we control for a variety of economic, political or demographic shocks that are regionally correlated (and may thus affect the construction of our IV) and which might simultaneously influence the emergence of terrorism and the genesis of income inequality in the country of interest. We also employ the plausibly exogenous framework of Conley et al. (2012), which relaxes the assumption of instrument exogeneity, showing that our main empirical finding of an unfavorable relationship between terrorism and income inequality is robust to substantial violations of the exclusion restriction.

On closer inspection, we show that our main finding is driven by democratic countries. While democracies tend to be more equal without terrorism, they lose this "equality advantage" as terrorist activity increases. We argue that democracies may be more vulnerable to terrorism—and thus see stronger effects of terrorism on inequality—than non-democracies for two reasons. First, and related to the economic channel, democracies may be more susceptible to the adverse macroeconomic effects of terrorism. For instance, greater respect for human rights and civil liberties in democracies may make it less likely that terrorist organizations are exposed before they can carry out their attacks (e.g., Chenoweth, 2013). Second, and related to the redistribution channel, due to greater levels of political accountability, democratic governments also have a greater likelihood of losing power due to terrorism. This makes it more likely that terrorism induces a policy response by democratic governments, where this response could also affect

² The empirical literature on the economic and political consequences of terrorism has deemed the aftereffects of terrorism to be persistent enough for it to affect, e.g., economic growth, investment, public opinion as well as economic and migration policy (e.g., Abadie and Gardeazabal, 2003, 2008; Crain and Crain, 2006; Sandler and Enders, 2008; Sandler, 2018; Gaibulloev and Sandler, 2019a, 2023; Meierrieks and Schneider, 2021; Helbling and Meierrieks, 2022; Bove et al., 2024). The literature on the determinants of income inequality has assessed how it is shaped by, inter alia, macroeconomic variables, political and social institutions, demographic conditions, monetary policy and military spending (e.g., Kuznets, 1955; Gupta et al., 2002; Beck et al., 2007; Chong and Gradstein, 2007; Neckerman and Torche, 2007; Roine et al., 2009; Jaumotte et al., 2013; Abdullah et al., 2015; Coibion et al., 2017; Aghion et al., 2019; Furceri and Ostry, 2019; Biscione and Caruso, 2021; Alexeev and Zakharov, 2022).

³ Domestic terrorism means that the perpetrators and victims of terrorism hail from the same country in which the terrorist attack takes place (e. g., Enders et al., 2011). This, in turn, implies that this type of terrorism cannot have direct consequences for other countries, making it more plausible that the exclusion restriction underlying our IV approach holds.

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redistribution. For example, democratic governments may more strongly invest in security and military spending due to terrorism (e. g., Cevik and Ricco, 2020), leading to cuts in government transfers—and thus lower levels of redistribution—to finance these investments.

To better understand how terrorism affects inequality and why this effect differs between democracies and non-democracies, we study the economic and redistribution transmission channel in more detail. Concerning the former, we find that terrorism does not hurt macroeconomic conditions (i.e., economic growth, inflation and unemployment) and that there are no differences in the economic impact of terrorism in democratic and non-democratic countries. These findings indicate that terrorism does not affect inequality via the economic channel. By contrast, we show that terrorism results in less redistribution especially in democracies, suggesting that terrorism indeed influences income inequality via the redistribution channel. This finding is consistent with our theoretical argument that democracies (by nature of being subject to higher levels of political accountability and a greater likelihood of losing political power when government performance is bad) are more responsive to terrorism in terms of implementing policy changes.

As a final empirical extension, we investigate the relationship between terrorism and wealth inequality. Consistent with earlier results concerning income inequality, we show that terrorism also results in higher levels of wealth inequality. Again, this effect is driven by democratic countries.

The rest of this paper is organized as follows. In Section 2, we develop our main hypotheses in more detail. We introduce the data and methodology to study the nexus between terrorism and economic inequality in Section 3. We present our main empirical findings in Section 4, before studying the role of democracy in the terrorism-inequality nexus in Section 5. In Section 6, we examine potential transmission channels from terrorist activity to income inequality. In Section 7, we study the relationship between terrorism and wealth inequality. Section 8 concludes.

2. Terrorism and inequality

In this section, we discuss how terrorism may affect inequality. We first present two pathways from the former to the latter: the economic channel and the redistribution channel. Afterwards, we discuss whether and how income inequality may respond differently to terrorism in democracies and non-democracies. Finally, we introduce two testable hypotheses that follow from our theoretical discussion.

2.1. The economic channel

The economic channel from terrorism to income inequality implies that terrorism induces economic instability, where this instability, in turn, leads to higher levels of economic inequality.

In addition to the direct destruction of physical and human capital, there are a number of indirect effects of terrorism that may result in reduced economic performance. Such indirect effects of terrorism emerge as markets and economic agents respond to terrorism by changing their behavior even when they are not directly hit by terrorism. For instance, physical capital (e.g., foreign investment) and human capital (e.g., in the form of migration) may flee an economy in response to a terrorist threat (e.g., Abadie and Gardeazabal, 2008; Younas, 2015; Helbling and Meierrieks, 2022); this capital flight, in turn, may negatively affect economic activity. There is also empirical evidence that adversely relates terrorism to, e.g., tourism (an economic sector that is especially vulnerable to terrorism), domestic investment, international trade and, ultimately, economic growth (e.g., Abadie and Gardeazabal, 2003; Drakos and Kutan, 2003; Blomberg et al., 2004; Crain and Crain, 2006; Sandler and Enders, 2008; Gaibulloev and Sandler, 2011; Llusa and Tavares, 2011; Meierrieks and Gries, 2013; Sandler, 2018; Krajnak, 2021).

Importantly, the macroeconomic instability due to terrorism may also have distributional consequences. There is evidence that inflation, unemployment and economic downturns can amplify income inequality (e.g., Mocan, 1999; Albanesi, 2007; Cysne, 2009; Furceri and Ostry, 2019; Memon and Qureshi, 2021). For instance, economic instability may increase workers' probability of unemployment or decrease the probability that already unemployed workers find new employment, consequently aggravating the relative economic position of those workers (e.g., Cysne, 2009).

2.2. The redistribution channel

The redistribution of income mechanically leads to lower levels of income inequality. Inter alia, this redistribution may occur via (progressive) taxation and government transfers from the rich to the (relatively) poor (e.g., Solt, 2020). Concerning the relationship between terrorism and inequality, the redistribution channel implies that terrorism affects a country's fiscal policy, especially with respect to taxation and government transfers, in ways that lower overall levels of income redistribution.

Terrorism may incentivize tax cuts to stimulate the economy, countering the adverse effects of terrorism on investment, consumption and other macroeconomic variables that we discussed in the previous sub-section. For example, after the 9/11 terrorist attacks the U.S. government lowered taxes also to promote economic activity (Eichenbaum and Fisher, 2005). As another example, the Tunisian government responded to an increase in terrorism in the 2010s by lowering taxes to especially stimulate the tourism sector (Khelifi et al., 2023). Indeed, governments tend to provide tax reliefs and tax cuts especially for business and industries hit hardest by terrorism (such as tourism and retailing), as could also be observed, e.g., in response to the 2002 Bali bombings in Indonesia and the 2015 Paris terrorist attacks. Given the progressive nature of most tax systems, tax cuts are expected to benefit especially those that are already quite well-off. Consequently, tax cuts are anticipated to contribute to higher levels of income inequality (e.g., Bargain et al., 2015; Hope and Limberg, 2022). Moreover, terrorism may mean that the government reduces transfer programs (unemployment benefits, the provision of food stamps etc.). For one, this may be a consequence of reduced tax income, either because of reduced economic activity or tax cuts due to terrorism. For another, it may be due to the government using public resources to bolster security spending rather than for transfers. Indeed, there is evidence that countries may increase their security and military spending due to terrorism, which may come at the expense of government programs that focus on redistribution (e.g., Gupta et al., 2004; Cevik and Ricco, 2020; Hunter, 2021). Facing terrorism and concerns about fiscal sustainability and stability at the same time, security spending may take precedence over transfers and social expenditures (such as spending on subsidies for essential goods or on education and health). Examples for such a scenario include Algeria during the 1990s and Nigeria during the ongoing Boko Haram insurgency. Overall, cutting government transfers is consequently also expected to result in lower levels of redistribution and—in comparison to a scenario without terrorism—higher levels of income inequality.⁴

2.3. The terrorism-inequality nexus in democracies and non-democracies

A country's political system may matter to the nexus between terrorism and income inequality, with inequality responding differently to terrorism in democracies compared to non-democracies for two reasons.

First, democracies are committed to observing human and civil rights, making it less likely that terrorist organizations are exposed before carrying out their attacks (e.g., Chenoweth, 2013; Baek and Bouzinov, 2021). More successful terrorist activity, in turn, is expected to create more adverse economic effects. Moreover, the media enjoys substantial freedoms in democracies. This may make it more likely that terrorism can induce unfavorable indirect economic effects (by influencing the behavior of economic agents not directly affected by terrorism). For these reasons, democracies may be more vulnerable to the adverse economic effects of terrorism.⁵

Second, the comparatively low costs of political participation make democratic governments more vulnerable to the political fallout from terrorism.⁶ According to the electoral accountability approach, a government's performance is (retrospectively) appraised by the electorate (for an overview, see Ashworth, 2012). The electorate is expected to strongly dislike the adverse economic effects and psychological distress associated with terrorism. It will therefore more likely punish at the ballot box governments for their failure to prevent terrorism. Indeed, the empirical evidence suggests that governments face instability and electoral defeat when terrorism occurs under their watch (e.g., Gassebner et al., 2008, 2011; Kibris, 2011; Williams et al., 2013).

The political fallout from terrorism is expected to make it likelier that a government loses power and the associated benefits (e.g., access to rents). This, in turn, creates an incentive for democratic governments to offer a policy response to terrorism. Important to our argument, this policy response also ought to be related to fiscal policy and thus have distributional effects. For one, cutting taxes in response to terrorism may not only stimulate the economy but also be popular with voters, thus potentially off-setting popularity losses associated with terrorist activity. For another, voters are more likely to favor policies that emphasize security during times of terrorism. This may mean that spending on security and the military increases when a country faces a terrorist threat especially in democracies, as shown by Hunter (2021). Given budget constraints, governments may consequently be less willing to redistribute income when there is a terrorist threat. In other words, terrorism may create a trade-off between security and equality, with voters favoring the former over the latter under terrorism and the government acting accordingly.⁷

2.4. Main hypotheses

The theoretical discussion of this section suggests that terrorism may lead to higher levels of economic inequality by (1) inducing unfavorable macroeconomic consequences and (2) affecting redistribution choices by the government. Therefore, we expect support for the following hypothesis.

Hypothesis 1. (H1): More terrorist activity is associated with higher levels of inequality.

Moreover, our discussion suggests that democracies may be more susceptible to the distributional effects of terrorism due to (1) greater economic vulnerability to terrorism and (2) a greater likelihood of losing political power when government performance is poor, which induces a policy response by democratic governments that also concerns redistributive policies. This leads to our second hypothesis.

⁴ Alternatively, terrorism could also increase some government transfers, e.g., in the form of disability benefits for terrorism victims or subsidies for businesses affected by terrorism, which could reduce inequality. However, there is evidence that the health consequences of terrorism are comparatively small (e.g., Arce, 2019) and that the direct economic effects due to destruction from terrorism are likewise negligible (e.g., Sandler, 2018: 118–119). This suggests that any government transfers to offset the human health consequences and property damage due to terrorism will also be small and most likely outweighed by the reduction of other government transfer programs in response to terrorism.

⁵ There are also arguments, however, why democracies ought to be *less* vulnerable to terrorism. For one, as democracies offer non-violent means to voice dissent, they may also see less terrorism and thus less economic damage due to it (e.g., Chenoweth, 2013; Baek and Bouzinov, 2021). For another, institutions in democracies may be more flexible to cushion adverse economic effects from terrorism (e.g., Sandler and Enders, 2008).

⁶ This does not mean, however, that non-democracies are fully immune to adverse political consequences of terrorism. For example, Aksoy et al. (2015) show that terrorism makes it more likely that reshuffling coups occur in dictatorships, which change the leadership but leave the dictatorial regime intact.

⁷ While there is no evidence that tests whether voters indeed prefer security over equality when there is a terrorism risk, there is evidence that voters are more likely to give up civil liberties and support authoritarian policies under such circumstances (e.g., Hetherington and Suhay, 2011).

(1)

Hypothesis 2. (H2): More terrorist activity is associated with higher levels of inequality, especially in democracies.

3. Data and methodology

To test our main hypotheses, we use data from a panel of 163 countries between 1980 and 2018. A list of countries and the summary statistics (Supplementary Table 1) are provided in the appendix.

3.1. Measuring income inequality

Our dependent variable to measure income inequality is the *Gini coefficient* which reflects, as an indicator of "vertical" income inequality, the extent to which the income distribution between individuals within an economy deviates from a perfectly equal distribution. It ranges from 0 (perfect equality) to 100 (perfect inequality). The data for the Gini coefficient come from the *Standardized World Income Inequality Database (SWIID)* (Solt, 2009, 2020). From the SWIID, we extract the Gini coefficient of net income, i.e., we consider the level of inequality that persists after taxes and government transfers are considered. Indeed, net income inequality (rather than inequality produced by the marketplace) is the kind of inequality felt by society and thus most relevant to political stakeholders.

We use the SWIID for three reasons. First, the SWIID has a greater spatial and temporal coverage compared to other cross-country inequality datasets (Solt, 2009, 2020; Ferreira et al., 2015). Second, by means of computational procedures the SWIID also aims at improving the comparability of income inequality statistics between countries. This standardization of inequality data allows for more consistent cross-national research (Solt, 2009, 2020). Third, the SWIID provides data on inequality before and after taxation and transfers. This allows us to explicitly consider the influence terrorism may have on redistribution, i.e., to explicitly test the redistribution channel we propose in this paper. As part of our robustness checks reported below, we, however, also use alternative inequality indicators and data sources.

3.2. Measuring terrorist activity

Data on terrorism is drawn the *Global Terrorism Database* (*GTD*) first introduced by LaFree and Dugan (2007).⁸ This database collects information on terrorist activity from media publications; for a terrorist event to be recorded in the GTD, it must be documented by at least one high-quality news source. Also, the incident must meet the following three criteria: it must (1) be intentional, (2) entail some level of violence or threat of violence and (3) be committed by non-state actors (LaFree and Dugan, 2007: 188). Finally, it must also meet at least two of the following three criteria: (1) the incident must be carried out to achieve a political, economic, religious or social goal, (2) there must be evidence of an intention to coerce, intimidate or convey some other message to a larger audience than the immediate victims and/or (3) the incident must be outside the context of conventional warfare (LaFree and Dugan, 2007: 188).

Our main indicator of terrorist activity is the *number of terrorist attacks* per country-year pair, weighted by population size (in million inhabitants). Here, we follow Jetter and Stadelmann (2019) who argue that terrorism per capita is a "measure of terror risk per country, which from a normative point regarding individual utility should be relevant for policy-making [...] [and] better proxies the relevance of risk from the viewpoint of individuals" compared to terrorism in absolute numbers. Data on population size come the *World Development Indicators (WDI)* (World Bank, 2019). Below, we also consider alternative ways to operationalize terrorism as part of our robustness checks.

3.3. Empirical Model

3.3.1. Main model

To evaluate the association between income inequality and terrorism, we estimate a two-way fixed-effects regression model, calculating Driscoll-Kraay standard errors (Driscoll and Kraay, 1998) for statistical inference.⁹ Our model has the following form:

$$GINI_{it} = \beta_1 * terror_{it-1} + \beta_t * X_{it-1} + \alpha_i + \lambda_t + \nu_{it}$$

GINI refers to the level of net income inequality for country *i* at year *t*, while *terror* refers to the per capita terrorism variable. The model also includes a vector of control variables (X'). Here, we draw on the literature on the determinants of income inequality and terrorism (e.g., Gassebner and Luechinger, 2011; Kis-Katos et al., 2011; Krieger and Meierrieks, 2011; Furceri and Ostry, 2019; Memon and Qureshi, 2021), controlling for (1) (logged) per capita *income* (WDI data), (2) (logged) *population size* (WDI data), (3) *democracy* by means of binary indicator that is equal to unity when there are free and fair elections with a peaceful transfer of power, using data from Bjornskov and Rode (2020), (4) *economic openness* (via an index that accounts for de facto and de jure trade and financial globalization, e.g., with respect to trade, foreign investment and tariffs), using data from Gygli et al. (2019); (5) *left-wing government ideology*

⁸ The data are available here: https://www.start.umd.edu/gtd.

⁹ Driscoll-Kraay standard errors are robust to very general forms of cross-sectional dependence as well as to heteroskedasticity and serial correlation. Cross-sectional dependence refers to the interdependency of variables of interest between countries, which may be due to due, e.g., spillover effects (Sarafidis and Wansbeek, 2012). Standard error estimates that are not robust to cross-sectional dependence can be severely biased when cross-sectional dependence is present, so that statistical inference will be invalid (e.g., Sarafidis and Wansbeek, 2012).

(employing binary indicator that is equal to unity when a government pursues a left-wing economic policy agenda), where the data are from the *Varieties of Democracy Dataset (VDEM)* of Coppedge et al. (2019) as well as (6) a country's *dependency ratio* (i.e., the ratio of dependents, i.e., people younger than 15 or older than 64, to the working-age population ages 15–64), where the data are from the WDI.

Moreover, the model includes country-fixed effects (\propto) and year dummies (λ). Country-fixed effects allow us to control for the role of time-invariant factors that may affect a country's income distribution and/or terrorism risk (e.g., colonial heritage or geographical distance to global trade and financial centers). Year-fixed effects control for year-specific effects that are relevant to all countries (e.g., global economic downturns). Moreover, they account for the influence of overall trends that may have affected global levels of inequality and/or terrorism.

3.3.2. Instrumental-variable approach

Potentially, the OLS estimates from Equation (1) are biased due to *endogeneity*. Endogeneity may be caused by measurement error, omitted variables and reverse causation, with concerns about the latter being most relevant. That is, terrorism may not only affect inequality (as we posit in this paper), but inequality may also determine terrorism. Indeed, there is evidence that high levels of economic inequality are associated with increased terrorist activity. Ezcurra and Palacios (2016) investigate the relationship between interregional inequality and of domestic terrorism for 48 countries over the 1990–2010 period. Similarly, Krieger and Meierrieks (2019) study the effect of income inequality on terrorism for a sample of 113 countries for the 1984–2012 period. Both studies provide evidence that inequality may lead to terrorism, especially by fueling economic grievances due to feelings of relative deprivation.

To accommodate endogeneity concerns, we employ an instrumental variable approach. Our two-stage regression model has the following form:

$$terror_{it} = \beta_{11} * near_dom terror_{it-1} + \beta_{1'} * X'_{it-1} + \alpha_i + \lambda_t + \nu_{it}$$
(2a)

$$GINI_{it} = \beta_{21} * terror_{it-1} + \beta_{2'} * X_{it-1} + \alpha_i + \lambda_t + \mu_{it}$$
(2b)

In the first stage (Equation (2a)), we regress our terrorism variable on the baseline set of controls, the country- and year-fixed effects and our instrumental variable, *near_domterror*. In the second stage (Equation (2b)), we use the fitted values of our terrorism index from the first-state regression (indicated by *terror*) to remedy endogeneity concerns.

Our instrumental variable, *near_domterror*, is defined as the *mean level of domestic terrorist activity in neighboring countries*. That is, this variable is equal to the average number of domestic terrorist incidents in neighboring countries, i.e., domestic terrorism in the country of interest is not considered; by construction, this instrumental variable is in principle unique for each country-year observation in the sample. Here, *domestic terrorism* implies that the venue of the attack, the terrorism target and the perpetrators are from the same country (Enders et al., 2011: 321), while *neighboring countries* are countries that are in the same geographical region as the respective country of interest.¹⁰ The data on domestic terrorism come from Enders et al. (2011) and Gaibulloev and Sandler (2019, 2023). These authors use raw data provided by the GTD, applying various calibration and re-coding methods to construct a data series on domestic terrorist activity; this is necessary because the GTD itself does not differentiate between domestic and non-domestic terrorism.

We argue that domestic terrorism in neighboring countries is *relevant* (i.e., sufficiently correlated with the endogenous explanatory variable) due to a *contagion effect* in terrorism, where terrorist activity in one country is dependent on activity in other countries (e.g., Braithwaite and Li, 2007; Krieger and Meierrieks, 2011). Local terrorist organizations (say, in country *i*) may be inspired by the success of terrorist groups in another country (say, in country *j*, located in the same world region as country *i*), copying their behavior (e.g., by imitating tactics and techniques) or cooperating with them, e.g., by sharing information. For instance, networks of "learning" and cooperation between terrorist groups from different countries have promoted the international spread of suicide terrorism as a major terrorist tactic (Horowitz, 2015). Here, imitation and other forms of cooperation between terrorist groups ought to be facilitated by geographical proximity between these groups, e.g., due to lower information costs. Given this rationale, we expect domestic terrorism in neighboring countries to be positively associated with terrorism in the country of interest. For the IV estimates to be sound, this association ought to be sufficiently strong. Below, we always report the Kleibergen-Paap first-stage *F*-statistic of instrument weakness; if this statistic exceeds the critical value of F = 10, the instrument is sufficiently strong.

Furthermore, we argue that our instrumental variable only affects inequality through its effect on local terrorist activity (*exclusion restriction*). By definition, domestic terrorism cannot directly influence policies and economic outcomes in other countries. As put by Enders et al. (2011: 321): "[D]omestic terrorism has *direct consequences* for only the *venue country*, its institutions, citizens, property, and policies" (emphases added). In other words, if a terrorist attack in country *j* had direct policy consequences for a neighboring country *i*, it would not constitute domestic terrorism; rather, it would be a case of *transnational terrorism* and thus not be included in our instrumental variable. This only leaves the possibility of indirect effects of neighboring domestic terrorism on income inequality in the country of interest. We argue that this indirect effect only emerges via terrorism contagion.

¹⁰ We use United Nations classifications to construct the mean level of domestic terrorism in the following 22 regions: Australia and New Zealand; the Caribbean; Central America; Central Asia; Eastern Africa; Eastern Asia; Eastern Europe; Melanesia; Micronesia; Middle Africa; Northern Africa; Northern America; Northern Europe; Polynesia; South America; South-Eastern Asia; Southern Africa; Southern Asia; Southern Europe; Western Africa; Western Asia; Western Europe.

There are threats to our empirical strategy. Besides producing contagion effects (which we use for identification), domestic terrorism may generate additional spillover effects. For instance, domestic terrorism in country *j* may affect local economic and political conditions in country *i*, potentially opening additional pathways from neighboring domestic terrorism (in country *j*) to local income inequality (in country *i*), thus violating the exclusion restriction. Below, we consequently examine the validity of the exclusion restriction in several ways. First, we control for other regional shocks (such as regional income shocks) that may be associated with domestic terrorism in proximate countries and constitute additional potential pathways from this type of terrorism to local income inequality. Second, we probe the assumption of instrument exogeneity by means of the plausibly exogeneous framework of Conley et al. (2012). As discussed below in more detail, this method relaxes the assumption of perfect instrument exogeneity, instead allowing for plausible violations of the exclusion restriction to study how such violations matter to our main empirical results. Finally, we also consider alternative ways to construct our instrumental variable, alternative instruments and placebo instruments to strengthen our causal claims concerning the terrorism-inequality nexus. We shall discuss these latter approaches in more detail below.

4. Main empirical results

4.1. Two-way fixed effects estimates

Our two-way fixed-effects regression results are reported in Table 1.¹¹ In line with H1, they indicate that more terrorist activity is associated with more inequality. This result emerges in a parsimonious setting where we only control for country- and year-fixed effects (Model 1, Table 1). We also present this correlation between terrorism and income inequality in the form of a binned scatterplot in Fig. 1.

We furthermore find that terrorism positively correlates with income inequality in a setting where we include our baseline controls. Concerning these baseline controls, we find that income inequality positively correlates with a country's level of economic development (per capita income), economic openness and dependency ratio, but negatively with democratic institutions and a left-leaning government, while there is no statistically significant relationship between income inequality and population size (Model 2, Table 1).

What is more, as a first robustness check, we consider the influence of three additional controls. First, we include a variable accounting for the activity of independent trade unions in the country of interest (VDEM data). We expect trade unionism to negatively correlate with income inequality. Second, we control for state failure; this variable is drawn from the *Political Instability Task Force*.¹² We include this variable to better differentiate between the role of terrorism and other types of political violence in income inequality. Finally, migration may also share an association with inequality. Thus, we control for net regional migration, i.e., the sum of migration inflows and outflows from and to countries in the same geographical region as the respective country of interest.¹³ The data are from Standaert and Rayp (2022). Reassuringly, as shown in Table 1, the inclusion of these additional controls does not affect our main empirical finding concerning the relationship between terrorism and income inequality.

4.2. Instrumental-variable estimates

We report our instrumental-variable estimates in Table 2. We again find support for *H1*. That is, more terrorism results in higher levels of income inequality in a parsimonious setting (Model 1, Table 2) and in a setting that accounts for the baseline controls (Model 2, Table 2). Moreover, controlling for trade unionism and state failure does not affect our IV estimates (Models 3 and 4, Table 2). Finally, considering net regional migration also does not impact the IV estimates (Model 5, Table 2). The latter finding is especially relevant in light of our IV strategy and speaks to the validity of the exclusion restriction: If domestic terrorism spurred migration to neighboring countries, inequality in the country of interest would also be affected by this very migration.¹⁴

Importantly, the IV diagnostics indicate that the IV estimates are sound. First, as expected, the instrument (i.e., domestic terrorism in proximate countries) positively predicts terrorism in the country of interest. Second, this instrument is sufficiently relevant, as indicated by first-stage *F*-statistics passing the threshold of F = 10 that would signal instrument weakness. Third, the rejection of the null hypothesis of the Anderson-Rubin test, which is robust to arbitrarily weak instruments, tells us that the coefficient of the endogenous regressor in the structural equation is not equal to zero. Finally, the Anderson-Rubin confidence intervals are similar to the standard IV intervals, firmly indicating statistical significance at conventional levels.

While less precisely estimated, in comparison to the OLS results, the effect of terrorism on income inequality is approximately five times larger, implying that the OLS approach underestimates the role of terrorism in income inequality. Besides the influence of omitted variables, this may also be due to negative feedback between terrorism and inequality.

What is more, while the OLS estimates describe the average relationship between terrorism and income inequality (average

¹¹ Note that in Table 1 we also report result for cross-sectional dependence in the residuals following Fan et al. (2015) and residual non-stationarity (i.e., panel unit root presence) following Choi (2001). We find that the residuals are affected by cross-sectional dependence (warranting the use of Driscoll-Kraay standard errors) but not by non-stationarity, which ameliorates concerns about spurious regression.

¹² The data are available at https://www.systemicpeace.org/inscrdata.html. The state failure index we use in our study measures the intensity of revolutionary and ethnic civil wars as well as of violent regime changes, genocides and politicides.

¹³ Alternatively, we also (1) only consider regional migration inflows or (2) employ a hyperbolic sine transformation of the net regional migration variable to accommodate outliers. The empirical results reported in Tables 1 and 2 are not affected by these robustness checks.

¹⁴ We thank a reviewer for raising this point.

Two-way fixed-effects estimates.

	(1)	(2)	(3)	(4)	(5)
Terrorism p.c. t-1	0.042***	0.042***	0.046***	0.041***	0.041***
	(0.011)	(0.011)	(0.010)	(0.011)	(0.011)
Per Capita Income t-1		1.983***	1.955***	1.984***	1.995***
		(0.488)	(0.506)	(0.491)	(0.486)
Population Size t-1		-0.053	0.223	-0.053	-0.119
		(0.472)	(0.487)	(0.475)	(0.481)
Democracy t-1		-0.660***	-0.679***	-0.660***	-0.666***
		(0.159)	(0.197)	(0.162)	(0.160)
Economic Openness t-1		0.032***	0.029***	0.032***	0.031***
		(0.009)	(0.009)	(0.009)	(0.009)
Left-Wing Government t-1		-1.472^{***}	-1.383^{***}	-1.472^{***}	-1.479^{***}
		(0.463)	(0.460)	(0.459)	(0.463)
Dependency Ratio t-1		0.072***	0.076***	0.072***	0.072***
		(0.013)	(0.013)	(0.013)	(0.013)
Engagement in Trade Unions t-1			-0.108		
			(0.189)		
State Failure t-1				0.001	
				(0.068)	
Net Regional Migration t-1					-0.001
					(0.001)
Number of Observations	4265	4265	4171	4265	4180
PURT Test (p-value) ^(a)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
CD Test (p-value) ^(b)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Notes: Fixed-effects regression results reported. Time- and country-fixed effects always included. (a) Fisher-type panel unit root test with null hypothesis that all panels contain a unit root. (b) Power-enhanced weighted test for cross-sectional dependence with the null hypothesis of weak cross-sectional dependence against the alternative of strong cross-sectional dependence. Driscoll-Kraay standard errors in parentheses. *p < 0.1; **p < 0.05; ***p < 0.01.



Fig. 1. Binned scatterplot of terrorism-income inequality relationship.

treatment effect), the IV estimates only correspond to the effect of terrorism on inequality for those countries that are affected by the instrument (local average treatment effect), i.e., countries that actually see changes in local terrorist activity due to increases in domestic terrorism in proximate countries (Imbens and Angrist, 1994). While it is not possible to formally distinguish those countries that are affected by the instrument (compliers) from those that are not (non-compliers), we can still discuss which countries are more likely to be compliers and how such assumptions matter to the interpretation of our empirical results. Here, it seems probable that especially those countries would see more local terrorism (i.e., would be compliers) due to more regional terrorism that are already at risk of terrorism. Given that the potential risk factors of terrorism (e.g., ethno-religious tensions, poverty, lack of public services, weak institutions; for overviews, see Gassebner and Luechinger, 2011; Kis-Katos et al., 2011; Krieger and Meierrieks, 2011; Gaibulloev and Sandler, 2019,2023) are expected to positively correlate with income inequality, for complier countries the respective level and responsiveness of inequality to shocks ought to be larger than the sample average levels and responsiveness of inequality. This is consistent with our IV estimates being larger than the OLS estimates.

4.3. Robustness of IV approach

We probe the robustness of our instrumental-variable approach in several ways. First, the validity of this approach rests on the

Instrumental-variable estimates.

	(1)	(2)	(3)	(4)	(5)
Terrorism p.c. t-1	0.248***	0.263***	0.262***	0.257***	0.264***
· ·-	(0.065)	(0.078)	(0.076)	(0.071)	(0.078)
Per Capita Income t-1		1.983***	1.974***	1.964***	1.984***
-		(0.425)	(0.447)	(0.456)	(0.425)
Population Size t-1		0.076	0.428	0.040	0.010
		(0.479)	(0.474)	(0.527)	(0.485)
Democracy t-1		-0.600***	-0.607***	-0.632^{***}	-0.608***
		(0.139)	(0.174)	(0.141)	(0.141)
Economic Openness t-1		0.044***	0.040***	0.041***	0.044***
		(0.010)	(0.011)	(0.009)	(0.010)
Left-Wing Government t-1		-1.140**	-1.035**	-1.150**	-1.152**
		(0.460)	(0.448)	(0.461)	(0.457)
Dependency Ratio t-1		0.073***	0.077***	0.076***	0.072***
		(0.013)	(0.014)	(0.014)	(0.013)
Engagement in Trade Unions t-1			-0.154		
			(0.182)		
State Failure t-1				-0.188	
				(0.120)	
Net Regional Migration t-1					-0.001
					(0.001)
First-Stage Regression Results ^(a)					
Domestic Terrorism in	0.010***	0.011***	0.011***	0.011***	0.011***
Neighboring Countries	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Number of Observations	4265	4265	4171	4265	4180
PURT Test (p-value) ^(b)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
CD Test (p-value) ^(c)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
First-Stage F-Statistic ^(d)	22.34	20.69	21.87	22.52	21.38
AR-Test (p-value) ^(e)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Anderson-Rubin Confidence 95% Interval	[0.125; 0.396]	[0.147; 0.488]	[0.150; 0.479]	[0.151; 0.448]	[0.151; 0.448]

Notes: Instrumental-variable fixed-effects regression results reported. Time- and country-fixed effects always included. (a) Only regression coefficients associated with instrumental variable reported (covariates always included). (b) Fisher-type panel unit root test with null hypothesis that all panels contain a unit root. (c) Power-enhanced weighted test for cross-sectional dependence with the null hypothesis of weak cross-sectional dependence against the alternative of strong cross-sectional dependence. (d) Instrument sufficiently relevant when F > 10. (e) Test of null hypothesis that the coefficient of the endogenous regressor in the structural equation is equal to zero. Driscoll-Kraay standard errors in parentheses. *p < 0.1; **p < 0.05; ***p < 0.01.

assumption that domestic terrorism in proximate countries only matters to local income inequality by affecting local terrorist activity. However, there may exist economic, political or demographic shocks that are regionally correlated and may consequently influence the construction of our instrument as well as the emergence of terrorism in proximate countries and/or income inequality in the country of interest. For instance, economic downturns in proximate countries may encourage domestic terrorism in these countries but also spill-over to the country of interest, where such a negative economic shock may increase unemployment and thus have a distributional effect.

In Supplementary Table 2, we control for several time-varying shocks within a specific world region. In detail, we control for regional economic (in terms of per capita income and economic openness), political (with respect to democracy and government ideology) and demographic shocks (in terms of population size and age structure). Formally, all regional shock variables are defined as the mean levels of per capita income, openness, democracy, government ideology, population size and dependency ratio in countries proximate to the country of interest; that is, they are constructed in the same way as our instrumental variable. As shown in Supplementary Table 2, we find no evidence that the influence of regional shocks matters to our main conclusion of a positive effect of terrorism on income inequality. What is more, the associated IV diagnostics and findings for the various controls are stable and sound across the various specifications.

Another way to probe the validity of our IV approach is the plausibly exogenous framework of Conley et al. (2012). The main idea of this framework is to relax the assumption of perfect instrument exogeneity by considering the following 2SLS model:

$$terror_{it} = \beta_{11} * near_dom terror_{it-1} + \beta_1 * X_{it-1} + \alpha_i + \lambda_t + \nu_{it}$$
(3a)

$$GINI_{it} = \beta_{21} * terror_{it-1} + \gamma * near_dom terror_{it-1} + \beta_{2'} * X_{it-1} + \alpha_i + \lambda_t + \mu_{it}$$
(3b)

In contrast to our main IV approach, we allow our instrument to enter the second-stage regression with a coefficient of value γ . That is, domestic terrorism in proximate countries can now directly affect income inequality in country *i*, meaning that the exclusion restriction is violated; in case of perfect instrument exogeneity, γ would be equal to zero and the exclusion restriction would hold. By considering various of γ , we can investigate how violations of the exclusion restriction matter to our IV estimates (Conley et al., 2012). We do so by employing the union of confidence interval approach proposed by Conley et al. (2012). As an upper bound for γ , we select

 $\gamma = 0.003$. This value is chosen according to the reduced-form estimates associated with the role of domestic terrorism in neighboring countries in local income inequality. As the lower bound, we consider a value of $\gamma = -0.003$, which would imply that more regional domestic terrorism is associated with less income inequality in the country of interest.

Fig. 2 presents the upper and lower bounds for the local terrorism variable coefficient, applying the plausibly exogenous approach for our baseline empirical model. There are two main conclusions. First, if $\gamma < 0$, the upper bound effect of local terrorism on income inequality becomes larger. Such a relation might emerge when regional domestic terrorism positively correlates with certain predictors of local income inequality. Second, if $\gamma < 0.0015$, the 95% confidence interval does not include zero. Taken together, the results reported in Fig. 2 indicate that γ must reach a value that is more than approximately 50% of the size of the reduced-form estimate for the coverage area to include zero. This, in turn, suggests that our IV estimates are robust to high degrees of instrumental invalidity.

Finally, we employ alternative and placebo instruments for terrorist activity to assess whether our main empirical findings are due to the choice of the instrumental variable. First, we construct our baseline instrument (proximate domestic terrorism) in a different manner. Before, this instrument was defined as mean level of domestic terrorist activity in 22 world regions; the alternative instrument is defined as the mean level of domestic terrorist activity in seven world regions. This is to examine whether the construction of the instrument matters to the IV results. Second, we construct an alternative instrument, where domestic terrorism in other countries is weighted by distance between the countries' capitals, with domestic terrorism in more distant countries being less influential. This is another way to operationalize terrorism contagion we use for identification. Third, we use two alternative instruments: freedom from physical violence (i.e., freedom from torture) and female political empowerment, respectively (VDEM data). Both variables are relevant to the emergence of terrorism: Walsh and Piazza (2010) show that respect for physical integrity rights reduces the risk of terrorism, whereas Robison (2010) finds that the influence of women in public society discourages terrorist activity. Finally, we construct three placebo instruments, where we either (1) randomly assign our baseline instrument to another country for specific year, (2) randomly assign it to a specific year within same country or (3) randomly assign one of the 22 world regions to a country before constructing the (alternative) instrument. Due to randomisation, such instruments should no longer be helpful in identifying the impact of terrorism on inequality.

As shown in Supplementary Table 3, using the various (non-placebo) instruments does not affect our main empirical conclusion of an unfavorable effect of terrorism on income inequality. What is more, for all these alternative instruments, the IV diagnostics are proper. Moreover, combining various instruments gives access to the Hansen test to assess the validity of over-identifying restrictions. Reassuringly, this additional test result is also sound. Indeed, the alternative IV approaches point to a single interpretation of the data, where higher levels of terrorist activity are associated with more income inequality. By contrast, when employing the placebo instrument, we are—as expected—unable to identify the effect of terrorism on income inequality, with the associated IV-diagnostics also pointing to instrument weakness.

4.4. Further robustness checks

In addition to probing the robustness of our IV approach, we run additional robustness checks. First, we consider changes to our baseline model. For instance, we replace the per capita income variable with an alternative measure of economic development (infant mortality rate) and replace the economic openness measure with a measure of trade openness (i.e., the sum of exports and imports to a country's GDP). We also run a model with a lagged dependent variable as well as a model with a quadratic term for per capita income to account for the Kuznets hypothesis (Kuznets, 1955). Furthermore, we consider various variants of our baseline model that do not consider potentially bad controls, i.e., variables that we consider to be confounders even though they may also constitute outcomes associated with terrorist activity. For instance, while we argue that economic openness matters to both terrorism and inequality, one may also argue that economic openness itself is an outcome of terrorism (e.g., Meierrieks and Schneider, 2021). Thus, we successively drop from our regression models the potentially bad controls for per capita income, democracy, economic openness and government ideology. Reassuringly, as shown in Supplementary Table 4, the various changes to the baseline model and regard for potentially bad controls do not affect our main empirical conclusions.

Our empirical findings are also not overturned by the inclusion of additional control variables. The operationalization and data sources of the additional controls are reported in Supplementary Table 5. That is, when accounting for the influence of financial development, foreign development aid, oil wealth, the quality of economic and political institutions (property rights protection, social exclusion and political exclusion) as well as various demographic variables (urbanization, fertility rates and population growth), we still find that terrorism leads to more income inequality (Supplementary Table 5).

Next, we use alternative operationalizations of terrorism to assess whether the measurement of terrorist activity matters to our empirical results. Instead of the per capita number of terrorist attacks (our baseline terrorism variable), we use log- and inverse hyperbolic sine transformations of this variable,¹⁵ do not weight the number of terrorist attacks by population size, create a binary terrorism variable (that is equal to unity when a county-year pair sees at least one terrorist attack) and also evaluate how income inequality interacts with domestic, transnational and anti-civilian terrorism, respectively. As reported in Supplementary Table 6, we find that higher levels of terrorist activity, regardless of how measured, result in higher levels of income inequality. This suggests that our main findings are not due to the operationalization of the terrorism variable.

¹⁵ The inverse hyperbolic sine transformation of a variable y is defined as log $(y + (y^2 + 1)^{\frac{1}{2}})$. In contrast to the log transformation, it is defined at zero.



Fig. 2. Plausibly exogenous framework.

Furthermore, we consider the effect of terrorism on inequality at the "intensive margin", asking whether the severity of terrorism also affects inequality. To do so, we draw additional data from the GTD on the number of individuals killed, wounded or victimized (i. e., killed or wounded) in terrorist attacks. As shown in Supplementary Table 7, we find that higher levels of terrorist ferocity result in higher levels of income inequality, suggesting that the severity of terrorism—in addition to the frequency of terrorism on which we focused above —also matters to inequality.

Next, we employ alternative operationalizations of income inequality to consider whether the measurement of our dependent variable affects our empirical conclusions. From the *Global Consumption and Income Project* (Lahoti et al., 2016), we draw alternative Gini coefficients and Theil index estimates, the latter being an alternative income inequality indicator. Moreover, we log-transform the Gini coefficient estimates to generate unbounded values of the Gini coefficient, which may accommodate concerns about using the OLS estimator to examine how terrorism affects an outcome (i.e., the untransformed Gini coefficient) that is usually bounded between 0 and 100. As shown in Supplementary Table 8, we find that more terrorism results in higher levels of income inequality regardless of how the latter is measured. This suggests that our main finding is also not due to idiosyncratic operationalizations of the dependent variable.

Finally, while our study aims at detecting the average effect of terrorism on income inequality, it is possible that specific subsamples drive our results. Thus, we sequentially drop from our sample sub-sets of countries that are either located in the same world region (e.g., the Middle East and Northern Africa) or share a certain level of economic development (e.g., high-income countries). Reassuringly, as shown in Supplementary Table 9, we do not find that specific sub-samples of countries drive our results.

5. The role of democracy in the terrorism-inequality nexus

Having presented evidence that more terrorism results in more income inequality (which is in line with *H1*), in this section we study whether a country's political system matters to the terrorism-inequality nexus. As discussed above, we hypothesize that democracies may be more vulnerable to the unfavorable distributional effects of terrorism (see *H2*). For one, democracies may be more susceptible to the economic fallout from terrorism. For another, higher levels of political accountability in democracies may make it more likely that democratic governments respond to terrorism by implementing policies (e.g., related to taxation and transfers) that eventually shape a country's income distribution.

5.1. Empirical results

In Fig. 3, we provide a first assessment of a potential moderating influence of a country's political system on the terrorisminequality nexus. Controlling for country- and year-fixed effects, we find that more terrorist activity is associated with more income inequality especially in democratic countries, while non-democracies appear to be less responsive.

To test our proposition more carefully, we amend our baseline empirical model with an interaction term for terrorism and democracy. We report our findings in Table 3. There are three main results. First, in the absence of terrorism, democracies tend to see lower levels of income inequality. For instance, this negative relationship between democracy and income inequality can be explained by the median voter theorem, where the median voter (who tends to be poor) may favor a certain degree of redistribution (for an extensive discussion of the relationship between democracy and inequality, see Acemoglu et al., 2015). Second, terrorism leads to more inequality especially in democracies, while inequality does not respond to terrorism in non-democracies. We visualize this relationship in Fig. 4, which plots the interaction effect associated with Model (2) of Table 3. Third, taken together, these findings suggest that democracies lose their "equality advantage" when terrorist activity is sufficiently high. As shown in Fig. 4, income inequality levels between democracies and non-democracies are similar when there are approximately two terrorist attacks per one million inhabitants (which is about one-half of a standard deviation of the terrorism variable).

In Table 3, we also report some robustness checks to support our claim that a country's political system matters to the terrorisminequality nexus. First, instead of using the democracy measure by Bjornskov and Rode (2020), we employ a dichotomous democracy



Fig. 3. Terrorism and income inequality in democracies and non-democracies.

Inequality and terrorism in democracies and non-democracies.

Democracy Variable \rightarrow	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Bjornskov- Rode (OLS)	Bjornskov- Rode (IV)	Boix-Miller- Rosato	Krieger- Gründler	Polyarchy (VDEM)	Political Accountability (VDEM)	Bjornskov-Rode (endogenous)
Terrorism p.c. t-1	0.011	-0.013	0.080	-0.251	-0.476*	0.060	-0.060
	(0.013)	(0.076)	(0.120)	(0.252)	(0.256)	(0.098)	(0.157)
Per Capita Income t-1	1.966***	1.737***	1.850***	1.880***	1.965***	1.924***	1.872***
	(0.486)	(0.366)	(0.433)	(0.399)	(0.408)	(0.425)	(0.414)
Population Size t-1	-0.050	0.200	-0.153	0.054	-0.329	-0.303	0.445
	(0.471)	(0.533)	(0.416)	(0.474)	(0.414)	(0.427)	(0.373)
Democracy t-1	-0.743***	-1.738***	-0.607	-1.968**	-3.036*		-2.337***
	(0.178)	(0.576)	(0.400)	(0.943)	(1.675)		(0.761)
(Democracy *	0.047**	0.673***	0.386*	0.928*	1.611**		0.797*
Terrorism p.c.) t-1	(0.020)	(0.245)	(0.212)	(0.487)	(0.636)		(0.441)
Political						-0.924*	
Accountability						(0.484)	
(Accountability *						0.380**	
Terrorism p.c.) t-1						(0.172)	
Economic Openness t-1	0.031***	0.046***	0.045***	0.042***	0.036***	0.036***	0.035***
	(0.009)	(0.014)	(0.012)	(0.011)	(0.011)	(0.009)	(0.012)
Left-Wing Government	-1.494***	-1.225^{***}	-1.172^{***}	-1.442***	-1.526***	-1.621***	-1.529***
t-1	(0.455)	(0.418)	(0.393)	(0.361)	(0.402)	(0.382)	(0.376)
Dependency Ratio t-1	0.071***	0.062***	0.067***	0.067***	0.068***	0.069***	0.066***
	(0.013)	(0.011)	(0.014)	(0.014)	(0.012)	(0.013)	(0.014)
Number of Observations	4265	4265	4219	4228	4265	4265	3970
First-Stage F- Statistic ^(a)		11.14	10.48	12.93	17.91	23.43	7.45; 66.27
AR-Test (p-value) ^(b)		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Notes: Instrumental-variable regression results reported. Time- and country-fixed effects always included. (a) F-test associated with instrument for terrorism. In Model (6), second F-test statistic refers to instrument for democracy. Instrument sufficiently relevant when F > 10. (b) Test of null hypothesis that the coefficient of the endogenous regressor in the structural equation is equal to zero. Driscoll-Kraay standard errors in parentheses. *p < 0.1; **p < 0.05; ***p < 0.01.

measure from Boix et al. (2012). In Boix et al. (2012), a country is democratic when there is sufficient political contestation (i.e., free and fair elections with an executive that is directly or indirectly responsible to the voters) and participation (meaning that a majority of adult men must have the right to vote). Second, we use a continuous democracy variable from Krieger and Gründler (2016) who use machine learning techniques to create a democracy measure that is potentially less strongly plagued by methodological issues than alternative democracy indicators. Third, from VDEM we use an index of electoral democracy that accounts for, inter alia, the extensiveness of suffrage, the cleanness of elections and levels of freedom of expression and association. Higher values of this index correspond to higher levels of electoral democracy. Fourth, we replace the democracy variable with an index of political accountability



Fig. 4. Interaction effect.

from VDEM. This index reflects how strongly the executive is held accountable by, inter alia, other branches of government, the voters, civil society and the media. Higher values of this index correspond to higher levels of accountability. Finally, we treat the Bjornskov-Rode democracy variable as endogenous in one specification, instrumenting it by the second lag of the democracy variable.¹⁶

As shown in Table 3, these robustness checks corroborate our main finding concerning the relationship between terrorism and inequality in democracies and non-democracies. In sum, the findings of Table 3 are in line with *H2*: democracies are more vulnerable to the distributional effects of terrorism.

6. Exploration of mechanisms

Above, we have shown that more terrorist activity is associated with more income inequality, where this relationship is especially pronounced for democracies. Two channels are potentially relevant: the economic channel and the redistribution channel. In this section, we investigate whether one or both channels can indeed account for the unfavorable effect of terrorism on income inequality and whether there are differences with respect to these channels between democracies and non-democracies.

6.1. Macroeconomic effects of terrorism

According to the economic channel, terrorism may affect income inequality by inducing adverse macroeconomic effects which, in turn, have distributional consequences. For instance, terrorism may hurt economic growth (e.g., by making capital flee a terror-ridden country). Economic downturns may consequently fuel inequality. Here, democracies may be especially vulnerable, e.g., by nature of having a free press that may make it easier to terrorize a population and induce adverse economic outcomes.

We study how terrorism influences three macroeconomic indicators: (1) the occurrence of a recession (indicated by a binary variable that is equal to unity when the annual economic growth rate is below zero) (2) the inflation rate (i.e., the annual growth rate of the GDP implicit deflator to reflect the rate of price change), and (3) the unemployment rate (i.e., the share of the labor force that is without work but available for employment). The data for all variables come from the WDI.

We report our empirical findings in Table 4. We find that terrorism shares no statistically significant relationship with either macroeconomic indicator. Also, we do not find that there are differences in the macroeconomic effects of terrorism in democracies and non-democracies. These results suggest that terrorism does not lead to more income inequality via the economic channel. Indeed, this is in line with several contributions rejecting the claim that terrorism induces economic losses that are noticeable at the national level (for overviews, see, e.g., Sandler and Enders, 2008; Gaibulloev and Sandler, 2023).

6.2. Terrorism and redistribution

According to the redistribution channel, governments may respond to terrorism by changing levels of taxation and government transfers. The associated policy changes due to terrorism are expected to lead to more inequality by making it less likely that income is redistributed. Here, democratic governments—by nature of being subject to greater levels of political accountability—may be especially likely to change fiscal policies in such a manner.

To test this proposition, we draw an additional variable from the SWIID: the *Gini coefficient of gross income*, which is an indicator of income inequality produced in the marketplace. That is, in contrast to our usual inequality measure (the Gini coefficient of disposable income), this inequality measure (the Gini coefficient of market income) does not consider taxes and government transfers. We can then use the Gini coefficient of disposable income and the Gini coefficient of market income to create two additional variables

¹⁶ Note, however, that the Bjornskov-Rode democracy variable is dichotomous and thus unlikely to respond to terrorism in the first place, which is why we treated it as exogenous for the rest of our empirical analysis.

Macroeconomic consequences of terrorism.

Dependent Variable \rightarrow	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)
	Recession (Economic Growth<0)		Inflation Rate		Unemployment Rate	
Terrorism p.c. t-1	0.002	0.020	0.127	0.017	0.125	0.059
	(0.020)	(0.013)	(0.254)	(0.054)	(0.147)	(0.073)
Democracy t-1	-0.046	0.029	-0.337	-0.790	0.847***	0.619*
	(0.029)	(0.069)	(0.530)	(0.767)	(0.160)	(0.376)
(Democracy * Terrorism p.c.) t-1		-0.044		0.268		0.235
		(0.034)		(0.646)		(0.377)
Baseline Controls	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	4265	4265	4265	4265	3625	3625
First-Stage F-Statistic ^(a)	20.69	11.14	20.69	11.14	34.90	16.65
AR-Test (p-value) ^(b)	(0.92)	(0.15)	(0.64)	(0.84)	(0.39)	(0.67)

Notes: Instrumental-variable fixed-effects regression results reported. Time- and country-fixed effects always included. Baseline Controls are for per capita income, population size, economic openness, left-wing government and the dependency ratio. (a) F-test associated with instrument for terrorism. Instrument sufficiently relevant when F > 10. (b) Test of null hypothesis that the coefficient of the endogenous regressor in the structural equation is equal to zero. Driscoll-Kraay standard errors in parentheses. *p < 0.1; **p < 0.05; ***p < 0.01.

measuring *relative redistribution* (defined as market minus net income inequality, divided by market income inequality) and *absolute redistribution* (calculated as market minus net income inequality). Comparing market and net income inequality does not reveal the full amount of government redistributive policy; for instance, interventions such as minimum-wage regulations are expected to already affect gross income inequality (Solt, 2020). However, contrasting gross and net income inequality nevertheless allows us to consider in a persuasive manner how fiscal policy (i.e., taxes and government transfers) is shaped by terrorism, in line with the redistribution channel outlined above.

In Table 5, we report our empirical findings using market income inequality, relative and absolute redistribution as dependent variables Our results can be summarized as follows. First, there is no statistically significant relationship between terrorism and gross income inequality. We also do not find that gross income inequality responds differently to terrorism in democracies and non-democracies. This is in line with the notion that terrorism does not produce noticeable adverse economic effects that could matter to the distribution of income in the marketplace, which is consistent with the findings of Table 4 that document no systematic relationship between terrorism and various macroeconomic outcomes. Second, terrorism results in lower levels of relative and absolute redistribution, where this relationship is especially relevant to democratic countries. These findings speak to our earlier observation that net income inequality increases due to terrorism especially in democratic countries. Consistent with the theoretical arguments associated with the redistribution channel outlined above, the detrimental interaction between net income inequality and terrorism in democracies (shown in Table 3) can be attributed—at least in parts—to changes in taxation and government transfers that deemphasize redistributive efforts.

6.3. Other mechanisms

While we have argued in this paper that terrorism affects inequality via the economic and redistribution channel, we cannot rule out that terrorism influences inequality in other ways. First, *military spending* may matter (McGauvran et al., 2024). There is evidence that terrorism might induce increased military spending as governments bolster internal security (e.g., Gupta et al., 2004; Cevik and Ricco, 2020; Hunter, 2021); military spending, in turn, increases inequality by crowding out public investment into other policy areas related to redistribution such as education, health and social spending (e.g., Biscione and Caruso, 2021). Second, occurrence of terrorism may correlate with a turn towards more hawkish *right-wing politics* (e.g., Holmes, 2001; Koch and Cranmer, 2007). Right-wing governments may also be less likely to address inequality and redistribute compared to more left-wing governments (e.g., Herwartz and Theilen, 2017). Finally, *institutional quality* may play a role (McGauvran et al., 2024). Existing research suggests that terrorism may unfavorably interact with political and legal-economic institutions, e.g., by increasing corruption (e.g., Meierrieks and Auer, 2024), where weak institutions, in turn, fuel income inequality by allowing the rich to wield disproportionate economic influence (e.g., Gupta et al., 2002; Chong and Gradstein, 2007).

As an extension, we test whether terrorism affects military spending, political change towards more right-governance and the quality of institutions (in terms of corruption); data sources and variable operationalizations are documented in Supplementary Table 10. As reported in Supplementary Table 10, terrorism indeed leads to higher levels of military spending and more right-wing governance; these effects are not conditional on regime type. By contrast, we find no evidence that terrorism impairs institutional quality in both democracies and non-democracies. In sum, these findings point to the existence of additional transmission channels related to the terrorism-inequality nexus. They also suggest that studying these and other channels may be a promising avenue for future research. For instance, in addition to its role in inducing more right-wing governance, terrorism may undermine democratic stability (e.g., Holmes, 2001), where a lack of democratic stability, in turn, may also have further distributional consequences.

Effect of terrorism on taxation and transfers.

Dependent Variable	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)
	Market Inequality		Relative Redistri	bution	Absolute Redistribution	
Terrorism p.c. t-1	0.093 (0.078)	0.014 (0.054)	-0.005*** (0.002)	-0.001 (0.001)	-0.170* (0.092)	0.027 (0.029)
Democracy t-1	-1.007*** (0.189)	-1.332** (0.538)	-0.004** (0.002)	0.015** (0.006)	-0.407*** (0.111)	0.405 (0.292)
(Democracy * Terrorism p.c.) _{t-1}		0.193 (0.258)		-0.011*** (0.004)		-0.481** (0.209)
Baseline Controls	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	4228	4228	4228	4228	4228	4228
First-Stage F-Statistic ^(a)	20.69	11.14	20.69	11.14	20.69	11.14
AR-Test (p-value) ^(b)	(0.30)	(0.42)	(0.00)	(0.00)	(0.02)	(0.00)

Notes: Instrumental-variable fixed-effects regression results reported. Time- and country-fixed effects always included. Baseline Controls are for per capita income, population size, economic openness, left-wing government and the dependency ratio. (a) F-test associated with instrument for terrorism. Instrument sufficiently relevant when F > 10. (b) Test of null hypothesis that the coefficient of the endogenous regressor in the structural equation is equal to zero. Driscoll-Kraay standard errors in parentheses. *p < 0.1; **p < 0.05; ***p < 0.01.

7. Terrorism and wealth inequality

Throughout this contribution, we have studied the role of terrorism in income inequality. As an extension, we now consider the relationship between terrorism and *wealth inequality*. Here, "wealth", according to the definition of Zucman (2019: 112),

"[...] includes all the nonfinancial assets—real estate, land, buildings, etc.—and financial assets—equities, bonds, bank deposits, life insurance, pensions funds, etc.—over which households can enforce ownership rights and that provide economic benefits to their owners, net of any debts."

Like income inequality, the concentration of wealth in the hands of the few has also received considerable attention in the academic literature and public policy arena. For instance, Zucman (2019) points to the role of wealth in allowing the rich to exercise outsized political influence. Thus, it is also of interest to explore how terrorism shapes the distribution of wealth.

Our measure of wealth inequality is the *share of net wealth held by the top 10%* of the wealth distribution within a country. The data come from the *World Inequality Database*.¹⁷ In our sample, on average the top 10% hold approximately 63% of a country's wealth. This speaks to the observation that the concentration of wealth is highly skewed, also in comparison the distribution of income (e.g., Zucman, 2019).¹⁸

In Table 6 we report our findings concerning the effect of terrorism on wealth inequality. We find that democracies that do not experience terrorism see lower levels of wealth inequality but that the occurrence of terrorism leads democracies to lose their "wealth equality advantage" over non-democracies. The results of Table 6 thus mirror those on the relationship between terrorism and income inequality in democracies and non-democracies (Table 3).

There is no data on wealth inequality before and after redistribution, meaning that we cannot test redistribution as an underlying mechanism. Still, we may hypothesize that similar mechanisms are at play for income and wealth inequality. That is, like for the case of income inequality, terrorism may induce a tax and transfer response that exacerbates wealth inequality in democratic countries. To this effect, our exploration of the terrorism-wealth inequality nexus points to another promising avenue of future research.

8. Conclusion

We use data from a panel of 163 countries between 1980 and 2018 to investigate the effect of terrorism on inequality. We provide robust evidence that more terrorist activity results in higher levels of income inequality. On closer inspection, we find that this relationship is especially relevant to democracies. While democracies see lower levels of income inequality in the absence of terrorism, they lose their "income equality edge" as terrorism increases.

Exploring potential transmission channels, we show that terrorism does not have distributional consequence by damaging the economy. Rather, in democracies terrorism results in lower levels of redistribution, with fiscal policies (related to taxation and government transfers) being less equalizing under terrorism. This latter finding is consistent with our theoretical argument that terrorism elicits a policy response from democratic governments due to these governments' dependence on electoral support to stay in power. For instance, in the face of a terrorist threat, the electorate is more likely to support cuts to government transfers in favor of public spending on security, which, in turn, is expected to increase income inequality.

Our study adds to the literature on the determinants of income inequality and the socio-economic consequences of terrorism. At the

¹⁷ The data are available here: https://wid.world/data/.

¹⁸ What is more, wealth inequality tends to be underestimated. For instance, this is due to the wealthy having access to many opportunities for tax avoidance and tax evasion, e.g., by hiding wealth in offshore accounts (Zucman, 2019).

Wealth inequality and terrorism.

	(1)	(2)	(3)	(4)	(5)	(6)
Terrorism p.c. t-1	-0.004	0.012	-0.007	-0.139	0.097	-0.165
	(0.019)	(0.013)	(0.010)	(0.137)	(0.121)	(0.102)
Per Capita Income t-1		2.541***	2.541***		2.548***	2.584***
		(0.519)	(0.515)		(0.531)	(0.516)
Population Size t-1		-4.301***	-4.311***		-4.354***	-4.708***
		(0.552)	(0.557)		(0.584)	(0.662)
Democracy t-1		-1.076***	-1.116^{***}		-1.042^{***}	-1.950***
		(0.244)	(0.250)		(0.276)	(0.545)
(Democracy * Terrorism p.c.) t-1			0.044			1.070**
			(0.031)			(0.540)
Economic Openness t-1		0.022**	0.022**		0.025**	0.032**
		(0.011)	(0.010)		(0.012)	(0.015)
Left-Wing Government t-1		-0.528	-0.522		-0.491	-0.274
		(0.504)	(0.507)		(0.493)	(0.623)
Dependency Ratio t-1		0.095***	0.094***		0.096***	0.076***
		(0.025)	(0.025)		(0.026)	(0.027)
Estimation Method	OLS	OLS	OLS	IV	IV	IV
Number of Observations	3206	3206	3206	3206	3206	3206
First-Stage F-Statistic ^(a)				41.70	39.97	21.19
AR-Test (p-value) ^(b)				(0.31)	(0.42)	(0.00)

Notes: OLS (Models 1–3) and instrumental-variable (Models 4–6) fixed-effects regression results reported. (a) F-test associated with instrument for terrorism. Instrument sufficiently relevant when F > 10. (b) Test of null hypothesis that the coefficient of the endogenous regressor in the structural equation is equal to zero. Driscoll-Kraay standard errors in parentheses. *p < 0.1; **p < 0.05; ***p < 0.01.

same time, it also points to promising avenues of future research. This includes, e.g., a closer investigation of the relationship between terrorism and other forms of economic inequality. As a first step in this direction, we show that terrorism especially fuels wealth inequality in democracies, too. Moreover, future research may focus more exhaustively on the political economy of terrorism, fiscal policy and the distribution of income, e.g., by studying which types of taxation and transfers are affected in what manner when democratic governments face terrorist threats.

Finally, our study contributes to the renewed public debate on potential remedies of inequality. Income inequality has increased in many countries throughout the world in recent decades. We show that terrorism—an issue that is similarly on the rise, plaguing both developed and developing countries—may matter to this unfavorable trend. This, in turn, suggests that policies that counter terrorism and extremism may play a role in reining in inequality, too. Here, potential policies include measures to combat terrorist financing, the supply of public goods and social services to aggrieved groups and the provision of foreign aid to other countries to address grievances that may otherwise result in terrorism (for an overview of counter-terrorism policies, see Schneider et al., 2015). What is more, considering the evidence presented in this paper on potential transmission channels, policymakers who are concerned about inequality due to terrorism should not invest in policies that boost a country's macroeconomic resilience against terrorism. Rather, they should focus on curbing the "collateral damage" to redistribution during times of terrorism, e.g., by avoiding cuts to government transfers on social security benefits for the unemployed or the old.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ejpoleco.2024.102640.

Data availability

Data will be made available on request.

References

- Abadie, A., Gardeazabal, J., 2003. The economic costs of conflict: a case study of the Basque Country. Am. Econ. Rev. 93, 113-132.
- Abadie, A., Gardeazabal, J., 2008. Terrorism and the world economy. Eur. Econ. Rev. 52, 1–27.
- Abdullah, A., Doucouliagos, H., Manning, E., 2015. Does education reduce income inequality? A meta-regression analysis. J. Econ. Surv. 29, 301–316.
 Acemoglu, D., Naidu, S., Restrepo, P., Robinson, J.A., 2015. Democracy, redistribution, and inequality. In: Atkinson, A.B., Bourguignon, F. (Eds.), Handbook of Income Distribution Volume 2. Elsevier, Amsterdam, pp. 1885–1966.

Aghion, P., Caroli, E., García-Peñalosa, C., 1999. Inequality and economic growth: the perspective of the new growth theories. J. Econ. Lit. 37, 1615–1660.

Aghion, P., Akcigit, U., Bergeaud, A., Blundell, R., Hemous, D., 2019. Innovation and top income inequality. Rev. Econ. Stud. 86, 1-45.

Aksoy, D., Carter, D.B., Wright, J., 2015. Terrorism and the fate of dictators. World Polit. 67, 423-468.

- Albanesi, S., 2007. Inflation and inequality. J. Monetary Econ. 54, 1088-1114.
- Alexeev, M., Zakharov, N., 2022. Who profits from windfalls in oil tax revenue? Inequality, protests, and the role of corruption. J. Econ. Behav. Organ. 197, 472–492. Alvaredo, F., Chancel, L., Piketty, T., Saez, E., Zucman, G., 2017. Global inequality dynamics: new findings from WID.world. Am. Econ. Rev. 107, 404–409. Arce, D.G., 2019. The human consequences of terrorism. Publ. Choice 178, 371–396.
- Ashworth, S., 2012. Electoral accountability: recent theoretical and empirical work. Annu. Rev. Polit. Sci. 15, 183-201.

Atkinson, A.B., Piketty, T., Saez, E., 2011. Top incomes in the long run of history. J. Econ. Lit. 49, 3–71.

Baek, I., Bouzinov, M., 2021. Does democratic progress deter terrorist incidents? Eur. J. Polit. Econ. 66, 101951.

Bargain, O., Dolls, M., Immervoll, H., Neumann, D., Peichl, A., Pestel, N., Siegloch, S., 2015. Tax policy and income inequality in the United States, 1979-2007. Econ. Inc. 53, 1061–1085.

Beck, T., Demirgüç-Kunt, A., Levine, R., 2007. Finance, inequality and the poor. J. Econ. Growth 12, 27-49.

Bircan, C., Brück, T., Vothknecht, 2017. Violent conflict and inequality. Oxf. Dev. Stud. 45, 125–144.

Biscione, A., Caruso, R., 2021. Military expenditures and income inequality Evidence from a panel of transition countries (1990-2015). Defence Peace Econ. 32, 46-67.

Bjornskov, C., Rode, M., 2020. Regime types and regime change: a new dataset on democracy, coups, and political institutions. Review of International Organizations 15, 531–551.

Blomberg, S.B., Hess, G.D., Orphanides, A., 2004. The macroeconomic consequences of terrorism. J. Monetary Econ. 51, 1007–1032.

Boix, C., Miller, M., Rosato, S., 2012. A complete dataset of political regimes, 1800-2007. Comp. Polit. Stud. 46, 1523-1554.

Bove, V., Efthyvoulou, G., Pickard, H., 2024. Are the effects of terrorism short-lived? Br. J. Polit. Sci. 54, 536–545.

Braithwaite, A., Li, Q., 2007. Transnational terrorism hot spots: identification and impact evaluation. Conflict Manag. Peace Sci. 24, 281–296.

Cevik, S., Ricco, J., 2020. Shock and awe? Fiscal consequences of terrorism. Empir. Econ. 58, 723-748.

Chancel, L., Piketty, T., Saez, E., Zucman, G., 2022. World Inequality Report 2022. World Inequality Lab.

Chenoweth, E., 2013. Terrorism and democracy. Annu. Rev. Polit. Sci. 16, 355-378.

Choi, I., 2001. Unit root tests for panel data. J. Int. Money Finance 20, 249–272.

Chong, A., Gradstein, M., 2007. Inequality and institutions. Rev. Econ. Stat. 89, 454-465.

Coibion, O., Gorodnichenko, Y., Kueng, L., Silvia, J., 2017. Innocent bystanders? Monetary policy and inequality. J. Monetary Econ. 88, 70–89.

Conley, T.G., Hansen, C.B., Rossi, P.E., 2012. Plausibly exogenous. Rev. Econ. Stat. 94, 260-272.

Coppedge, M., Gerring, J., Knutsen, C.H., Lindberg, S.I., Skaaning, S.-E., Teorell, J., Altman, D., Bernhard, M., Fish, M.S., Cornell, A., Dahlum, S., Gjerløw, H., Glynn, A., Hicken, A., Krusell, J., Lührmann, A., Marquardt, K.L., McMann, K., Mechkova, V., Medzihorsky, J., Olin, M., Paxton, P., Pemstein, D., Pernes, J., von

Römer, J., Seim, B., Sigman, R., Staton, J., Stepanova, N., Sundström, A., Tzelgov, E., Wang, Y., Wig, T., Wilson, S., Ziblatt, D., 2019. V-dem dataset V9. Available at: https://www.v-dem.net/en/data/data-version-9/.

Crain, N., Crain, W., 2006. Terrorized economies. Publ. Choice 128, 317-349.

Cramer, C., 2003. Does inequality cause conflict? J. Int. Dev. 15, 397-412.

Cysne, R.P., 2009. On the positive correlation between income inequality and unemployment. Rev. Econ. Stat. 91, 218–226.

Drakos, K., Kutan, A.M., 2003. Regional effects of terrorism on tourism in three Mediterranean countries. J. Conflict Resolut. 47, 621-641.

Driscoll, J., Kraay, A.C., 1998. Consistent covariance matrix estimation with spatially dependent data. Rev. Econ. Stat. 80, 549–560.

Eichenbaum, M., Fisher, J.D.M., 2005. Fiscal policy in the aftermath of 9/11. J. Money Credit Bank. 37, 1–22.

Enders, W., Gaibulloev, K., Sandler, T., 2011. Domestic versus transnational terrorism: data, decomposition, and dynamics. J. Peace Res. 48, 319-337.

Ezcurra, R., Palacios, D., 2016. Terrorism and spatial disparities: does interregional inequality matter? Eur. J. Polit. Econ. 42, 60–74.

Fan, J., Liao, Y., Yao, J., 2015. Power enhancement in high-dimensional cross-sectional tests. Econometrica 83, 1497–1541.

Ferreira, F.H.G., Lustig, N., Teles, D., 2015. Appraising cross-national income inequality databases: an introduction. J. Econ. Inequal. 13, 497–526.

Furceri, D., Ostry, J.D., 2019. Robust determinants of income inequality. Oxf. Rev. Econ. Pol. 35, 490-517.

- Gaibulloev, K., Sandler, T., 2011. The adverse effect of transnational and domestic terrorism on growth in Africa. J. Peace Res. 48, 355-371.
- Gaibulloev, K., Sandler, T., 2019. What we have learned about terrorism since 9/11. J. Econ. Lit. 57, 275–328.

Gaibulloev, Khusrav, Sandler, T., 2019. Common myths of terrorism. J. Econ. Surv. 37, 271-301.

Gassebner, M., Jong-A-Pin, R., Mierau, J.O., 2008. Terrorism and electoral accountability: one strike, you're out. Econ. Lett. 100, 126–129.

Gassebner, M., Jong-A-Pin, R., Mierau, J.O., 2011. Terrorism and cabinet duration. Int. Econ. Rev. 52, 1253–1270.

Gassebner, M., Luechinger, S., 2011. Lock, stock, and barrel: a comprehensive assessment of the determinants of terror. Publ. Choice 149, 235–261.

Gründler, K., Krieger, T., 2016. Democracy and growth: evidence from a machine learning indicator. Eur. J. Polit. Econ. 45, 85–107.

Gupta, S., Davoodi, H., Alonso-Terme, R., 2002. Does corruption affect income inequality and poverty? Econ. Govern. 3, 23-45.

Gupta, S., Clements, B., Bhattacharya, R., Chakravarti, S., 2004. Fiscal consequences of armed conflict and terrorism in low- and middle-income countries. Eur. J. Polit. Econ. 20, 403–421.

Gygli, S., Haelg, F., Potrafke, N., Sturm, J.E., 2019. The KOF globalisation index - revisited. Review of International Organizations 14, 543-574.

Helbling, M., Meierrieks, D., 2022. Terrorism and migration: an overview. Br. J. Polit. Sci. 52, 977–996.

Herwartz, H., Theilen, B., 2017. Ideology and redistribution through public spending. Eur. J. Polit. Econ. 46, 74–90.

Hetherington, M.J., Suhay, E., 2011. Authoritarianism, threat, and Americans' support for the war on terror. Am. J. Polit. Sci. 55, 546–560.

Holmes, J., 2001. Terrorism and Democratic Stability. Routledge, New York.

Hope, D., Limberg, H., 2022. The economic consequences of major tax cuts for the rich. Soc. Econ. Rev. 20, 539–559.

Horowitz, M.C., 2015. The rise and spread of suicide bombing. Annu. Rev. Polit. Sci. 18, 69-84.

Hunter, L.Y., 2021. Terrorism, regime type, and defense spending: a cross-national analysis. Democr. Secur. 17, 148–180.

Imbens, G.W., Angrist, J.D., 1994. Identification and estimation of local average treatment effects. Econometrica 62, 467-475.

Jaumotte, F., Lall, S., Papageorgiou, C., 2013. Rising income inequality: technology, or trade and financial globalization? IMF Econ. Rev. 61, 271–309. Jetter, M., Stadelmann, D., 2019. Terror per capita. South. Econ. J. 86, 286–304.

Kelly, M., 2000. Inequality and crime. Rev. Econ. Stat. 82, 530–539.

Khelifi, I., Dissou, Y., Bouabid, A., 2023. Terrorism and economic policy responses in Tunisia. J. Pol. Model. 45, 1281–1295.

D Meierrieks

Kibris, A., 2011. Funerals and elections: the effects of terrorism on voting behavior in Turkey. J. Conflict Resolut. 55, 220-247.

- Kis-Katos, K., Liebert, H., Schulze, G.G., 2011. On the origin of domestic and international terrorism. Eur. J. Polit. Econ. 27, S17-S36.
- Koch, M.T., Cranmer, S., 2007. Testing the "Dick Cheney" hypothesis: do governments of the left attract more terrorism than governments of the right? Conflict Manag. Peace Sci. 24, 311-326.
- Krieger, T., Meierrieks, D., 2011. What causes terrorism? Publ. Choice 147, 3-27.
- Krieger, T., Meierrieks, D., 2019. Income inequality, redistribution and domestic terrorism. World Dev. 116, 125-136.
- Krainak, T., 2021. The effects of terrorism on tourism demand: a systematic review. Tourism Econ. 27, 1736-1758.
- Kuznets, S., 1955. Economic growth and income inequality. Am. Econ. Rev. 45, 1-28.
- LaFree, G., Dugan, L., 2007. Introducing the global terrorism database. Terrorism Polit. Violence 19, 181–204.
- Lahoti, R., Arjun, J., Sanjay, R., 2016. The global consumption and income Project (GCIP): an overview. J. Glob. Dev. 7, 61-108.
- Llusa, F., Tavares, J., 2011. Which terror at which cost? On the economic consequences of terrorist attacks. Econ. Lett. 110, 52-55.
- McGauvran, R.J., Biglaiser, G., Hunter, L.Y., Lee, H., 2024. The effect of terrorism on income inequality. Int. Stud. O. 68, sqae043.
- Meierrieks, D., Gries, T., 2013. Causality between terrorism and economic growth. J. Peace Res. 50, 91-104.
- Meierrieks, D., Schneider, F., 2021. Terrorism and international economic policy. Eur. J. Polit. Econ. 69, 102011.
- Meierrieks, D., Auer, D., 2024. Bribes and bombs: the effect of corruption on terrorism. Am. Polit. Sci. Rev. forthcoming.
- Memon, S., Qureshi, I.A., 2021. Income inequality and macroeconomic instability. Rev. Dev. Econ. 25, 758-789. Mocan, H.N., 1999. Structural unemployment, cyclical unemployment, and income inequality. Rev. Econ. Stat. 81, 122-134.
- Neckerman, K.M., Torche, F., 2007. Inequality: causes and consequences. Annu. Rev. Sociol. 33, 335-357.
- Pickett, K.E., Wilkinson, R.G., 2015. Income inequality and health: a causal review. Soc. Sci. Med. 128, 316-326.
- Piketty, T., 2014. Capital in the Twenty-First Century. Harvard University Press, Cambridge. Piketty, T., Saez, E., 2014. Inequality in the long run. Science 344, 838-843.
- Robison, K.K., 2010. Unpacking the social origins of terrorism: the role of women's empowerment in reducing terrorism. Stud. Conflict Terrorism 33, 735–756. Roine, J., Vlachos, J., Waldenström, D., 2009. The long-run determinants of inequality: what can we learn from top income data? J. Publ. Econ. 93, 974–988. Sandler, T., 2018. Terrorism: what Everyone Needs to Know. Oxford University Press, New York.
- Sandler, T., Enders, W., 2008. Economic consequences of terrorism in developed and developing countries: an overview. In: Keefer, P., Loayza, N. (Eds.), Terrorism, Economic Development, and Political Openness. Cambridge University Press, New York, pp. 17-47.
- Sarafidis, V., Wansbeek, T., 2012. Cross-sectional dependence in panel data analysis. Econom. Rev. 31, 483-531.
- Schneider, F., Brück, T., Meierrieks, D., 2015. The economics of counter-terrorism: a survey, J. Econ. Surv. 29, 131-157.
- Solt, F., 2008. Economic inequality and democratic political engagement. Am. J. Polit. Sci. 52, 48-60.
- Solt, F., 2009. Standardizing the world income inequality database. Soc. Sci. Q. 90, 231-242.
- Solt, F., 2020. Measuring income inequality across countries and over time: the standardized world income inequality database. Soc. Sci. Q. 101, 1183–1199. Standaert, S., Rayp, G., 2022. Where did they come from, where did they go? Bridging the gaps in migration data. In: UNU-CRIS Working Paper 22.04. United Nations
- University Institute on Comparative Regional Integration Studies, Bruges.
- Walsh, J.I., Piazza, J.A., 2010. Why respecting physical integrity rights reduces terrorism. Comp. Polit. Stud. 43, 551-577.
- Williams, L.K., Koch, M.T., Smith, J.M., 2013. The political consequences of terrorism: terror events, casualties, and government duration. International Studies Perspective 14, 343–361.
- World Bank, 2019, World Development Indicators, The World Bank, Washington, D.C.
- Younas, J., 2015. Terrorism, openness and the feldstein-horioka paradox. Eur. J. Polit. Econ. 38, 1-11.
- Zucman, G., 2019. Global wealth inequality. Annual Review of Economics 11, 109-138.