

# Terrorism in the Worlds of Welfare Capitalism

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## Abstract

This contribution argues that social policies ameliorate poor short-run and long-run socioeconomic conditions (e.g., unemployment, poverty, inequality, and dissatisfaction), thereby indirectly reducing terrorist activity. The authors empirically assess the influence of social policies (indicated by social spending and welfare regime variables) on homegrown terrorism for fifteen Western European countries during the 1980–2003 period. The authors find that higher social spending in certain fields (health, unemployment benefits, and active labor market programs) is associated with a significant reduction in homegrown terrorism, while spending in other fields (e.g., public housing) is not. Moderate evidence furthermore indicates that the different worlds of welfare capitalism differently affect homeland terrorism. Social democratic welfare regimes that create low levels of market dependence are on average less prone to domestic terrorist activity. The findings suggest that homegrown terrorism in Western Europe may also be fought by higher spending in certain fields and more generous welfare regimes.

## Keywords

domestic terrorism, social policy, welfare regimes, worlds of welfare capitalism, Western Europe

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## Introduction

Many Western European countries have suffered from major episodes of terrorist activity on their own soil since the 1950s (Engene 2007). While such terrorism has resulted in thousands of victims, it has also entailed notable negative economic and political effects. Several studies analyze the impact of terrorism on economic and political factors in Western Europe.<sup>1</sup> As these direct and indirect costs are considerable, this contribution seeks to investigate the determinants of homegrown (homeland) terrorism in Western Europe. In particular, we want to extend the academic discourse on a potential *welfare policy–terrorism nexus*, which was introduced by Burgoon (2006). He argues that social policies may indirectly reduce terrorist activity by removing several socioeconomic causes of terrorism (e.g., poverty, inequality, and social dissatisfaction). He offers an empirical analysis of this hypothesis, finding that welfare efforts are indeed linked to a reduction in the production of and vulnerability to transnational terrorism. His analysis has attracted some criticism, especially by Crenshaw, Robison, and Jenkins (2007) who point at potential flaws in Burgoon’s argumentation and econometric procedure. We take Burgoon’s analysis as a starting point of our investigation, keeping in mind already raised objections to improve our empirical approach. We add to and complement Burgoon’s analysis by, *inter alia*, concentrating on domestic (homegrown) instead of transnational terrorism (as we expect a particularly strong relationship between social systems and domestic terrorism), by using a variety of spending variables to improve the analysis of the mechanics of the welfare policy–terrorism nexus, and by analyzing (for the first time) the institutional aspects of welfare regimes and their influence on terrorism.

We scrutinize the effect of welfare policies (indicated by social spending and welfare regime variables) on homegrown terrorism in Western Europe during the 1980–2003 period, using time series cross-sectional data for fifteen countries. A focus on the mature welfare states of Western Europe is especially interesting because for this part of the world detailed data and previous empirical work are available, which allow us to investigate the welfare policy–terrorism nexus in much more detail, for example, by looking at specific forms of social spending and welfare state design and their effects on terrorism. At the same time, homegrown terrorism in Western Europe has been carried out in large parts by ethnic-nationalist and left-wing groups that are (in contrast to religious groups) much likelier to respond to social policies (Crenshaw, Robison, and Jenkins 2007). Our first hypothesis is that *higher social spending* reduces terrorist activity by improving a variety of short-run and long-run socioeconomic conditions, net of other factors contributing to the genesis of terrorism, and potential terror-enhancing effects of social spending. In an economic sense, higher social spending translates into higher opportunity costs of terrorism, for example, as poverty and inequality diminish or additional economic alternatives open up. Our second hypothesis is that certain *worlds of welfare capitalism* are (independent of the actual level of social spending) less vulnerable to terrorism

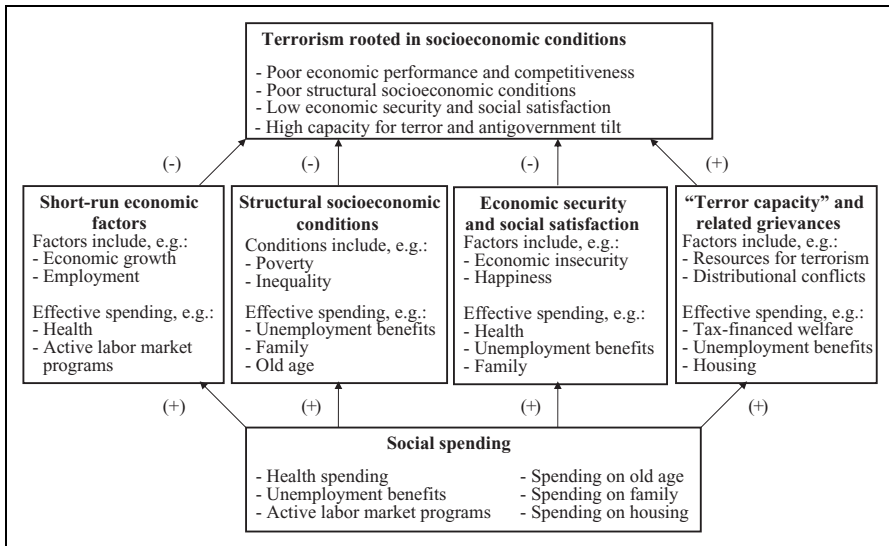
because they are more successful in ameliorating poor short-term and long-term socio-economic conditions that may otherwise provide breeding grounds for terrorism. The latter hypothesis is linked to the influential work of Esping-Andersen (1990). Similar to our first hypothesis, we argue that policy success differs across welfare regimes, thereby affecting the opportunity costs of terrorism in different ways.

As our main results, we find that higher social spending in certain fields (health, unemployment benefits, and active labor market programs) is associated with a significant reduction in homeland terrorist activity. However, there are some policy fields where more spending does not universally translate into less terrorism (e.g., public housing). Spending in fields close to the “typical” terrorist (who may be young and lack economic opportunities or who is sympathetic toward this group of people) generally discourages terrorist activity more effectively. Moderate evidence indicates that the various worlds of welfare capitalism are prepared to deal with homeland terrorism in different ways. Welfare regimes that provide low levels of market dependence (i.e., the social democratic worlds of welfare capitalism) are on average less prone to terrorist activity than more liberal systems (which offer higher levels of market dependence). Our findings are robust to a variety of specifications. In an extension to our empirical work, we show that imported transnational terrorism (which originates, e.g., in the Middle East) is not discouraged by higher social spending or a more social democratic welfare regime.

The remainder of this contribution is organized as follows. After this introduction, we provide an in-depth discussion of potential links between social policies and terrorism in the section on Welfare Systems and Terrorism. Afterwards, we present the data and the empirical framework used for our investigation. Then, we provide the empirical results. Finally, we discuss and sum up our findings.

## **Welfare Systems and Terrorism**

Economic theory identifies terrorists as rational actors who use violence as a means to achieve political goals. The terrorists’ calculus (and the calculus of their supporters) includes the costs, benefits, and opportunity costs arising from terrorist activity, depending on which the actual level of terrorism is chosen (e.g., Frey and Luechinger 2003). Country-specific factors may influence these calculi. Existing empirical research has analyzed the role of, *inter alia*, democracy (Li 2005), economic integration (Li and Schaub 2004), geographical proximity to terrorism hot spots (Braithwaite and Li 2007), and identity conflict (Basuchoudhary and Shughart Forthcoming) in swaying the patterns of terrorism.<sup>2</sup> We control for several of these factors in our empirical analysis. However, at the same time, we acknowledge that there is no academic consensus on the importance of certain country-specific factors in affecting the production of terrorism. For our country sample, some explanatory approaches do not appear to fit. For instance, this is the case with the role of some political factors (repression or state failure) as terrorism catalysts.



**Figure 1.** Welfare spending and terrorist activity.

In this contribution, we focus on *social spending* as a potential (country-specific) determinant of terrorism. We argue that social spending influences intervening socioeconomic variables in ways that diminish terrorist activity because these very variables are among the determinants of terrorism. In short, social spending is anticipated to improve short-run economic conditions (e.g., growth and employment), ameliorate poor structural socioeconomic conditions (e.g., poverty and inequality), reduce economic insecurity, and increase overall social satisfaction. An improvement in these socioeconomic conditions makes terrorism less attractive as it generally increases the opportunity costs of violence. We connect social spending to terrorism in more detail below and summarize our line of argumentation in figure 1.<sup>3</sup>

Furthermore, we argue that certain *welfare regimes* (certain *worlds of welfare capitalism*, as Esping-Andersen 1990 calls them) affect terrorist activity, *independent of the actual volume of social spending*. Welfare regimes may assign different roles to the state, the market, and the family, leading to different degrees of market dependence and forms of social structuring. Depending on the level of market dependence and the configuration of social structuring, short-run and long-run socioeconomic conditions, insecurity, and social satisfaction are influenced in different ways, in turn swaying the terrorists’ calculus and the calculus of their supporters in different ways. Our main hypothesis is that low levels of market dependence and egalitarian forms of social structuring (which are typically associated with the social democratic world of welfare capitalism) should generally lower terrorism by affecting its opportunity costs through the aforementioned intervening variables. We give a more in-depth discussion of this point below and illustrate our argumentation in figure 2.

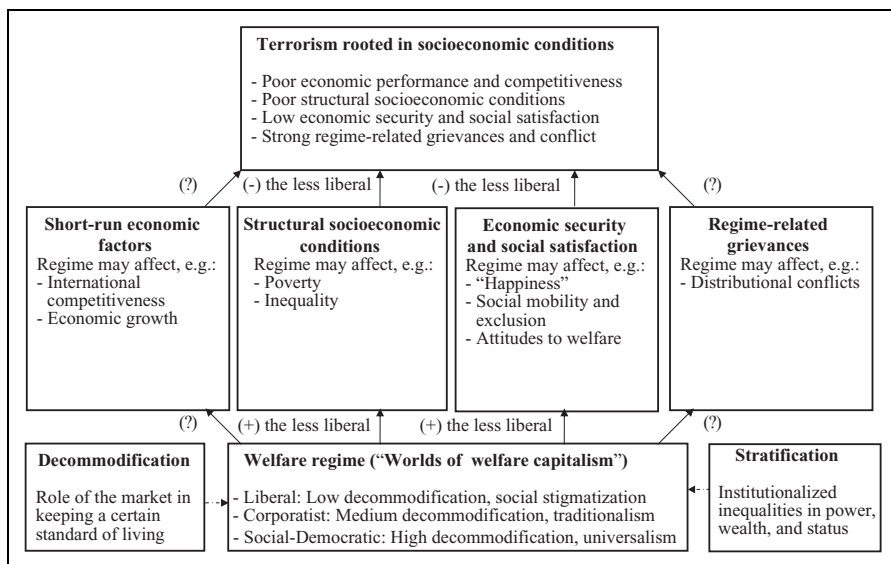


Figure 2. Welfare regimes and terrorist activity.

### Social Spending and Terrorism

Social spending may positively affect short-run economic conditions (e.g., economic growth, employment, and investment). Midgley and Tang (2001) offer a variety of channels through which such effects may emerge. For instance, spending on health or active labor market programs may be considered as an investment in human capital which in turn stimulates growth and employment.<sup>4</sup> Social spending on family programs may also remove obstacles for female economic participation, again promoting economic performance. Harris (2002) argues that certain forms of social spending (e.g., on health or labor market programs) may accelerate aggregate productivity and stimulate labor market participation, innovation, and investment. De Grauwe and Polan (2005) furthermore find that countries with developed welfare systems exhibit high international competitiveness, so there is no evidence to indicate that social spending decreases a country’s international economic position. The positive effect of social spending on short-run economic conditions may feed through to a reduction in terrorism. Blomberg and Hess (2008) find that economic success reduces the likelihood of terrorist activity in a country. Blomberg, Hess, and Weerapana (2004) show that slow growth is one important factor leading to transnational terrorist attacks. A number of further studies (e.g., Muller and Weede 1990; Braithwaite and Li 2007) also find that economic success is a disincentive to terrorist activity.<sup>5</sup> This evidence suggests that social spending may potentially decrease terrorist activity through its positive effect on short-run economic factors.

There may also be a terror-reducing effect of social spending via an amelioration of long-run socioeconomic conditions. The evidence indicates that social spending has been a fundamental determinant of poverty reduction, particularly in developed welfare states (e.g., Kenworthy 1999; Foerster and Pearson 2002; Brady 2005). Similarly, welfare spending has been associated with a reduction in income inequality (Caminada and Goudswaard 2001; Foerster and Pearson 2002). Increased welfare spending may reduce poverty and inequality, for example, by providing health and unemployment benefits or financial support for families and the elderly. The empirical evidence also indicates that low income and high inequality are conducive to violence in societies (e.g., Muller and Seligson 1987; Blomberg, Hess, and Weerapana 2004; Blomberg and Hess 2008). For instance, terrorist organizations may use poor socioeconomic conditions as a convenient platform to muster support. By its positive effect on structural socioeconomic conditions, social spending may undermine the recruitment efforts or support of terrorist organizations, thus indirectly contributing to a reduction in terrorism.

Social spending may also affect terrorist activity through variables such as economic security or satisfaction with life (happiness). These factors are to some extent associated with the short- and long-run socioeconomic conditions discussed above but also transcend them as they take a more “holistic” perspective on individual well-being, which independently affects terrorist activity. For instance, a recession may trigger terrorism by making terrorism more attractive for those hit by the economic crisis (e.g., the unemployed). At the same time, a recession also changes the perceptions of risk, fear, and satisfaction of those individuals that are actually unaffected by the crisis. This rather “diffuse” dissatisfaction may also produce terrorism (Frey and Stutzer 2005). Social spending may counter the latter effect. As shown by Di Tella, MacCulloch, and Oswald (2003) and Pacek and Radcliff (2008a), higher levels of social spending are associated with higher levels of satisfaction. Di Tella, MacCulloch, and Oswald (2003) specifically refer to the positive effect of unemployment benefits as one form of spending that reduces insecurity and increases satisfaction. Generally, social spending that secures against perceived risks (e.g., spending on health or old-age benefits) may increase life satisfaction. Through its positive effects on individual perceptions of insecurity and dissatisfaction, social spending may eventually reduce terrorism that is rooted in these very “holistic” conditions.

Besides the positive effects of social spending on terrorism via the channels discussed above, it is also possible that social spending spurs terrorism. On one hand, social spending (e.g., unemployment benefits) may enable individuals to commit terrorism by providing them with free time and financial resources (Burgooon 2006). That is, terrorism may positively affect the capacities of those organizing and perpetrating terrorism. On the other hand, social spending may create grievances. The net contributors to a redistributive system (the taxpayers) may feel betrayed because they have to give away too much of their resources.<sup>6</sup> The net receivers may feel betrayed because society does not seem to support them enough. Possibly, both

forms of resistance against welfare spending may translate into increased terrorist violence. However, we side with Burgoon (2006) and argue that the terror-enhancing effects of social spending via increased terror capacities or the creation of spending-related grievances are rather marginal.

In figure 1, we sum up how social spending may influence terrorist activity. Based on the discussion before, we verbalize our first hypothesis:

*Hypothesis 1:* Social spending augments short-run economic conditions, improves poor structural socioeconomic conditions, reduces economic insecurity, and leads to generally higher satisfaction with life. Because of the effect of social spending on these intervening variables, terrorism production (*ceteris paribus*) should be lower, the higher the level of social spending in a given country.

### *The Worlds of Welfare Capitalism and Terrorism*

Previously, we argued that social spending reduces terrorist activity through a number of channels. An empirical assessment of this hypothesis requires us to study the effect of spending variables on terrorist activity. Spending, however, does not necessarily tell the complete story about a welfare regime. For instance, welfare spending on unemployment benefits may increase (as unemployment increases) but the state may at the same time cut unemployment benefit programs (meaning that the welfare state's generosity toward an individual on welfare decreases). This example illustrates that spending variables may not be good indicators of welfare state commitment (cf. Scruggs and Allan 2006). Welfare regimes may, *inter alia*, differ in terms of the rules of access to the welfare system, the conditions under which one receives social support, and the role of the state, the market, and the family. These differences may be independent of the respective levels of social spending.

Although not exempted from criticism, Esping-Andersen (1990) offers a popular characterization of welfare regimes that is independent of the actual level of social spending, namely the *worlds of welfare capitalism* view.<sup>7</sup> This view focuses on two fundamental welfare state dimensions: decommodification and social stratification. *Decommodification* refers to the degree to which citizens are dependent on the labor market to keep up a certain standard of living. In social systems that offer generous welfare services, the degree of market dependence is smaller (decommodification is higher) than in systems that offer only minimum compensations. *Stratification* refers to the societal structuring fostered by welfare policies. Social policies may aim at conserving a society's status quo, at unleashing potential for individual success or at overcoming class differences. Social systems may rely on narrow or broad solidarities, depending on which concept fits in better with underlying ideas of social structuring. Esping-Andersen (1990) identifies three "ideal" worlds of welfare capitalism for Western Europe along the decommodification and stratification dimension.<sup>8</sup> The *liberal type of welfare capitalism* emphasizes the importance of the

individual and of the market (meaning a low level of decommodification), where the primacy of the market usually leads to a social stratification where a minority is dependent on low levels of state benefits (implying social inequality). In *corporatist welfare regimes*, benefit recipients may maintain their former level of income for some time, where benefits usually increase with previous contributions to the system (implying a moderate level of decommodification). Such regimes tend to preserve a “natural” social order (e.g., with respect to the role of the family and women in society). *Social democratic welfare regimes* aim at low levels of market dependence (meaning a high level of decommodification) and promote the ideas of universality and broad solidarity (implying social equality).

Our main hypothesis is that welfare regimes that promote low levels of market dependence and high levels of social equality are better prepared for swaying socio-economic conditions in ways that reduce terrorism. More plainly, we argue that in particular social democratic welfare regimes are less prone to terrorist activity. Figure 2 above illustrates our reasoning. Below, we discuss in more detail how different welfare regimes may influence terrorism. We then formulate our second hypothesis accordingly.

At times, more liberal welfare regimes have been argued to spur economic growth, employment, and international competitiveness, outperforming the conservative and social democratic worlds of welfare capitalism. For instance, advantages for liberal regimes are argued to come, for example, from fiscal discipline, flexible labor markets, or a better attraction of capital (Bernard and Boucher 2007). However, Bernard and Boucher (2007) find that the different worlds of welfare capitalism use different strategies to achieve employment and that no regime is particularly well suited to improving short-run economic conditions. Similarly, Headey et al. (2000) do not find that liberal regimes achieve higher growth or employment rates. That is, there is little evidence that liberal regimes improve short-run economic conditions more effectively than their conservative or social democratic counterparts. Furthermore, there is no evidence of a trade-off between economic efficiency and welfare state generosity (Headey et al. 2000). Consequently, we cannot assess which welfare regime is less prone to terrorism rooted in poor economic performance, unemployment, or low economic competitiveness. However, welfare regime characteristics may still affect long-run socioeconomic conditions or social satisfaction, which explains why some welfare regimes are more vulnerable to terrorism than others.

That said, we analyze whether different types of welfare regimes have an effect on poverty and income inequality reduction. A substantial body of empirical literature argues that more generous welfare regimes perform better (Green, Henley, and Tsakalotos 1994; Headey et al. 1997; Kenworthy 1999; Rueda and Pontusson 2000; Fouarge and Layte 2005; Scruggs and Allan 2006). Further studies also find that more generous regimes are better prepared for countering social exclusion and resource deprivation, thereby reducing more than just the purely material forms of socioeconomic inequality (Tsakloglou and Papadopoulos 2002; Muffels and



Fouarge 2005). In general, these results convincingly suggest that social democratic welfare regimes (the most generous regimes) outperform the corporatist and liberal ones, thereby being less prone to terrorism rooted in poor structural socioeconomic conditions.<sup>9</sup>

Different welfare regimes may also produce different levels of social satisfaction and economic security, thereby indirectly affecting terrorism that is rooted in general dissatisfaction and insecurity. Again, the evidence indicates that welfare regimes offering low levels of market dependence and universal access to their social systems are able to generate higher levels of satisfaction and security (Radcliff 2001; Di Tella, MacCulloch, and Oswald 2003; Pacek and Radcliff 2008b). Generally, this means that social democratic welfare regimes are less likely to breed terrorism due to social dissatisfaction. For instance, in the social democratic world of welfare capitalism, the possibility of unemployment is less threatening. High levels of decommodification make it possible to sustain a comparatively high standard of living, making it also less likely to lose social status quickly. If we accept that fear, insecurity, and other “diffuse” feelings may drive violence (Frey and Stutzer 2005), then such violence is less likely to be produced in more generous welfare regimes.

Nevertheless, it may also be possible that the existence of a specific welfare state regime (including the social democratic one) itself produces grievances that translate into violence. In particular, distributional and “insider-versus-outsider” conflicts may arise, where it is a priori unclear which welfare regime is more prone to these kinds of conflicts. First, one may argue that any kind of tax-financed welfare program produces distributional conflicts, dividing societies into net contributors and net beneficiaries of a welfare state. By trend, one may hypothesize that more generous regimes produce higher grievances among the former group, whereas more liberal (i.e., less generous) regimes create grievances among the latter. Second, welfare regimes may generate intergenerational conflict. For instance, some evidence indicates that large pay-as-you-go pension systems (which are typical of corporatist countries) systematically reduce fertility (Cigno and Rosati 1996), thereby shifting political influence in favor of the elderly. This may lead to grievances among the younger generation. Third, corporatist welfare states in particular often suffer from particularly high labor market rigidity. Strong protection for the employed combined with huge barriers to labor market entry divides the labor force into privileged “insiders” and precarious “outsiders,” including, for example, young and immigrant workers (Esping-Andersen 2002). In fact, Rueda (2005, 2006) shows that even in social democratic welfare regimes, governments may be tempted to introduce active labor market policies that benefit insiders while ignoring the interests of outsiders as this serves their electoral goals best. This may produce grievances among the “outsiders,” in consequence possibly fostering violence.

We provided evidence to indicate that welfare regimes that promote low levels of market dependence and high levels of social equality are generally more able to

sway certain socioeconomic conditions (the intervening variables) in ways that reduce terrorism. Although some terror-enhancing effects of welfare regimes were identified, we believe that they are in general outweighed by the terror-dampening effects of these very regimes. Our second main hypothesis is thus:

*Hypothesis 2:* Different welfare regimes differently affect short-run economic conditions, structural socioeconomic conditions, economic security, and satisfaction with life, independent of the actual level of social spending. Terrorism production (*ceteris paribus*) should be lower in countries whose welfare regimes are characterized by high levels of market independence and social equality because the effect of such regimes on some of the aforementioned intervening variables is most beneficial.

## Econometric Methodology

### *Variables and Data*

*Dependent variables.* We obtain raw data on terrorist activity from the Global Terrorism Database (GTD) of LaFree and Dugan (2007). For our main analysis, we consider actions by *known domestic terrorist organizations*. Given that media attention is a major goal of terrorist organizations, we do not consider actions perpetrated by unknown groups or individuals.<sup>10</sup> We only consider domestic groups because they should react most strongly to changes in socioeconomic conditions initiated by social policies. In addition, domestic terrorism is a more common phenomenon than transnational terrorism (Sanchez-Cuenca and de la Calle 2009). According to Engene (2007), most domestic terrorist activity in Western Europe is conducted by ethnic nationalist (e.g., Euskadi Ta Askatasuna [ETA]) or left-wing groups (e.g., Action Directe). Note that religiously motivated terrorism does not play a role in Western Europe because we only consider homegrown terrorism during the 1980–2003 period.

We use two definitions of domestic terrorism. We consider *purely domestic terrorism* (terrorism by domestic groups aimed only at domestic targets). Here, our analysis is linked to the common differentiation between domestic and transnational terrorism. This differentiation has, however, been criticized. We, therefore, also investigate *all terrorism taking place in one country as well as originating in this country* (terrorism by domestic groups against domestic and international targets). Here, we side with Sanchez-Cuenca and de la Calle (2009) who argue that the nationality of a terrorist target may not matter but that it is more important that a terrorist act is conducted by a terrorist organization in its natural territory.<sup>11</sup>

Based on our two definitions of homeland terrorism, we construct a total of four dependent variables. First, we use the *number of terrorist attacks* to indicate the frequency of purely domestic and total domestic terrorism. Second, we also investigate

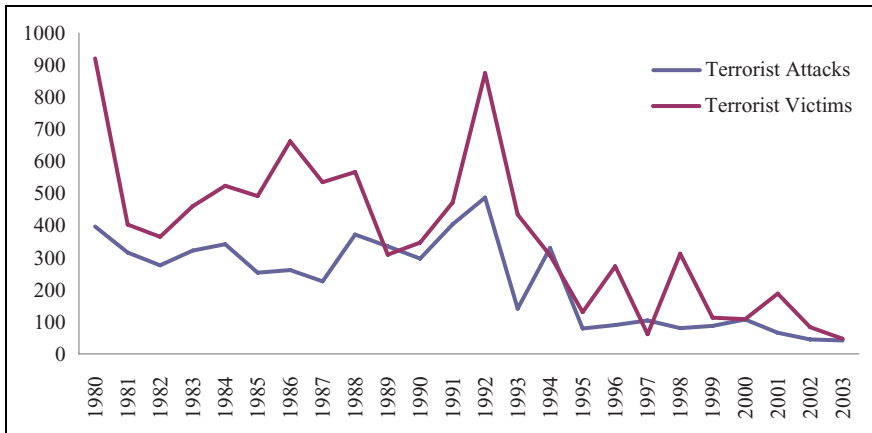
the ferocity of purely domestic and total domestic terrorism, indicated by the *sum of people injured or killed in terrorist attacks*.

All of these four terrorism incident and victim variables are event counts. For our analysis, we chose fifteen Western European countries that experienced homeland terrorist activity between 1980 and 2003. The countries most hit were the United Kingdom, France, Greece, Italy, Spain, and Germany.<sup>12</sup> Figure 3 gives an overview of the frequency and ferocity of purely domestic terrorism between 1980 and 2003.<sup>13</sup> In total, there were almost 5,000 terrorist attacks that claimed approximately 8,400 victims.

**Independent variables.** To test our hypotheses of influences of welfare policies on terrorism, we use a variety of measures in two categories. First, we use social expenditure variables. Second, we use indicators that characterize the design of welfare systems and their affiliation with the broad worlds of welfare capitalism clusters. Additional information on all our independent variables is given in the appendix.

Our overall measure for social spending is *total social public expenditure* (SOCEXP).<sup>14</sup> We also consider spending on *public health* (HEALTH), *unemployment* (UNEMP), and *active labor market programs* (LABOR). In line with our first hypothesis, we expect higher spending to generally coincide with a decrease in terrorism, for example, by means of increased economic security or participation or augmented social stability and satisfaction. As “typical” terrorists (and their supporters) are usually young and without much economic perspective (Ehrlich and Liu 2002), we expect the effects of HEALTH, UNEMP, and LABOR to be particularly strong because they are strongly linked to the socioeconomic conditions of potential terrorists and their supporters. We also check for the impact of further expenditure variables. Here, we incorporate public expenditure on *old age* (OLDAGE), the *family* (FAMILY), and on *public housing* (HOUSE). These spending variables may be less strongly linked to the typical “potential terrorists” socioeconomic conditions and thus less likely to be linked to violence propensity.

As argued before, the analysis of social spending patterns does not necessarily provide a complete picture of the welfare–terrorism nexus. Esping-Andersen (1990) notes that it is not the amount of public spending per se but its effect (policy outcome) that matters. This effect becomes apparent in the two dimensions (decommodification and social stratification) we discussed earlier. Decommodification may be measured by an index computed using information on pension, unemployment, and sickness welfare programs (Scruggs and Allan 2006). Specifically, these programs are evaluated, *inter alia*, with respect to their coverage, duration of benefits, and qualifying rules. Higher index values coincide with higher decommodification and thus less market dependence. Scruggs (2004) provides a *decommodification score* using new data based on the methodology proposed by Esping-Andersen (1990). We use this decommodification score (DEMSCORE) as a measure of market independence. Decommodification is expected to be particularly high in the social democratic world of welfare capitalism (Esping-Andersen 1990). We also use data



**Figure 3.** Terrorist activity in Western Europe, 1980–2003.

on *unemployment replacement rates* (UNEMP RPLC) from Scuggs (2004) as another indicator of market dependence and welfare generosity. When replacement rates are high, unemployment benefits come closer to the net income of a working individual. Welfare state generosity is again anticipated to be high in the social democratic world of welfare capitalism. Finally, we also use a measure of social stratification. Following Scuggs and Allan (2008), a possible indicator to assess social stratification is the *degree of universalism* (UNIV), which indicates how many individuals (in the labor force or above retirement age) are covered by unemployment or sickness insurance or receive pensions. According to Esping-Andersen (1990), a high degree of universalism is associated with a social democratic welfare regime.<sup>15</sup> In line with our second hypothesis, we expect a negative relationship between high levels of decommodification and universalism on the one hand and terrorism on the other. More generous regimes should be more successful in discouraging homegrown terrorism, for example, by means of countering economic or social disenfranchisement. This relationship should be independent of the actual level of social spending.<sup>16</sup>

**Controls.** We follow Burgoon (2006) and consider a variety of control factors that may not only influence terrorism but also social spending and the welfare regime. Thus, we avoid detecting spurious correlations. We choose controls that account for economic, political, demographic, and systemic factors. Information on data measurement and sources is given in the appendix.

*Trade openness* may influence terrorist activity by its effects on economic growth, inequality, and income levels (Li and Schaub 2004). Blomberg and Hess (2008) find that higher levels of trade openness reduce the likelihood of

transnational and domestic terrorism. Economic integration may reduce grievances associated with poor economic conditions, consequently reducing terrorism building on such grievances. At the same time, open economies face external risks from world market fluctuations. This increases demand for more universal social protection provided by the government (Rodrik 1998).

*Voter turnout* may be another variable influencing terrorism and social spending. On one hand, democratic participation may, inter alia, make it more costly for terrorist groups to find new members and popular support, given that dissent may be voiced nonviolently and cost-efficiently by democratic means (Li 2005). On the other hand, higher voter turnouts may also coincide with increased political participation of underprivileged voters demanding an increase in social spending and a more universal form of social protection (Hicks and Swank 1992).

*Left-wing governments* may also influence the patterns of terrorism. Burgoon (2006) argues that the presence of left-wing governments should make terrorism less likely, as left-wing parties represent disenfranchised social groups more strongly. When such groups are able to enforce their goals politically, they are expected to resort less to violence. This representation of the underprivileged is likewise expected to increase social spending and to produce more egalitarian social policy outcomes (Allan and Scruggs 2004).

*Electoral fractionalization* (political competition) may mean that social tensions that manifest themselves in a fractionalized electorate abound in a country. Such cleavages may translate into terrorist violence (Piazza 2006). However, in stable democracies, political plurality needs not necessarily lead to more violence but may, in contrast, crowd out support for violent fringe groups. Political competition may also influence welfare spending and the goals of welfare policies. Political platforms change when competition is high. Spending is expected to increase with competition as policy outcomes are anticipated to become more egalitarian (Hicks and Swank 1992).

*Population size* is almost always positively associated with terrorism in empirical analyses (e.g., Li and Schaub 2004; Burgoon 2006). Larger populations should make monitoring for governments more expensive, while making recruitment for terrorist groups less costly. More plainly, terrorism as a random event is more likely in a larger country. In addition, population size is named as a factor strongly explaining social spending and policy patterns (Rodrik 1998).

The variable *population over 65* is considered because older populations are expected to generate less terrorism just as younger populations are anticipated to breed more (Ehrlich and Liu 2002). At the same time, an older population may demand more social spending related to pensions, health, or other welfare programs (Lindert 1996).

*Ethnic polarization* may also matter. Montalvo and Reynal-Querol (2005) show that ethnic polarization increases the risk of conflict. Similarly, Basuchoudhary and Shughart (Forthcoming) argue that identity conflict leads to terrorism. For instance, higher ethnic polarization may coincide with an increased likelihood of struggles over rents, thus increasing the risk of terrorism. Likewise, ethnic polarization may

influence the patterns of social spending and policies. For instance, Alesina, Glaeser, and Sacerdote (2001) argue that racial fragmentation in the United States and the underrepresentation of minorities in the political system has led to lower levels of redistribution.

Finally, we also control for a major systemic change that occurred during our observation period, namely the *end of the cold war*. The end of the cold war is perceived as having significantly changed the dynamics of terrorism (e.g., Enders and Sandler 1999; Robison, Crenshaw, and Jenkins 2006). For instance, left-wing groups may find it harder to get ideological and financial support, given the collapse of Communism, driving down related risks of terrorist activity. At the same time, the end of the cold war cleared the way for economic internationalization and increased international competition, possibly influencing welfare spending and policies (Levy 1999). For instance, in the 1990s, governments may have altered social systems to enhance international competitiveness.

### Estimation Model

We run a panel analysis, departing from previous studies, which often relied on cross-sectional approaches. We are able to capitalize on cross-sectional information reflecting differences between countries and on time series information reflecting dynamics within countries over time. Panel analyses, among others, allow for a better control of heterogeneity effects, reduce problems of collinearity, and deliver more efficient econometric estimations.

The dependent variables of our model are count variables that assume only discrete, nonnegative values. Standard regression models require that the dependent variable is continuous and random. Our dependent variables violate this requirement, rendering standard panel-based analysis impossible (Winkelmann and Zimmermann 1995). The variances of our dependent variables are larger than their respective means, as shown in table 1. Because of this so-called overdispersion, we use a negative binomial count model that does not suffer from the inefficiency problems that may result from overdispersion.<sup>17</sup>

The estimation equation is as follows:

$$\text{Error}_{jit} = \alpha_i + \beta_1 \text{Error}_{ji,t-1} + \beta_2 \text{SOC}_{ji,t-1} + \beta_3' X_{i,t-1} + \lambda_t + \varepsilon_{it}, \quad (1)$$

where  $\text{Error}_{jit}$  is the  $j$ th terrorism indicator for country  $i$  in period  $t$ .  $\text{Error}_{ji,t-1}$  is the respective lagged dependent variable.  $\text{SOC}_{ji,t-1}$  is our  $j$ th welfare spending or policy measure for country  $i$  in period  $t - 1$ .  $X_{i,t-1}$  is the vector of control variables for  $i$  in the  $(t - 1)$  lagged form.  $\beta_1$ ,  $\beta_2$ , and  $\beta_3$  are coefficients.  $\lambda_t$  are the fixed time effects (time dummies).  $\varepsilon_{it}$  is the error term.

We let the independent variable and control variables enter the model with  $(t - 1)$  lagged values, as we assume that any changes in these parameters should affect terrorist behavior only after some time. Furthermore, we avoid potential reverse

causation problems by lagging all the explanatory variables as this eliminates the correlation between the explanatory variables and the error term. We include a lagged dependent variable in all estimations to account for serial correlation and the possibility of omitted variables. At the same time, this variable captures the reinforcement effect of past terrorism on present one (e.g., Enders and Sandler 1999). We take into account time and trending effects by including time dummies. Note that we only use time dummies when this is suggested by joint significance tests. The inclusion of a dummy variable for the end of the cold war era also controls for the time dependence and trending effects specifically associated with the structural changes in the international system and their effect on terrorism and social systems.

## Empirical Results

### *Main Findings*

*Social spending and terrorism.* First, we investigate how the frequency of terrorism is affected by total social spending and by spending on health, unemployment, and active labor market programs. The results are reported in table 2. Net of the impact of the control variables on the number of terrorist attacks in a given year and country, we find that higher social spending is consistently associated with a lower level of terrorist activity. This result holds for purely domestic terrorism as well as for the more comprehensive measure of total (homegrown) terrorism. In particular, spending on health and active labor markets may influence terrorism through several of the aforementioned channels. For instance, spending on health may promote economic growth by positively affecting human capital, may reduce poverty by means of redistribution (Brady 2005), and may affect overall satisfaction with life. Similarly, active labor market programs may not only promote economic growth but may also influence satisfaction with life. Furthermore, if we think of the “typical” terrorist as young and with only poor economic perspectives (Ehrlich and Liu 2002), it is intuitive to find that spending which opens up new perspectives (spending on health and active labor market programs) is particularly effective.

Next, we consider the effects of OLDAGE, FAMILY, and HOUSE on the number of terrorist attacks. As shown in table 3, there is considerably less evidence to link public spending on the elderly, the family, and housing to the frequency of terrorist attacks. While the spending variables always enter with the expected sign, only FAMILY comes out significant in the specification where the total number of attacks is the dependent variable. These results imply that not all kinds of spending lead to a reduction in terrorist activity. If we again think of the “typical” terrorist as a young, unmarried male with little economic perspective, our findings are highly intuitive. While, for example, spending on labor market programs is likely to affect a “typical” would-be terrorist in ways that make terrorism less attractive (by offering nonviolent opportunities), the same cannot be anticipated for public spending on the elderly or on public housing. As argued by Brady (2005), public health expenditure is probably the most encompassing measure of welfare-induced redistribution

**Table 1.** Summary Statistics

Variable (Abbreviation)	Observations	Mean	Standard Deviation	Minimum	Maximum
Purely Domestic Terrorist Attacks	360	13.872	35.345	0	244
Purely Domestic Terrorism Victim	360	23.339	66.186	0	527
Total Domestic Terrorist Attack	360	15.164	36.369	0	247
Total Domestic Terrorism Victim	360	24.969	68.022	0	528
Transnational Attacks	360	1.875	3.998	0	33
Transnational Terrorism Victims	360	8.086	31.910	0	270
Total Social Public Expenditure (SOCEXP)	346	22.063	4.832	10.77	36.17
Public Health Expenditure (HEALTH)	346	5.562	1.092	2.89	8.48
Unemployment Benefits (UNEMP)	343	1.578	1.190	0	5.27
Active Labor Market Spending (LABOR)	310	0.868	0.525	0	2.86
Old Age Spending (OLDAGE)	346	7.486	2.391	2.24	12.79
Spending on Family (FAMILY)	346	1.997	1.099	0.15	4.89
Spending on Housing (HOUSE)	322	0.406	0.403	0	1.82
Decommodification Score (DEMScore)	276	7.916	2.060	2.887	11.634
Unemployment Replacement Rate (UNEMP RPLC)	269	0.584	0.205	0.020	0.917
Degree of Universalism (UNIV)	276	0.870	0.087	0.627	1.048
Trade Openness	360	66.386	32.786	21.463	187.361
Voter Turnout	360	77.603	11.768	42.200	94.800
Left Party in Power	360	0.392	0.4889	0	1
Electoral Fractionalization	360	4.512	1.762	2.276	10.289
Population Size	360	9.600	1.0222	8.132	11.322
Population Over 65	360	14.728	1.827	10.453	19.330
Ethnic Polarization	360	0.324	0.254	0.020	0.871
Post-Cold War Era Dummy	360	0.500	0.500	0	1

because it is not restricted to specific interest groups (e.g., the elderly or families). Again, it is intuitive to assume that when health expenditures increase (meaning that overall resource redistribution increases), terrorism that is rooted in inequality grievances becomes less likely. Note also that the insignificant effects OLDAGE, FAMILY, and HOUSE on the number of terrorist attacks explain why the coefficient of SOCEXP (total social spending) is substantially smaller than that of the other variables reported in table 2.

We also estimate how social spending is related to the ferocity of purely domestic and total homeland terrorism. We report our findings on the effect of SOCEXP, HEALTH, UNEMP, and LABOR on terrorist violence in table 4. Our results are broadly consistent with previous ones. There are negative and significant effects



of SOCEXP, HEALTH, and LABOR on the dependent variable. However, the impact of UNEMP on terrorist violence is negative but not significant. We can interpret the major terror-dampening effects of HEALTH and LABOR on terrorist violence as before, arguing that higher spending in these fields (intuitively) affects the terrorists' calculi more strongly.

Regarding the substantive effects of the different social spending variables on terrorist violence, a calculation of the respective incidence rate ratios (IRR) shows that a one-unit increase in total social spending leads to a decrease of domestic terrorist violence by approximately one unit (not reported). For instance, one-unit increases in health and active labor market spending lead to approximately half a unit less domestic terrorist violence. Similar results are obtained when calculating the IRR for the different spending variables and the number of terrorist attacks and when calculating the IRR for the different definition of homeland terrorism. In general, these findings suggest moderate effects of social spending on a reduction of homeland terrorism.

We also investigate how spending on old age, the family, and public housing relates to terrorist violence. The results are given in table 5. For terrorist violence, OLDAGE and FAMILY are found to reduce terrorist violence significantly. The effect of public housing spending on terrorist violence remains insignificant. For instance, these results imply that higher spending on the family may lead to less social dissatisfaction and may be seen as a credible effort to reduce poverty and inequality, thereby draining terrorist violence that is rooted in these very factors.

A calculation of the IRR reveals that one-unit increases in social spending on old age and the family translates into a moderate reduction of terrorist violence (approximately half a unit less domestic terrorist violence). These results are somewhat less robust when calculating the IRR for the number of terrorist attacks and when using a different definition of homeland terrorism. In general, the calculations of the IRR show moderate effects of old-age benefits and social spending on the family on terrorism. No evidence is found for a substantial link from public housing spending to homeland terrorism.

Finally, we examine the results for the control variables. Considering the frequency of terrorism, we find that past terrorist activity is positively associated with present terrorism, hinting at the self-energizing nature of terrorism detected in many other studies. Terrorism is also positively linked to larger populations, but this may simply indicate that terrorism is more likely in more populous countries. Higher ethnic polarization is also associated with higher terrorist activity, indicating that ethnic conflicts translate into an increased likelihood of terrorism. By contrast, higher trade openness is found to be negatively linked to terrorist attacks in statistically significant ways. This is in line with Blomberg and Hess (2008). Economic integration may spur economic development, which in turn reduces incentives for terrorism. There is also a negative effect of the post-cold war dummy, indicating that terrorism became less likely after the end of the cold war, for example, as left-wing terrorist groups lost part of their ideological and financial base with the fall of Communism. In contrast to the former findings, there is little evidence of the importance of political variables

**Table 2.** Welfare Spending Variables and Terrorist Attacks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SOEXP <sub>t-1</sub>	-0.082 (2.75) <sup>***</sup>				-0.097 (3.51) <sup>***</sup>			
HEALTH <sub>t-1</sub>		-0.719 (6.07) <sup>***</sup>				-0.672 (6.05) <sup>***</sup>		
UNEMP <sub>t-1</sub>			-0.215 (2.39) <sup>**</sup>				-0.234 (2.85) <sup>***</sup>	
LABOR <sub>t-1</sub>	0.004 (3.21) <sup>***</sup>	0.004 (3.14) <sup>***</sup>	0.004 (2.81) <sup>***</sup>	-0.655 (2.64) <sup>***</sup>	0.005 (4.11) <sup>***</sup>	0.005 (4.07) <sup>***</sup>	0.005 (3.73) <sup>***</sup>	-0.742 (3.19) <sup>***</sup>
Dependent Variable <sub>t-1</sub>				0.004 (2.99) <sup>***</sup>				0.006 (4.19) <sup>***</sup>
Trade	-0.024 (3.15) <sup>***</sup>	-0.018 (3.38) <sup>**</sup>	-0.026 (3.36) <sup>***</sup>	-0.020 (2.17) <sup>**</sup>	-0.021 (2.99) <sup>***</sup>	-0.016 (3.32) <sup>***</sup>	-0.023 (3.15) <sup>***</sup>	-0.015 (1.73) <sup>*</sup>
Openness <sub>t-1</sub>								
Turnout <sub>t-1</sub>	0.002 (0.17)	0.003 (0.28)	-0.008 (0.61)	-0.027 (1.93) <sup>*</sup>	0.004 (0.37)	0.004 (0.46)	-0.007 (0.64)	-0.030 (2.26) <sup>**</sup>
Left Party	-0.051 (0.41)	0.004 (0.04)	-0.072 (0.57)	-0.071 (0.51)	0.014 (0.13)	0.059 (0.56)	-0.013 (0.11)	-0.036 (0.27)
Power <sub>t-1</sub>								
Electoral	-0.078 (1.06)	-0.133 (1.96) <sup>**</sup>	-0.081 (1.07)	-0.064 (0.68)	-0.085 (1.23)	-0.146 (2.28) <sup>**</sup>	-0.086 (1.20)	-0.065 (0.73)
Fraction <sub>t-1</sub>								
Population	0.631 (3.27) <sup>***</sup>	1.070 (4.86) <sup>***</sup>	0.452 (2.22) <sup>**</sup>	0.291 (1.19)	0.737 (4.06) <sup>***</sup>	1.133 (5.71) <sup>***</sup>	0.556 (2.82) <sup>***</sup>	0.385 (1.69) <sup>*</sup>
Size <sub>t-1</sub>								
Population Over 65 <sub>t-1</sub>	-0.036 (0.54)	-0.004 (0.07)	-0.081 (1.18)	0.094 (1.26)	-0.022 (0.39)	-0.013 (0.27)	-0.078 (1.25)	0.067 (0.93)
Polarization	2.124 (3.49) <sup>***</sup>	2.027 (3.46) <sup>***</sup>	2.528 (3.73) <sup>***</sup>	1.543 (1.93) <sup>*</sup>	1.942 (3.41) <sup>***</sup>	1.920 (3.57) <sup>***</sup>	2.276 (3.55) <sup>***</sup>	1.182 (1.51)
Post-Cold	-0.813 (2.54) <sup>**</sup>	-0.539 (1.86) <sup>*</sup>	-0.414 (1.21)	-0.622 (1.83) <sup>*</sup>	-0.828 (2.78) <sup>***</sup>	-0.589 (2.13) <sup>**</sup>	-0.459 (1.44)	-0.589 (1.79) <sup>*</sup>
War <sub>t-1</sub>								
Time	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dummies								
Mean VIF	2.00	2.00	1.88	1.84	2.02	2.02	1.90	1.86
Observations	331	331	328	295	331	331	328	295

Note: Dependent Variable is purely domestic terrorist attacks in models 1–4 and total number of domestic terrorist attacks in models 5–8. Numbers in brackets are absolute z values. \*, \*\*, and \*\*\* denote significance at 10 percent, 5 percent, and 1 percent levels, respectively. Mean VIF refers to the mean variance inflation factor, denoting multicollinearity when the mean VIF is bigger than 5.

(left-wing government, voter turnout, and fractionalization of the electorate) in explaining the frequency of terrorism. The results of the controls for terrorism ferocity are in many ways similar to the previous ones. There is a positive association between past and present terrorist violence and a positive effect of population size and ethnic polarization on terrorism. Higher levels of trade openness are linked to lower levels of terrorist violence. However, there is no strong relationship between the end of the cold war and terrorist violence. In addition, political competition (electoral fractionalization) is now found to be negatively related to terrorist violence. In some specifications, an older population is also found to be positively linked to terrorism.

*The worlds of welfare capitalism and terrorism.* We have already stressed that social spending variables do not necessarily provide a complete picture of a potential nexus between social policies and terrorist activity. Therefore, we assess the impact of welfare regime variables on terrorist activity in Western Europe. First, we analyze whether higher levels of decommodification and more egalitarian forms of social stratification influence the number of terrorist attacks, as suggested in our second hypothesis. The results are reported in table 6. The findings indicate that only UNEMP RPLC significantly reduces the number of terrorist attacks. The broader decommodification measure (DEMSCORE) is found to significantly lower only the likelihood of the total number of homeland terrorist attacks. UNIV, which indicates the degree of universalism (i.e., of social stratification) in a society, is never found to significantly sway the number of attacks, even though the sign of the coefficient is as anticipated. Overall, these findings provide some support for the idea that higher levels of decommodification reduce the number of homegrown terrorist attacks. This relationship seems to be particularly important with respect to unemployment benefit generosity but not so important for welfare state generosity in general (DEMSCORE). While the former should matter to the “typical” terrorist and their supporters, the latter is also related to generosity toward the elderly and the sick, so less connected to an environment potentially bearing terrorism. This finding also matches our previous insights into the relative importance of social spending on unemployment and labor market programs.

Next, we want to assess to which extent welfare regime variables interact with terrorist violence. The findings are given in table 7. These results show that UNEMP RPLC and DEMSCORE significantly reduce terrorist violence from purely domestic and total terrorist activity. Thus, our findings again stress the role of higher welfare state generosity (i.e., of higher decommodification) in reducing terrorists’ incentives to act violently. Lower levels of market dependence may cause lower levels of income inequality and social dissatisfaction, thereby making terrorism rooted in these very conditions less likely. Contrary to the findings in table 6, we now even find a weakly significant negative effect of higher universalism on terrorist violence, at least for purely domestic terrorism. While this result indicates that welfare regimes fostering social equality are less prone to terrorist violence (as social

**Table 3.** Additional Welfare Spending Variables and Terrorist Attacks

	(1)	(2)	(3)	(4)	(5)	(6)
OLDAGE <sub>t-1</sub>	-0.051 (0.71)			-0.056 (0.81)		
FAMILY <sub>t-1</sub>		-0.144 (1.06)			-0.255 (1.96)**	
HOUSE <sub>t-1</sub>			0.053 (0.25)			0.099 (0.49)
Dependent Variable <sub>t-1</sub>	0.004 (3.18)**	0.005 (3.38)**	0.005 (3.24)**	0.006 (4.05)**	0.006 (4.42)**	0.006 (4.15)**
Trade Openness <sub>t-1</sub>	-0.029 (3.90)**	-0.027 (3.56)**	-0.030 (3.17)**	-0.027 (3.82)**	-0.024 (3.35)**	-0.023 (2.58)**
Turnout <sub>t-1</sub>	0.003 (0.25)	0.002 (0.15)	-0.001 (0.11)	0.002 (0.18)	0.002 (0.19)	0.001 (0.07)
Left Party Power <sub>t-1</sub>	-0.090 (0.70)	-0.078 (0.61)	-0.099 (0.77)	-0.031 (0.26)	-0.009 (0.08)	-0.036 (0.30)
Electoral Fraction <sub>t-1</sub>	-0.099 (1.31)	-0.107 (1.44)	-0.132 (1.43)	-0.101 (1.41)	-0.116 (1.67)*	-0.091 (1.07)
Population Size <sub>t-1</sub>	0.539 (2.61)**	0.504 (2.65)**	0.498 (2.41)**	0.597 (3.01)**	0.569 (3.22)**	0.503 (2.46)**
Population Over 65 <sub>t-1</sub>	-0.074 (1.01)	-0.085 (1.35)	-0.093 (1.40)	-0.061 (0.92)	-0.063 (1.11)	-0.072 (1.17)
Polarization	2.105 (3.33)**	2.254 (3.65)**	2.091 (2.53)**	1.948 (3.26)**	2.116 (3.61)**	2.343 (2.88)**
Post-Cold War <sub>t-1</sub>	-0.827 (2.43)**	-0.909 (2.68)**	-0.374 (0.69)	-0.878 (2.76)**	-0.977 (3.12)**	-0.575 (1.16)
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Mean VIF	2.14	1.94	1.79	2.16	1.96	1.81
Observations	331	331	308	331	331	308

Note: Dependent Variable is purely domestic terrorist attacks in models 1–3 and total number of domestic terrorist attacks in models 4–6. Numbers in brackets are absolute z values. \*, \*\*, and \*\*\* denote significance at 10 percent, 5 percent, and 1 percent levels, respectively. Mean VIF refers to the mean variance inflation factor, denoting multicollinearity when the mean VIF is bigger than 5.

**Table 4.** Welfare Spending Variables and Terrorism Victims

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SOEXP <sub>t-1</sub>	-0.120 (2.85) <sup>***</sup>				-0.115 (3.93) <sup>***</sup>			
HEALTH <sub>t-1</sub>		-0.705 (5.48) <sup>***</sup>				-0.610 (5.08) <sup>***</sup>		
UNEMP <sub>t-1</sub>			-0.001 (0.01)				-0.062 (0.59)	
LABOR <sub>t-1</sub>				-0.649 (2.60) <sup>***</sup>				-0.684 (2.41) <sup>**</sup>
Dependent Variable <sub>t-1</sub>	0.003 (3.03) <sup>***</sup>	0.003 (4.35) <sup>***</sup>	0.003 (4.28) <sup>***</sup>	0.003 (4.66) <sup>***</sup>	0.003 (4.26) <sup>***</sup>	0.003 (3.67) <sup>***</sup>	0.003 (3.94) <sup>***</sup>	0.003 (3.38) <sup>***</sup>
Trade	-0.046 (3.67) <sup>***</sup>	-0.028 (2.95) <sup>***</sup>	-0.036 (3.99) <sup>***</sup>	-0.043 (3.36) <sup>***</sup>	-0.036 (3.81) <sup>***</sup>	-0.034 (3.55) <sup>***</sup>	-0.040 (4.31) <sup>***</sup>	-0.062 (3.70) <sup>***</sup>
Openness <sub>t-1</sub>								
Turnout <sub>t-1</sub>	0.014 (0.70)	0.012 (1.03)	0.011 (0.89)	0.004 (0.27)	0.013 (1.17)	0.007 (0.60)	0.006 (0.53)	-0.005 (0.37)
Left Party	-0.234 (1.22)	-0.043 (0.28)	-0.061 (0.36)	0.027 (0.16)	0.033 (0.21)	-0.021 (0.14)	-0.050 (0.29)	-0.223 (1.12)
Power <sub>t-1</sub>								
Electoral	-0.153 (1.46)	-0.332 (4.05) <sup>***</sup>	-0.305 (3.01) <sup>***</sup>	-0.476 (4.40) <sup>***</sup>	-0.269 (3.21) <sup>***</sup>	-0.345 (4.29) <sup>***</sup>	-0.323 (3.15) <sup>***</sup>	-0.515 (4.91) <sup>***</sup>
Fraction <sub>t-1</sub>								
Population	0.224 (0.85)	1.160 (6.31) <sup>***</sup>	0.597 (4.44) <sup>***</sup>	0.819 (5.74) <sup>***</sup>	0.744 (5.55) <sup>***</sup>	1.034 (6.16) <sup>***</sup>	0.569 (4.46) <sup>***</sup>	0.706 (4.58) <sup>***</sup>
Size <sub>t-1</sub>								
Population	0.026 (0.26)	0.138 (2.13) <sup>**</sup>	-0.043 (0.61)	0.199 (2.46) <sup>**</sup>	0.142 (2.15) <sup>**</sup>	0.158 (2.44) <sup>**</sup>	-0.013 (0.17)	0.200 (2.29) <sup>**</sup>
Over 65 <sub>t-1</sub>								
Polarization	3.601 (4.97) <sup>***</sup>	2.470 (4.99) <sup>***</sup>	3.208 (5.47) <sup>***</sup>	2.937 (5.35) <sup>***</sup>	2.804 (6.13) <sup>***</sup>	2.264 (4.72) <sup>***</sup>	3.131 (5.64) <sup>***</sup>	2.814 (5.32) <sup>***</sup>
Post-Cold	-0.512 (1.17)	-0.121 (0.60)	-0.100 (0.44)	-0.480 (2.18) <sup>**</sup>	-0.114 (0.57)	-0.094 (0.47)	-0.031 (0.14)	-0.172 (0.35)
Var <sub>t-1</sub>								
Time	Yes	No	No	No	No	No	No	Yes
Dummies								
Mean VIF	1.97	1.97	1.85	1.81	1.98	1.97	1.85	1.82
Observations	331	331	328	328	331	331	328	295

Note: Dependent Variable is *victims from purely domestic terrorism* in models 1–4 and *total number of victims from domestic terrorism* in models 5–8. Numbers in brackets are absolute z values. \*, \*\*, and \*\*\* denote significance at 10 percent, 5 percent, and 1 percent levels, respectively. Mean VIF refers to the mean variance inflation factor, denoting multicollinearity when the mean VIF is bigger than 5.

inequality may otherwise contribute to terrorism), the results from tables 6 and 7 generally seem to show that higher levels of de commodification matter more to terrorism than the promotion of social equality. The social democratic world of welfare capitalism, which offers the highest degree of market independence, may be regarded as least vulnerable to homeland terrorism. Welfare regimes offering lower levels of market independence (i.e., the liberal regime) may be seen as more prone to such forms of terrorism.

Our findings are also stressed when we calculate the respective IRR to assess the substantive effects of the different regime variables on domestic terrorism. While a one-unit increase in DEMSCORE and UNEMP RPLC reduces purely domestic terrorist violence by 0.8 and 0.25 units, respectively, there is only a 0.01 unit decrease in purely domestic terrorist violence associated with a one-unit increase in UNIV. Similar results are obtained when calculating the IRR for the different regime variables and the number of terrorist attacks and for the alternative definition of homeland terrorism.

The results for the controls are generally as expected. While past terrorism and bigger populations make terrorist attacks and related violence more likely, a higher level of trade openness makes terrorism less probable. Terrorist attacks are also less likely in the post-cold war era, which is consistent with previous results. Interestingly, while political factors continue not to matter to terrorist violence, higher voter turnout and a left-wing government are found to reduce the number of homegrown terrorist attacks against domestic and international targets alike. These findings provide at least some support for the idea that democratic participation and government ideology are important determinants of terrorist activity, as previously found, for example, by Li (2005) and Burgoon (2006).

## Robustness

We perform a number of robustness checks to see whether our results are stable to methodological changes. First, we run our standard model without the inclusion of a lagged dependent variable and time dummies. Second, we run the standard empirical specification with a reduced data set. That is, we exclude several Scandinavian countries from the data set, which exhibit very little terrorist activity but have very developed (social democratic) welfare systems (e.g., Norway or Denmark). Finally, we also use a different data set for terrorist activity, namely the TWEED set (Engene 2007). The TWEED set contains information on domestic terrorism and should thus match our purely domestic terrorism variable we constructed from the GTD. However, the TWEED data set, while comprehensive, may suffer from underreporting problems (Sanchez-Cuenca 2009).<sup>18</sup> Therefore, we use it only for robustness checks.

In general, our robustness findings confirm that social spending and welfare regime variables are negatively and significantly associated with terrorist activity. This relationship is stronger for the spending variables, giving further support to our *Hypothesis 1*. We also find moderate support for our *Hypothesis 2*. Our previously

**Table 5.** Additional Welfare Spending Variables and Terrorism Victims

	(1)	(2)	(3)	(4)	(5)	(6)
OLDAGE <sub>t-1</sub>	-0.188 (3.00)***			-0.176 (3.01)***		
FAMILY <sub>t-1</sub>		-0.406 (3.16)***			-0.357 (2.95)***	
HOUSE <sub>t-1</sub>			-0.301 (0.95)			0.156 (0.88)
Dependent Variable <sub>t-1</sub>	0.003 (3.51)***	0.004 (4.67)***	0.005 (4.43)***	0.003 (3.23)***	0.003 (4.14)***	0.003 (4.06)***
Trade Openness <sub>t-1</sub>	-0.040 (4.41)***	-0.029 (3.18)***	0.078 (4.89)***	-0.058 (4.94)***	-0.035 (3.84)***	-0.053 (4.67)***
Turnout <sub>t-1</sub>	0.016 (1.42)	0.009 (0.80)	0.010 (0.69)	0.018 (1.44)	0.005 (0.43)	-0.012 (0.94)
Left Party Power <sub>t-1</sub>	-0.022 (0.14)	-0.013 (0.08)	-0.393 (2.20)**	-0.287 (1.63)	0.007 (0.04)	-0.133 (0.86)
Electoral Fraction <sub>t-1</sub>	-0.246 (2.56)**	-0.303 (3.20)***	-0.422 (3.78)***	-0.303 (3.22)***	-0.305 (3.24)***	-0.453 (4.49)***
Population Size <sub>t-1</sub>	0.737 (5.62)***	0.646 (4.33)***	0.334 (1.92)*	0.590 (4.34)***	0.586 (4.24)***	0.566 (4.78)***
Population Over 65 <sub>t-1</sub>	0.075 (1.25)	0.046 (0.65)	-0.079 (0.88)	0.059 (0.89)	0.069 (0.67)	0.067 (0.93)
Polarization	2.728 (5.48)***	2.924 (5.27)***	3.053 (4.41)***	2.525 (5.20)***	2.802 (5.25)***	2.529 (5.11)***
Post-Cold War <sub>t-1</sub>	-0.011 (0.05)	-0.283 (1.26)	1.510 (2.13)**	-0.274 (0.65)	-0.209 (0.95)	-0.059 (0.28)
Time Dummies	No	No	Yes	Yes	No	No
Mean VIF	2.13	1.91	1.77	2.11	1.92	1.77
Observations	331	331	308	331	331	308

Note: Dependent Variable is victims from purely domestic terrorism in models 1-3 and total number of victims from domestic terrorism in models 4-6. Numbers in brackets are absolute z values. \*, \*\*, and \*\*\* denote significance at 10 percent, 5 percent and 1 percent levels, respectively. Mean VIF refers to the mean variance inflation factor, denoting multicollinearity when the mean VIF is bigger than 5.

reported results are thus stable to a number of methodological changes and do not seem to be randomly generated.

### Extension

As an extension to our empirical work, we consider the case of transnational terrorism. This extension may also be seen as another form of robustness check. Crenshaw, Robison, and Jenkins (2007) note that any effect of social policies on terrorism should be stronger in the countries generating terrorism (i.e., in the terrorists' homeland) compared to the target or location country of transnational terrorism. We similarly argue that transnational terrorism that has its origins outside Western Europe should be far less responsive to benevolent social policies due to the lack of connection to the welfare systems it targets. For instance, it is not intuitive to assume that the terrorist attacks by the Groupe Islamique Arme (GIA, an Algerian organization) in France in the 1990s were somehow influenced by French social policies. Rather, we assume that GIA actions were driven by factors associated with socio-economic and political developments in Algeria. We thus assume that transnational terrorism imported into Western Europe is not affected by social policies in the country where the attacks take place. Such attacks in one country may be better understood as spillover of domestic conflict in another country (Addison and Mursheed 2005) or as a violent response to the foreign policy of the country targeted by transnational terrorism (Savun and Phillips 2009).

To assess whether terrorist attacks imported into Western Europe follow a different pattern than attacks by groups operating in their homeland, we modify our empirical model accordingly. As dependent variables, we use the number of terrorist attacks by *known terrorist groups that have a homeland outside of Western Europe*.<sup>19</sup> We also use the number of victims from those attacks as another dependent variable. We use the usual indicators for social spending and welfare regimes as independent variables. As control variables, we use the previously discussed variables because they have also been used as factors explaining transnational attacks before (e.g., Li and Schaub 2004; Piazza 2006; Burgoon 2006).<sup>20</sup>

Our empirical results are given in table 8. While we only present assorted results here, findings for other specifications are very similar.<sup>21</sup> The findings suggest that there is no significant effect of spending or welfare regime variables on the number of imported transnational terrorist attacks and on the number of victims from these attacks. This suggests that terrorism imported into Western Europe is not swayed by social policies of the country where the attack eventually takes place. This is in line with Crenshaw, Robison, and Jenkins (2007). Interestingly, these kinds of attacks are more likely when countries are more open, which is exactly the opposite compared to the case of homeland terrorism. Blomberg and Hess (2008) find similar results. Furthermore, ethnic factors do not matter to transnational terrorism, while population size and the post-cold war era still do. Political factors emerge as insignificant. As we can see from table 8, transnational terrorist attacks are obviously influenced



**Table 6.** Welfare Regime Variables and Terrorist Attacks

	(1)	(2)	(3)	(4)	(5)	(6)
DEMSCORE <sub>t-1</sub>	-0.155 (1.39)			-0.191 (1.77)*		
UNEMP RPLC <sub>t-1</sub>		-3.758 (4.69)***			-3.280 (3.23)***	
UNIV <sub>t-1</sub>			-0.621 (0.30)			-2.263 (1.21)
Dependent Variable <sub>t-1</sub>	0.004 (2.16)**	0.003 (1.99)**	0.003 (1.76)*	0.006 (3.02)***	0.004 (2.37)**	0.005 (2.64)***
Trade Openness <sub>t-1</sub>	0.004 (0.34)	-0.008 (0.69)	-0.003 (0.24)	0.009 (0.84)	0.002 (0.20)	0.003 (0.35)
Turnout <sub>t-1</sub>	-0.038 (2.34)**	-0.079 (4.20)***	-0.033 (2.01)**	-0.042 (2.90)***	-0.064 (3.26)***	-0.041 (2.74)***
Left Party Power <sub>t-1</sub>	-0.493 (2.55)**	-0.639 (3.34)***	-0.503 (2.56)**	-0.403 (2.28)**	-0.496 (2.76)***	-0.396 (2.23)**
Electoral Fraction <sub>t-1</sub>	-0.094 (0.85)	-0.123 (1.20)	-0.056 (0.53)	-0.066 (0.57)	-0.068 (0.65)	-0.033 (0.32)
Population Size <sub>t-1</sub>	1.209 (4.76)***	0.731 (2.49)**	1.284 (5.51)***	1.296 (5.78)***	1.095 (3.84)***	1.373 (6.65)***
Population Over 65 <sub>t-1</sub>	-0.024 (0.20)	0.223 (1.85)*	-0.086 (0.76)	-0.024 (0.21)	0.157 (1.21)	-0.076 (0.72)
Polarization	1.162 (1.16)	2.620 (1.96)**	0.926 (0.93)	0.672 (0.65)	0.890 (0.76)	0.447 (0.45)
Post-Cold War <sub>t-1</sub>	-1.309 (3.80)**	-3.990 (4.65)***	-1.247 (3.36)***	-1.370 (4.53)***	-3.037 (4.53)***	-1.278 (3.66)***
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Mean VIF	2.33	2.18	2.27	2.34	2.19	2.28
Observations	276	269	276	276	269	276

Note: Dependent Variable is purely domestic terrorist attacks in models 1-3 and total number of domestic attacks in models 4-6. Numbers in brackets are absolute z values. \*, \*\*, and \*\*\* denote significance at 10 percent, 5 percent, and 1 percent levels, respectively. Mean VIF refers to the mean variance inflation factor, denoting multicollinearity when the mean VIF is bigger than 5.

**Table 7. Welfare Regime Variables and Terrorism Victims**

	(1)	(2)	(3)	(4)	(5)	(6)
DEMSCORE <sub>t-1</sub>	-0.234 (2.66) <sup>***</sup>			-0.192 (2.19) <sup>**</sup>		
UNEMP RPLC <sub>t-1</sub>		-1.429 (2.85) <sup>***</sup>			-1.157 (2.35) <sup>**</sup>	
UNIV <sub>t-1</sub>			-4.851 (1.93) <sup>*</sup>			-3.393 (1.41)
Dependent Variable <sub>t-1</sub>	0.003 (3.44) <sup>***</sup>	0.003 (2.56) <sup>**</sup>	0.003 (3.20) <sup>***</sup>	0.003 (2.92) <sup>***</sup>	0.002 (2.20) <sup>**</sup>	0.003 (2.76) <sup>***</sup>
Trade Openness <sub>t-1</sub>	-0.016 (1.10)	-0.037 (2.44) <sup>**</sup>	-0.024 (1.67) <sup>*</sup>	-0.020 (1.39)	-0.038 (2.60) <sup>***</sup>	-0.028 (2.03) <sup>**</sup>
Turnout <sub>t-1</sub>	0.006 (0.34)	0.015 (0.86)	0.007 (0.41)	0.004 (0.23)	0.012 (0.71)	0.006 (0.41)
Left Party Power <sub>t-1</sub>	-0.331 (1.28)	-0.278 (1.06)	-0.242 (0.95)	-0.302 (1.18)	-0.258 (0.99)	-0.235 (0.94)
Electoral Fraction <sub>t-1</sub>	-0.148 (1.26)	0.015 (0.12)	-0.160 (1.29)	-0.127 (1.14)	0.007 (0.06)	-0.128 (1.08)
Population Size <sub>t-1</sub>	1.418 (4.57) <sup>***</sup>	1.445 (4.45) <sup>***</sup>	1.466 (4.72) <sup>***</sup>	1.387 (4.85) <sup>***</sup>	1.413 (4.76) <sup>***</sup>	1.422 (5.03) <sup>***</sup>
Population Over 65 <sub>t-1</sub>	-0.036 (0.29)	-0.024 (0.19)	-0.059 (0.47)	-0.024 (0.20)	-0.016 (0.13)	-0.042 (0.35)
Polarization	5.457 (4.97) <sup>***</sup>	5.726 (4.71) <sup>***</sup>	6.093 (5.19) <sup>***</sup>	5.222 (5.00) <sup>***</sup>	5.479 (4.70) <sup>***</sup>	5.720 (5.25) <sup>***</sup>
Post-Cold War <sub>t-1</sub>	-0.569 (1.79) <sup>*</sup>	-0.398 (1.32)	-0.385 (1.26)	-0.522 (1.63)	-0.385 (1.26)	-0.356 (1.17)
Time Dummies	No	No	No	No	No	No
Mean VIF	2.32	2.19	2.27	2.33	2.19	2.28
Observations	276	276	276	276	269	276

Note: Dependent Variable is victims from purely domestic terrorism in models 1-3 and total number of victims from domestic terrorism in models 4-6. Numbers in brackets are absolute z values. \*, \*\*, and \*\*\* denote significance at 10 percent, 5 percent, and 1 percent levels, respectively. Mean VIF refers to the mean variance inflation factor, denoting multicollinearity when the mean VIF is bigger than 5.

**Table 8.** Assorted Welfare Spending and Regime Variables and Transnational Terrorism

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SOEXP <sub>t-1</sub>	-0.023 (0.81)				-0.041 (1.15)			
HEALTH <sub>t-1</sub>		-0.018 (0.17)				0.200 (1.48)		
LABOR <sub>t-1</sub>			-0.126 (0.50)				0.073 (0.20)	
DEMSCORE <sub>t-1</sub>				-0.092 (1.50)				-0.059 (0.64)
Dependent Variable <sub>t-1</sub>	0.058 (5.54) <sup>***</sup>	0.058 (4.55) <sup>***</sup>	0.055 (3.58) <sup>***</sup>	0.053 (3.94) <sup>***</sup>	0.004 (1.93) <sup>*</sup>	0.004 (2.22) <sup>***</sup>	0.005 (2.42) <sup>***</sup>	0.003 (1.43)
Trade Openness <sub>t-1</sub>	0.014 (2.38) <sup>**</sup>	0.014 (2.41) <sup>**</sup>	0.020 (2.95) <sup>***</sup>	0.022 (3.63) <sup>***</sup>	0.009 (1.42)	0.008 (1.17)	0.011 (1.53)	0.013 (1.84) <sup>*</sup>
Turnout <sub>t-1</sub>	-0.013 (1.06)	-0.09 (1.65) <sup>*</sup>	-0.019 (1.58)	-0.027 (2.67) <sup>***</sup>	0.020 (1.38)	0.010 (0.68)	0.006 (0.40)	0.008 (0.56)
Left Party Power <sub>t-1</sub>	0.015 (0.08)	-0.022 (0.12)	0.183 (0.81)	0.067 (0.33)	-0.431 (1.57)	-0.533 (1.98) <sup>**</sup>	-0.264 (0.87)	-0.448 (1.52)
Electoral Fraction <sub>t-1</sub>	0.058 (0.73)	0.044 (0.56)	0.032 (0.37)	0.015 (0.20)	-0.058 (0.57)	-0.109 (1.06)	-0.012 (0.11)	-0.135 (1.35)
Population Size <sub>t-1</sub>	0.539 (3.47) <sup>***</sup>	0.527 (3.37) <sup>***</sup>	0.635 (3.39) <sup>***</sup>	0.609 (4.22) <sup>***</sup>	0.303 (1.76) <sup>*</sup>	0.145 (0.78)	0.471 (2.47) <sup>**</sup>	0.271 (1.43)
Polarization <sub>t-1</sub>	-0.612 (1.03)	-0.638 (1.08)	-0.553 (0.81)	-0.649 (1.06)	-0.602 (0.97)	-0.506 (0.79)	-1.062 (1.44)	-0.540 (0.69)
Post-Cold War <sub>t-1</sub>	-0.541 (1.14)	-0.623 (1.30)	-0.964 (1.79) <sup>*</sup>	-1.245 (3.09) <sup>***</sup>	-1.589 (4.64) <sup>***</sup>	-1.723 (5.09) <sup>***</sup>	-1.666 (4.66) <sup>***</sup>	-1.502 (4.11) <sup>***</sup>
Time Dummies	Yes	Yes	Yes	Yes	No	No	No	No
Mean VIF	1.66	1.59	1.50	1.74	1.64	1.57	1.48	1.73
Observations	331	331	295	276	331	331	295	276

Note: Dependent Variable is purely transnational terrorist attacks in models 1-4 and total number of victims from purely transnational terrorist attacks in models 5-8. Numbers in brackets are absolute z values. \*, \*\*, and \*\*\* denote significance at 10 percent, 5 percent, and 1 percent levels, respectively. Mean VIF refers to the mean variance inflation factor, denoting multicollinearity when the mean VIF is bigger than 5.

by factors omitted by our standard model (e.g., by foreign policy). Overall, our empirical extension matches our central hypotheses and previously presented results. Social spending and the welfare regime matter to homeland terrorism where their influence on the terrorists' and supporters' calculi is comprehensive but not to imported terrorism.

## Conclusion

In this contribution, we investigated whether social spending and welfare regime variables have an impact on terrorist activity originating in fifteen Western European countries during 1980–2003. We argued that welfare spending alters socioeconomic conditions in ways that reduce homegrown terrorist activity. We also argued that certain worlds of welfare capitalism differ with respect to the degree of market dependence and social stratification they offer and propagate, thereby influencing the terrorists' calculi in different ways. Our central hypotheses were that higher social spending reduces homeland terrorism and that more social democratic worlds of welfare capitalism are less prone to terrorism.

We find that social spending in certain fields (health, unemployment benefits, and active labor market programs) indeed significantly reduces homeland terrorist activity. While total social spending also negatively correlates with terrorist activity, higher social spending in other fields (e.g., public housing) does not universally translate into less terrorism. Further evidence also suggests that more generous welfare systems offering high degrees of decommodification are less prone to terrorism. Independent of the actual level of social spending, our findings provide moderate support for the hypothesis that more social democratic worlds of welfare capitalism are less prone to terrorist activity originating from within their borders. In general, we find ample evidence linking welfare policies to terrorism. There are moderate substantive effect of welfare policies (indicated by social spending and welfare regime variables) on terrorist activity, presumably as welfare policies influence a variety of socioeconomic factors (e.g., economic growth, employment, poverty, and economic security) in which terrorism may be rooted. Our findings are robust to different specifications.

Welfare policies may thus be seen as helpful instruments for fighting terrorism. This applies in particular to social policies (e.g., unemployment compensation or labor market mobilization) that are connected to the socioeconomic environment of "typical" terrorists and their supporters. It applies somewhat less to social policies (e.g., on public housing) that target conditions outside this very environment and applies neither to transnational terrorist activity that is imported into Western Europe. Overall, our findings imply that social policies in fields that improve the socioeconomic conditions of terrorists and their support are effective in reducing terrorist activity. This result holds even when we acknowledge that terrorism is also driven by other factors, be they ethnic conflict, political developments, or past histories of repression and dictatorship (cf. Sanchez-Cuenca 2009). In an economic

sense, social spending and welfare regime variables affect terrorist activity by influencing certain intervening variables, thereby affecting the opportunity costs of violence (i.e., making terrorism comparatively more costly). Our analysis thus sides with other contributions that emphasize the importance of raising the opportunity costs to terrorists instead of relying on hard-line counter-terrorism strategies (e.g., Frey and Luechinger 2003). In the light of our results, welfare state retrenchments (e.g., to reduce fiscal deficits) should be considered with caution because they may make homegrown terrorism more likely. Potentially, there is a trade-off between the positive and negative effects of welfare state reform, where the latter may become manifest in less internal security.

With this contribution, we add to the discussion on a potential welfare policy–terrorism nexus started by Burgoon (2006) and Crenshaw, Robison, and Jenkins (2007). We extend the approach by Burgoon (2006), for example, by looking at specific kinds of social spending, at welfare regime variables, and at homeland terrorist activity. While our evidence suggests that there is a strong and negative interdependency between welfare policies and terrorism in Western Europe, some questions remain open. As previously discussed, Western Europe suffered from waves of mainly homegrown left-wing and ethnic-nationalist terrorism in the past. Welfare policies do not necessarily discourage the new waves of internationalized or religious terrorism which Western Europe could face in future. Religiously motivated terrorists are driven by the belief in the superiority of their worldview. The possibility of changing their minds by means of welfare policies seems limited.<sup>22</sup> Future research may thus focus on the effectiveness of social policies on terrorism affiliated with certain ideologies. At the same time, the interaction between social policies and terrorism should be investigated for other parts of the world. It is currently unclear whether they may similarly benefit from a potential welfare policy–terrorism nexus. On the one hand, other parts of the world may not exhibit such mature welfare regimes as Western Europe. On the other hand, other causes of terrorist activity (e.g., political instability and repression) may matter more strongly, so the effect of social policies on terrorism may not be that prominent. Finally, it may also be interesting to examine whether social policies also diminish other forms of undesired behavior in societies (e.g., violent crime). While we provide evidence that social policies contribute to a reduction of terrorist activity by improving the socioeconomic conditions in which terrorism is (partly) rooted, similar effects on other social phenomena through similar channels may also be possible and should be assessed.

## Notes

1. See Gaibulloev and Sandler (2008) for a study of the negative effects of terrorism on economic growth in Western Europe. See Enders and Sandler (1996), Abadie and Gardeazabal (2003), and Greenbaum, Dugan, and LaFree (2007) for studies that investigate the negative influence of terrorism on tourism, production, investment, and employment in

- Spain, Greece, and Italy. See Indridason (2008) for the disruptive effects of terrorist activity on political systems in Western Europe.
2. Krieger and Meierrieks (forthcoming) offer a comprehensive overview of potential terrorism causes and related empirical evidence.
  3. The discussion of the relationship between social spending and terrorism draws in parts on Burgoon (2006). We complement and readjust his argumentation with respect to the scope of our empirical analysis. For instance, Burgoon argues that social policies may reduce religious and political extremism by “crowding out” welfare activities by terrorist groups (where the social policies of Hamas in the Gaza Strip may serve as an example). We do not consider this link between social policies and terrorism for Western Europe because their mature welfare systems do not allow for a “welfare takeover” of this kind.
  4. Alternatively, the welfare state can be seen as an institution offering insurance against lifelong career risks, allowing for any type of risky investment, for example, in individual human capital (Sinn 1995). Thus, a welfare state can again be seen as an institution promoting long-run economic performance.
  5. There is, however, a body of research that argues otherwise. For instance, Abadie (2006) and Kurrild-Klitgaard, Justesen, and Klemmensen (2006) find that political development is more important to the genesis of terrorism. While a number of political factors (e.g., repression or state failure) obviously do not matter to the production of terrorism in our country sample, we carefully control for the influence of other political factors in our empirical analysis. Our analysis consistently finds that social policies exert a negative influence on terrorism, net of a variety of political indicators.
  6. The form of taxation may also matter to the genesis of grievances. For instance, financing social spending by a value-added tax may amplify grievances among those most strongly taxed (e.g., the lower middle class). A more detailed analysis of the linkages between taxation and terrorism may be an interesting avenue of future research.
  7. We refer to the excellent survey of Arts and Gelissen (2002) for a broader discussion of the related literature.
  8. According to Esping-Andersen (1990), for example, the United Kingdom is a prototype of the liberal world of welfare capitalism. Germany and Italy are “ideal” conservative worlds of welfare capitalism. The Scandinavian countries are prototypes of the social democratic system.
  9. Whether corporatist or liberal welfare states are better at reducing poverty and inequality is to some extent open to debate. While liberal welfare states tend to directly target benefits at the poor and provide equal public transfers to the needy, Korpi and Palme (1998) provide evidence that this strategy is in fact less likely to reduce poverty and inequality compared to providing earnings-related benefits, as most corporatist (continental) European countries do. See also Conde-Ruiz and Profeta (2007) and Lefèbvre (2007) for further evidence regarding this issue.
  10. At the same time, we avoid counting ordinary criminal acts as acts of terrorism. When we process the raw GTD data, we also filter out any event data that can be considered as a criminal but not terrorist act (e.g., Mafia activity in Italy).

11. To construct terror variables for total homeland terrorism, we, for example, count all attacks by ETA in Spain (its homeland), regardless of the nationality of the target of these attacks. By contrast, we do not investigate imported transnational terrorism conducted by groups operating outside their natural territory (e.g., Palestinian groups) in our main analysis. Instead, we focus on this imported transnational terrorism in an extension of our empirical work. Note that for imported terrorism, religious ideology may very well matter.
12. The other countries in our sample are Austria, Belgium, Denmark, Ireland, the Netherlands, Norway, Portugal, Sweden, and Switzerland.
13. Note that the patterns of total homeland terrorism are very similar. The correlation between the number of purely domestic and total terrorist attacks is .99. The correlation between the number of victims from purely domestic terrorism and total homeland terrorism (including international victims) is .97.
14. Note that there is no common trend of spending patterns observable for our country sample between 1980 and 2003, based on the SOCEXP variable. This should reduce the possibility of detecting only a spurious relationship between social spending and terrorism when running corresponding empirical analyses.
15. Because of missing panel data, it is not possible to construct and use the other stratification measures proposed by Esping-Andersen (1990). See Scruggs and Allan (2008) for a discussion of this issue.
16. The correlation between total social spending (SOCEXP) and DEMSCORE is .29. The correlation between SOCEXP and UNEMP RPLC is .49 and the correlation between SOCEXP and UNIV is .02. This indicates the relationship between social spending and welfare regime variables is not very strong, so an independent analysis of the effect of both types of variables on terrorism is justified.
17. We may need to take into account the possibility of excess zeros that may be the actual cause of overdispersion. Zero inflation can cause efficiency problems if not accounted for. Burgoon (2006) argues that zero inflation in the context of terrorism analysis may occur because of systematic differences in the likelihood and causes of terrorist activity. Additionally, zero inflation may be a consequence of underreporting biases of terrorist activity in countries with low levels of press freedom. Given our data sample for Western Europe during 1980–2003, we see no reason for assuming the existence of systematic differences in terrorist activity across countries or of any substantial underreporting bias. On these grounds, we abstain from correcting for zero inflation.
18. In fact, the correlation between the TWEED attack data and our purely domestic attack data is only .21. The correlation between the TWEED victim data and our comparable victim measure is .82. For victim data, the underreporting bias should be smaller. Note also that the TWEED data contain information on terrorist actions by unknown groups.
19. Such terrorist organizations (with their respective homeland) include the *Groupe Islamique Arme GIA* (Algeria), the *Kurdistan Worker's Party PKK*, the *Revolutionary People's Liberation Party DHKP/C* (both Turkey), or the *Armenian Secret Army for the Liberation of Armenia ASALA* (USSR/Turkey/Armenia).
20. We only exclude *Population over 65* from the set of controls because there is no theoretical or empirical contribution linking this factor to transnational attack patterns.

21. In fact, we only find a negative effect of OLDAGE on terrorism victims that is significant at the 10 percent level. For all other social spending or welfare regime variables, there is no significant effect on transnational terrorist attacks or victims.
22. In fact, Crenshaw, Robison, and Jenkins (2007) provide first evidence that international terrorism driven by religious world views is unlikely to be affected by welfare means.

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## **Appendix A Independent Variables**

*Total Social Public Expenditure—Description:* Broad expenditure measure on publicly financed health and social protection, for instance, on unemployment, sickness, and so on. *Notes:* For missing values, see OECD (2007). *Source:* OECD (2007). *Unit:* Expenditure to GDP.

*Public Health Expenditure—Description:* Measures public spending on in- and outpatient care, medical goods, and so on. *Notes:* For missing values, see OECD (2007). *Source:* OECD (2007). *Unit:* Expenditure to GDP.

*Unemployment Benefits—Description:* Indicates cash expenditure on unemployment compensation, and so on. *Notes:* For missing values, see OECD (2007). *Source:* OECD (2007). *Unit:* Expenditure to GDP.



- Active Labor Market Programs*—*Description*: Measures public spending on employment services, youth training, and so on. *Notes*: For missing values, see OECD (2007). *Source*: OECD (2007). *Unit*: Expenditure to GDP.
- Old Age Spending*—*Description*: Indicates spending on pensions, housing services, and so on. *Notes*: For missing values, see OECD (2007). *Source*: OECD (2007). *Unit*: Expenditure to GDP.
- Family Expenditure*—*Description*: Proxy for spending on childcare support, single parent support, and so on. *Notes*: For missing values, see OECD (2007). *Source*: OECD (2007). *Unit*: Expenditure to GDP.
- Public Housing*—*Description*: Measures public expenditure on housing allowances, and so on. *Notes*: For missing values, see OECD (2007). *Source*: OECD (2007). *Unit*: Expenditure to GDP.
- Decommodification Score*—*Description*: Assesses the overall generosity of a welfare state regime with respect to features of public programs for unemployment, sickness, and old age insurance, using the methodology by Esping-Andersen (1990). *Notes*: For missing values, see Scruggs (2004). *Source*: Scruggs (2004). *Unit*: Calculated index.
- Unemployment Replacement Rate*—*Description*: Ratio of net unemployment benefits to net income of an unmarried single person. *Notes*: For missing values, see Scruggs (2004). *Source*: Scruggs (2004). *Unit*: Rate.
- Degree of Universalism*—*Description*: Indicates the degree to which the labor force and old population are covered by unemployment and sickness insurance, and by pensions. *Notes*: For missing values, see Scruggs (2004). *Source*: Raw data from Scruggs (2004). *Unit*: Percentage, own calculations following Scruggs and Allan (2008).

## Appendix B Control Variables

- Trade Openness*—*Description*: Sum of exports and imports to real GDP. Indicates the degree of economic integration of a country. *Source*: PENN World Table (Heston, Summers, and Aten 2006). *Unit*: Ratio.
- Voter Turnout*—*Description*: Voter turnout in national election. Indicates degree of democratic participation. *Source*: Comparative Political Data Set (Armingeon et al. 2008). *Unit*: Percentage.
- Left Party*—*Description*: Indicates whether a left-wing government is in power. *Source*: Beck et al. (2001). *Unit*: Dummy variable (1 when the left is in power, 0 otherwise).
- Electoral Fractionalization*—*Description*: Index of electoral fractionalization of the party system. Proxy for political competition and social cleavages. *Source*: Comparative Political Data Set (Armingeon et al. 2008). *Unit*: Calculated index.

- Population Size—Description:* Total population size. *Source:* World Bank (2006). *Unit:* Logged, in thousands.
- Population over 65—Description:* Indicator of the number of people aged 65 or older in one country. *Source:* World Bank (2006). *Unit:* Percentage.
- Polarization—Description:* Indicator of the degree of ethnic polarization of a country. *Source:* Montalvo and Reynal-Querol (2005). *Unit:* Constant calculated index.
- Post-cold war—Description:* Indicates the post-cold war period (1992–2003). *Unit:* Dummy variable.

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