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# Can Societies Experience Post-Traumatic Growth after a Terror Attack? The Influence of Terror Attacks on Political, Institutional, and Social Trust in European Countries

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# Can Societies Experience Post-Traumatic Growth after a Terror Attack? The Influence of Terror Attacks on Political, Institutional, and Social Trust in European Countries

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Research shows that people are less likely to have mental health problems after a disaster, if they feel that they have learned from it and grown as a person. This phenomenon that a traumatic experience can have positive consequences is called "post-traumatic growth." In the current study, we investigate whether inhabitants of countries can also experience post-traumatic growth after a large-scale traumatic experience, namely a terror attack. We examined data from the European Social Survey with 75,805 participants for thirteen European countries at one moment before a terror attack and two after it. If inhabitants of these countries experienced post-traumatic growth in terms of *government*, then we would expect their political and institutional trust to increase after a terror attack. In terms of post-traumatic growth of *community*, we expected social trust to increase. Our results suggest that, overall, post-traumatic growth does not occur. Specifically, political trust does not change significantly after a terror attack; institutional trust decreases directly after, only to increase again later. In terms of community, social trust remains largely unaffected after a terror attack. Interestingly, this overall pattern does not occur in all individual countries: in-depth analyses indicate a pattern in line with post-traumatic growth for specific countries. We discuss potential explanations.

**Keywords:** terrorism, post-traumatic growth, trust

McMillen, Smith, and Fisher (1997) interviewed people who witnessed a tornado, mass murder, or airplane crash, directly after the disaster and also three years later. Those who reported directly after the disaster that they had learned from their experiences and grown as a person were less likely to have mental health problems than those who did not. Calhoun and Tedeschi (2006) dubbed this phenomenon "post-traumatic growth": the phenomenon that a traumatic experience can have positive consequences (Taku 2011). In the current study, we investigate whether citizens can also experience post-traumatic growth after a specific kind of large-scale traumatic experience, namely a terror attack.

We focus on terror attacks, because they can have severe consequences for the inhabitants of a country, and also because they have become increasingly common recently (GPI Expert Panel 2018). Terror attacks have been defined as "an act of violence [...] usually committed against non-combatants, and aimed to achieve behavioral change and political objectives by creating fear in a larger population" (Doosje et al. 2016, 79). Terror attacks often aim to undermine feelings of security, such as trust in the government and trust among citizens. Yet it remains unclear whether they actually succeed in doing so. On the contrary, we hypothesize that inhabitants of countries can also experience post-traumatic growth after a terror attack. Below, we will first explain how terror attacks can cause post-traumatic growth at the *individual* level. Subsequently, we will aim to explain the main contribution of our

study: how terror attacks can also lead to positive changes on a *societal* level.

At the individual level, post-traumatic growth is traditionally measured in terms of mental health. Although previous research suggests that terror attacks can have a negative impact on mental health, such as increased anxiety (Rubin et al. 2005; Schuster et al. 2001), these negative effects often disappear after a number of months. As several authors point out, positive emotions may buffer individuals against negative consequences in the aftermath of crises. Or, put in terms of the broaden-and-build theory of positive emotions, positive emotions may be the "active ingredients" of trait resilience (Frederickson 2001). Powell, Gilson, and Collin (2012) show how thirteen years after severe traumatic brain injury, survivors indicated that post-traumatic growth was relatively unchanged compared to the early years after their injury. In the context of terror attacks, Hobfoll et al. (2007) report that when individuals sought to translate growth cognitions to growth actions after the Al Aqsa Intifada, they experienced less psychological distress. Fredrickson et al. (2003) show how positive emotions in the aftermath of September 11 attacks fuel thriving and growth in psychological resources. All in all, this suggests that post-traumatic growth can follow terror attacks, at least at the individual level.

In line with the broaden-and-build theory of positive emotions, we have seen that "positive emotions [...] all share the ability to broaden people's momentary thought-action repertoires and build their enduring personal resources, ranging from physical and intellectual resources to social and psychological resources" (Frederickson 2001, 219). We have furthermore presented research that shows that positive emotions can not only potentially dampen distress after a terror attack, but may even lead to post-traumatic growth. Although previous research addressed this matter at the *individual* level, we argue that post-traumatic growth after a terror attack can also have a profound influence at the *societal* level. For instance, within two years after the 2011 terror attacks in Norway, 39 percent of Norwegians were quite sure that the government could prevent future terror attacks. At the same time, Norwegians reported being more supportive of the government than before (Wollebœk et al. 2012).

The aftermath of the 2011 terror attacks in Norway clearly suggests that terror attacks can be related to changes on a societal level. In the current study, we operationalize post-traumatic growth in terms of increased trust in the government and among citizens. We are not the first to relate post-traumatic growth to trust (see Trzebiński and Zięba 2011), but we are the first to do so at the societal level. Specifically, we examine two indicators of the extent to which inhabitants trust their *government*, namely political and institutional trust, and one indicator of the extent to which inhabitants trust each other in their *community*, namely social trust.

In terms of government, we first investigate the relationship between terror attacks and *political trust*. Political trust relates to political parties and leaders (Newton and Zmerli 2011). For instance, Hetherington and Husser (2011) show how media coverage of terrorism in the United States influences people's political trust in foreign and national defense policies, because these issues became more salient. Similarly, Gross, Aday, and Brewer (2004) show that television news use was associated with higher levels of trust in government during the military surge that followed the September 11 terrorist attacks. This exemplifies how, in some instances, terror attacks can increase political trust. Another example is that after the 9/11 terror attacks in the United States, popular approval of the President rose (Moore 2001). This may be due to the fact that people often value a strong and charismatic leader during a crisis (Bligh, Kohles, and Meindl 2004). Clearly, political trust can be affected by terror attacks.

Also in terms of government, we examine *institutional trust*. Institutional trust relates to people's trust of institutions such as the government and police (Hudson 2006). Simply put, when political parties and leaders become more popular after a terror attack, it is likely that trust in the government's institutions will also increase. For instance, when political leaders express their trust in these institutions, people are more likely to do so too. A good example is provided by the aftermath of the 9/11 terror attacks in the United States, where people expressed increased support for US institutions, such as the army (Klarevas, Gelpi and Reifler 2006). Similarly, for at least ten months after the 2011 terror attacks in Norway, Norwegians reported increased trust in the police and justice system (Wollebœk et al. 2012).

Political and institutional trust encompass the relationship between inhabitants of a country and the various aspects of the state. In addition, we argue that terror attacks can affect the relationships between inhabitants themselves, namely in

terms of *social trust*. Put differently, social trust is the belief that other people are reliable and trustworthy (Borum 2010). Anecdotal evidence for the hypothesis that social trust might increase after a terror attack comes from political leaders emphasizing unity after a terror attack. For example, after the beheading of an American-Israeli journalist by ISIS in 2014, President Obama stated: "Americans are repulsed by their barbarism, we will not be intimidated, their horrific acts only unite us" ("Sotloff beheading: Obama warning to Islamic State," *BBC.com*, September 3, 2014). More rigorous evidence is provided by studies that show increased social trust after terror attacks. For instance, Gross et al. (2004) show that people who read newspapers after the September 11 terrorist attacks generally reported increased social trust. Similarly, Wollebœk et al. (2012) report how after the 2011 terror attacks in Norway this type of trust increased. Finally, Joseph and Linley (2008) analyze the results of various studies and conclude that, "taken conjointly, [...] terrorist attacks can have an unexpected rebound effect on [...] intragroup cohesion, which is probably the opposite from the effect intended by the terrorists" (77).

In sum, we formulate two hypotheses about the relationship between terror attacks and post-traumatic growth. As mentioned before, McMillen et al. (1997) report post-traumatic growth already directly after a traumatic incident. As such, Hypothesis 1 predicts that post-traumatic growth is visible directly after a terror attack, manifesting as an increase in political, institutional, and social trust compared to before the attack. In addition, traumatic experiences are not easily forgotten (Hobfoll et al. 2007; Powell et al. 2012). For instance, even seven months after the July 2005 London bombings, Londoners reported substantial stress, perceived threat, and reduced travelling (Rubin et al. 2007). In a similar vein, we expect post-traumatic growth to be relatively stable. Hypothesis 2 therefore predicts that the increase in political, institutional, and social trust after a terror attack remains stable at least one year after the terror attack.

## 1. Method

### 1.1 Design

We used a quantitative longitudinal design based on data from the Global Terrorism Database (GTD; www.start.umd.edu/gtd) and European Social Survey (ESS; www.europeansocialsurvey.org). The dependent measure is posttraumatic growth, namely the degree of political, institutional, and social trust. The independent measure is the measurement moment, once before and twice after the terror attack.

### 1.2. Participants

From the GTD, we selected countries that had witnessed at least one terror attack between 2002 and 2014, but also had periods devoid of any terror attacks. In other words, we excluded European countries that witnessed a great many terror attacks or did not have periods free of terror attacks. We also excluded countries for which data were not available for all variables. As a result, we included the following thirteen countries: Belgium, Czech Republic, Denmark, Germany, Finland, Hungary, Ireland, the Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom. In total, we included 75,805 participants from the ESS. Participants' ages ranged from 14 to 102 ($M$ = 46.3, $SD$ = 18.7) and 51.3 percent identified as female.

### 1.3. Materials

The ESS is a cross-national survey that measures public attitudes and opinions in Europe. Every two years, the ESS aims to interview at least 1,500 randomly chosen inhabitants per country (800 for smaller countries). Participants are asked to state their answers to items printed on cards. We included the following three variables in our study: political, institutional, and social trust.

The ESS measured political trust with three items: "How much do you personally trust [the parliament] [politicians] [political parties]?" Institutional trust consisted of two items: "How much do you personally trust the [legal system] [police]?" For political and institutional trust, participants indicated their answers from 0 ("Do not trust at all") to 10 ("Complete trust"). Social trust was measured with three items. First, "Most people can be trusted, or you can't be too careful in dealing with people" from 0 ("You can't be too careful") to 10 ("Most people can be trusted"). Second, "Most people would try to take advantage of you if they got the chance, or would try to be fair" from 0 ("Most people try to take advantage of you") to 10 ("Most people try to be fair"). Third, "Most of the time people try to be helpful, or they are mostly looking out for themselves" from 0 ("People

mostly look out for themselves") to 10 ("People mostly try to be helpful"). For all items, higher scores indicate higher levels of trust.

### 1.4. Procedure

From the GTD, we selected those countries that not only witnessed one or more terror attacks, but also had periods devoid of any terror attacks. We only examined terror attacks that meet all GTD requirements and were executed successfully. We included six measurement moments of the European Social Survey, namely every two years in 2002–2012 (ESS1=2002; ESS2=2004; ESS3=2006; ESS4=2008; ESS5=2010; ESS6=2012). For each country, we determined when the terror attack took place and which three ESS measurement moments could be used as pre-measurement and post-measurements 1 and 2. Concerning the measurement moments, we selected the pre-measurement that had been administered no more than two years before the terror attack; we selected the post-measurement 1 that had been administered as soon as possible after the terror attack, and no more than a year after; and we selected the post-measurement 2 that had been administered at least one year after post-measurement 1. Table 1 provides information about the terror attacks and ESS measurement moments in the aforementioned thirteen countries.

Although we aimed to include only countries that had experienced relatively long periods without terror attacks between 2002 and 2012, these were difficult to find. In fact, a number of countries witnessed terror attacks around one of the ESS measurement moments, namely the Czech Republic, Denmark, Germany, Norway, the Netherlands, and the United Kingdom.[1] For two reasons, we still included these countries in the analyses. First, our study benefits from a representative sample size. Second, we ensured that the scale of the selected terror attacks is significantly more severe than other terror attack(s). In some cases, the terror attack took place *during* post-measurement 1. Participants who were interviewed before the terror attack were then included in the pre-measurement instead of post-measurement 1.

In line with the ESS recommendations (European Social Survey 2014), we weighted the variables. Post-stratification weights were applied to correct for non-response bias and sampling error, which can result from differences in age, gender, education, and region. Population-size weights were used when combining data from multiple countries. Without this correction, countries with a lower population size would be overrepresented compared to countries with a larger population size. When analyzing data within a single country, we only applied the post-stratification weights. In contrast, when we compared data between multiple countries, we multiplied the post-stratification with the population-size weights. All analyses use weights.

## 2. Results

Collapsed across countries, Cronbach's alpha reliabilities ranged from good to sufficient, namely .90 for political trust, .76 for institutional trust, and .72 for social trust. Within countries, Cronbach's alpha reliabilities for the thirteen countries ranged from .75 to .87 for political trust, .66 to .82 for institutional trust, and .66 to .78 for social trust.

We then analyzed whether there are differences in political, institutional, and social trust between the pre-measurement and post-measurements 1 and 2, collapsed across all countries. Because all Levene's tests indicated that the variances of groups were not homogenous, we carried out Welch's one-way ANOVAs and Games-Howell post-hoc tests. Collapsed across countries, Table 2 depicts the differences in political, institutional, and social trust between the ESS measurement moments, namely Levene's tests, Welch's one-way ANOVAs, and Games-Howell post-hoc tests. We describe these findings below.

In terms of government, the mean of *political* trust does not differ significantly between the pre-measurement ($M$ =

[1] There are a number of additional exceptions to these rules. First, the third wave of the ESS did not include the Czech Republic. As such, only for this country, there are four years between the pre-measurement and the post-measurement 1. Second, a series of terror attacks took place during one of the measurement moments in Hungary. Terrorists were responsible for the so-called Roma murders, which kept Hungarians in suspense for 167 consecutive days. The terrorists were caught in August 2009 (Vágvölgyi, 2014), which we therefore designated as the end of this terror attack. Third, the period between the terror attack and post-measurement 1 is fifteen months in Belgium and thirteen months in Hungary. Fourth, although Spain witnessed many relatively minor terror attacks, it was still included to investigate the consequences of the large-scale 2004 Madrid train bombings. Similarly, Ireland has witnessed many attacks. However, there are significant differences between the scale of these attacks. We decided to examine a period in which a relatively severe attack took place, in the hope that this attack would stand out.

4.13, *SD* = 2.18) and post-measurement 1 (*M* = 4.12, *SD* = 2.13). Similarly, political trust does not differ significantly between post-measurement 1 and 2 (*M* = 4.14, *SD* = 2.19). That is, collapsed across all countries, the results suggest that political trust does not significantly differ after the terror attack compared to before, neither directly after nor at least one year later.

Also in terms of government, the mean of *institutional* trust decreases significantly from the pre-measurement (*M* = 5.82, *SD* = 2.20) to post-measurement 1 (*M* = 5.62, *SD* = 2.15), only to increase significantly again from post-measurement 1 to 2 (*M* = 5.94, *SD* = 2.14). In other words, collapsed across all countries, institutional trust falls directly after the terror attack, but rises again at least one year later, although the effect size is rather low ($\eta 2$ = .003).

In terms of community, *social* trust does not differ significantly between the pre-measurement (*M* = 5.34, *SD* = 1.78) and post-measurement 1 (*M* = 5.31, *SD* = 1.78). Similarly, social trust does not differ significantly from post-measurement 1 to 2 (*M* = 5.34, *SD* = 1.74). That is, collapsed across all countries, social trust remains largely unaffected after a terror attack.

The previous analyses concerned the mean of political, institutional, and social trust, when collapsed across all countries. In the following, we again analyze the differences in trust between the measurement moments, but now within countries. Similar to before, we first analyze two indicators of the extent to which inhabitants trust their government, namely political and institutional trust, and then one indicator of the extent to which inhabitants trust each other, namely social trust.

First, we tested whether *political* trust differs between the measurement moments within countries. A factorial ANOVA indicates a significant interaction between measurement moment and country ($F$(24, 74967) = 36.09, $p$ < .001). As such, we subsequently analyzed every country individually. Table 3 shows the mean and standard deviation of political trust, as well as the number of participants, by country, for every measurement moment. Table 4 shows the differences in political trust between the measurement moments, using Levene's tests, Welch's one-way ANOVAs, and Games-Howell post-hoc tests.

The most common pattern is stable political trust between the pre-measurement and post-measurement 1, followed by an increase in political trust between post-measurement 1 and 2. Specifically, Belgium, Ireland, the Netherlands, and the United Kingdom conform to this pattern. Also common is a completely stable pattern of political trust, namely in the Czech Republic, Denmark, and Switzerland. Germany and Sweden show an increase in political trust between pre-measurement and post-measurement 1, only for political trust to then drop between post-measurement 1 and 2. The remaining patterns are stable political trust followed by a decrease (Finland), a decrease in political trust followed by an increase (Hungary), a steady increase in political trust through all measurement moments (Norway), and an increase in political trust between the pre-measurement and post-measurement 1, which then remains stable between post-measurement 1 and 2 (Spain).

Second, we tested whether *institutional* trust differs between the measurement moments within countries. Tested in a factorial ANOVA, the interaction between measurement moment and country was again significant ($F$(24, 75315) = 15.82, $p$ < .001). This allows us to analyze and examine every country individually. Table 5 shows the mean and standard deviation of institutional trust, as well as the number of participants, by country, for every measurement moment. Table 6 shows differences in institutional trust between the measurement moments, namely Levene's tests, Welch's one-way ANOVAs and Games-Howell post-hoc tests.

The most common pattern is an increase in institutional trust between pre-measurement and post-measurement 1, which then remains stable between post-measurement 1 and 2. Specifically, Belgium, Czech Republic, Germany, Norway, and Sweden conform to this pattern. Also common is a completely stable pattern, namely in Finland, Ireland, Switzerland, and the Netherlands. Denmark and Hungary show a decrease in institutional trust between the pre-measurement and post-measurement 1, followed by an increase between post-measurement 1 and 2. The remaining patterns are a steady increase in institutional trust through all measurement moments (Spain) and stable institutional trust followed by an increase (United Kingdom).

Third, we tested whether *social* trust differs between the measurement moments within countries. A factorial ANOVA indicates a significant interaction between measurement moment and country (F(24, 75694) = 7.37, p < .001). As such, we subsequently analyzed every country individually.

Table 7 depicts the mean and standard deviation of political trust, as well as the number of participants, by country, for every measurement moment. Table 8 depicts differences in political trust between the measurement moments, namely Levene's tests, Welch's one-way ANOVAs and Games-Howell post-hoc tests.

The most common pattern is completely stable social trust through all measurement moments. Specifically, Denmark, Finland, Germany, the Netherlands, Norway, and Sweden conform to this pattern. Hungary and Ireland show an initial decrease in social trust between pre-measurement and post-measurement 1, only to increase again between post-measurement 1 and 2. Another pattern, namely in Switzerland and the United Kingdom, is stable social trust between pre-measurement and post-measurement 1, followed by a decrease between post-measurement 1 and 2. The remaining patterns are stable social trust followed by an increase (Belgium), increase in social trust which then remains stable (Czech Republic), and decrease in social trust which then remains stable (Spain).

## 3. Discussion

Research shows that people are less likely to have mental health problems after a disaster, if they feel that they have learned from it and grown as a person. The feeling that a traumatic experience can have positive consequences is called "post-traumatic growth." In the current study, we investigate whether societies can also experience post-traumatic growth after a large-scale traumatic experience, namely a terror attack.

Hypothesis 1 predicted that post-traumatic growth would be visible directly after a terror attack, in the form of an increase in political, institutional, and social trust compared to before the attack. When collapsed across countries, political and social trust did not differ between before the terror attack and directly after it. That is, the overall pattern for political and social trust did not confirm Hypothesis 1. Interestingly, when collapsed across countries, institutional trust shows a decrease directly after a terror attack. Again, this findings contrasts with our expectations.

Hypothesis 2 predicted that the supposed increase in political, institutional, and social trust after a terror attack remains stable to at least one year after the terror attack. Political and social trust did indeed remain stable from post-measurement 1 to 2, but did not show an increase in the first place. Hence, the overall pattern for political and social trust failed to confirm Hypothesis 2. Again, when collapsed across countries, institutional trust does change: between post-measurement 1 and 2, institutional trust increases to approximately its value before the terror attack. However interesting this finding, it does not confirm Hypothesis 2.

In terms of government, we find that political trust does not significantly differ after the terror attack compared to before. This is true for the trust directly after the attack and for levels of trust at least one year later. In terms of community, social trust shows a similar pattern. At least when collapsed across all countries, this suggests that terror attacks have little influence on these types of trust in our sample. Yet also in terms of government, institutional trust decreases after a terror attack. However, this institutional trust rises again at least one year later. In other words, a terror attack seems to have a negative effect on institutional trust, but this seems to be merely temporary. As to our point of departure, post-traumatic growth, we can only conclude that we do not find any evidence for post-traumatic growth in countries after a terror attack, when collapsed across all countries.

However, we did not only analyze post-traumatic growth *collapsed across* countries, but also the patterns *within* individual countries (see Table 3–8). These analyses, warranted by significant interactions, show some patterns that do provide support for the hypotheses. Again, Hypotheses 1 and 2 predicted that post-traumatic growth would be visible directly after a terror attack, namely in terms of a higher level of political, institutional, and social trust compared to before the attack, and then remain stable to at least one year after the terror attack. In terms of political trust, the pattern in Spain is fully in line with our hypotheses: an increase in political trust directly after the terror attack, which remains stable over time. With regard to institutional trust, several countries confirm our expectations: Belgium, Czech Republic, Germany, Norway, and Sweden show an initial increase in institutional trust, which remains stable over time. Finally, concerning social trust, one country shows a pattern in which social trust increases after the terror attack and remains stable over time, namely the Czech Republic.

As such, there are a number of countries that confirm the predictions of both Hypothesis 1 and 2. Of course, if we only

look at one of the hypotheses, even more countries qualify. For instance, if we examine only the countries in which political, institutional, or social trust increased after a terror attack, either directly after or at least one year later, then we see that many countries support our predictions of post-traumatic growth, including Belgium, Czech Republic, Germany, Norway, Spain and Sweden.

Why some countries follow a post-traumatic growth pattern and other countries do not, is not an easy question to answer. One can think of factors related to the population size, but this does not appear to be a good candidate if we examine the different countries, because there is no clear pattern when relating population size to the pattern of post-traumatic growth. Similarly, cultural norms and values seem not good candidates either, because the countries that show a post-traumatic growth pattern differ from each other on these dimensions. Alternatively, it is possible to examine the nature of the attacks, for example, how large or impactful was the attack (number of casualties or damage). One might speculate that with a large attack, the post-growth pattern might be more pronounced, but these are fruitful questions to examine in future studies.

Another interesting route is to examine the role of emotions and, in particular, mimicry of emotions. Based on Van der Schalk et al. (2011), we argue that convergent emotional reactions of in-group members to a terrorist attack, for example in terms of fear, can potentially via mimicry, result in increased liking for in-group members (and not for outgroup members). In their research, Van der Schalk et al. show that people increase their liking for in-group members to the extent that they mimic the emotional displays of their fellow group members. This increased liking may be translated into more in-group trust as well.

In conclusion, despite the fact that there is little overall evidence that post-traumatic growth occurs in countries after a terror attack, some countries do provide support for the post-traumatic hypotheses. For some countries, on some measures, we did observe a pattern in line with post-traumatic growth, such as in Spain, Belgium, Czech Republic, Germany, Norway, and Sweden. It is important to note, however, that the countries that exhibit a pattern in line with our expectations for post-traumatic growth are in the minority. For instance, for institutional trust, only five out of thirteen countries show a pattern in line with our hypotheses, and even fewer countries do so for political and social trust. As such, our study finds only very limited support for the idea that post-traumatic growth occurs in countries after a terror attack.

### 3.1 Limitations

First, as the current study is correlational, we need to be careful with causal conclusions. In other words, changes in political or institutional trust may have been caused by other factors than the terror attack. Although it is impossible to exclude all such external influences, we attempted to minimize their effect by including as many European countries as possible. While there are many unique things that may have happened in these countries, they have one common factor: the occurrence of a terror attack. After new editions of the ESS appear, future studies could carry out additional analyses. More specifically, future studies could include a more specific estimate of the time between the terror attack that occurred and registration of political, institutional, and social trust in the ESS, allowing for a more detailed study of potential pattern of post-traumatic growth.

Second, the current study is based on three measurement moments. It can therefore be hard to determine the duration of an increase or decrease in trust. If a future study were to take all ESS measurement moments and terror attacks into account, then it could be easier to determine the duration of possible post-traumatic growth and other patterns.

Third, p-values are naturally low due to the large number of participants, namely 75,805. In the case of such a large sample, it is important to examine the proportions of explained variance. Given that the effect sizes are rather low in the analyses, some caution is warranted with regard to our conclusions.

Another limitation is that in eight of the countries other terror attacks took place just before or after an ESS measurement moment, potentially confounding the results: Czech Republic, Denmark, Germany, Ireland, the Netherlands, Norway, Spain, and the United Kingdom. For instance, a constant threat of actions by ETA in Spain may influence political, institutional, and social trust aside from the 2004 Madrid train bombings. To minimize the influence of other terror attacks, we have included three ESS measurement moments. Future studies could try, if possible, to include only countries that

witnessed a single terror attack in a certain time period. Such a study should also consider including countries outside Europe. For instance, data from the World Value Survey (http://www.worldvaluessurvey.org/wvs.jsp) or General Social Survey (http://gss.norc.org/) could be used.

A final point of criticism is that one might wonder whether we have covered all aspects of growth for individuals within a society after a terror attack. While this seems almost impossible in a single study, we chose to investigate political, institutional, and social trust as indicators of post-traumatic growth, because these are often the very variables that terrorism tries to undermine. Investigating an opposite effect then seemed to us indicative of true growth after a traumatic experience. Practically, we chose these three types of trust because they are uniquely covered in the ESS. That is, these variables are backed up by a wealth of data, covering hundreds of thousands of participants (in representative samples) throughout various countries and years. In sum, while our measures may not capture post-traumatic growth completely, we believe that they are the best starting points to investigate post-traumatic growth.

### 3.2 Implications

The broaden-and-build theory of positive emotions predicts that traumatic events can cause people to "build their enduring personal resources, ranging from physical and intellectual resources to social and psychological resources" (Fredrickson 2001, 219). Several studies show that post-traumatic growth can follow after terror attacks, at least at the individual level (Hobfoll et al. 2007; Fredrickson et al. 2003). At the societal level, too, there is evidence that post-traumatic growth can also influence people (Wollebœk et al. 2012). However, the results of the current study only provide very limited support for the idea that post-traumatic growth can occur in terms of political, institutional, or social trust after a terror attack. In a theoretical sense, then, the current article contributes to the literature by casting a critical shadow over the idea that post-traumatic growth can foster trust, at least in our contemporary European sample.

Certain countries did confirm our expectations in terms of post-traumatic growth, but at this moment, it is difficult to establish why the pattern was observed in some countries and not in others. Here we think a more nuanced and perhaps qualitative study might shed more light on the different reactions to terror attacks in the different countries in our sample. For example, one important component might be the official reactions by political leaders after an attack. Do they have a firm and clear answer in response to the attack? And are these political leaders able to deliver a message that resonates well with the shared emotional climate and that stimulates a sense of unity in citizens who are often bewildered, scared, or even angered after an attack?

In a practical sense, our study once again emphasizes the importance of trust in the government, in terms of political and institutional trust, and trust among citizens, as constituted by social trust, in the aftermath of a terror attack. Indeed, terrorism often aims to undermine these kinds of trust (Fierke, 2009). As Longstaff and Yang (2008) point out, in times of such public danger, trust is one of the most important variables for successfully overcoming such danger. They show how preparedness, internal coordination, and effective leadership all depend on trust. Our results show that for certain countries, political, institutional, or social trust dropped after a terror attack. As such, governments would do well to take counter-measures if they sees a decrease in any kind of trust, especially given that distrust in the government has been identified as a driver for terrorism itself (Wheeler 2009).

## 4. Conclusion

In conclusion, we investigated whether inhabitants of countries can experience post-traumatic growth after a terror attack. First, we hypothesized that post-traumatic growth would be visible directly after a terror attack, namely an increase in political, institutional, and social trust compared to before the attack. Second, we predicted that the increase in political, institutional, and social trust after a terror attack would remain stable at least one year after the terror attack. Although certain individual countries show such patterns, our overall results do not suggest that countries typically experience post-traumatic growth after a terror attack. That is, when collapsed across countries, political, institutional, and social trust remain largely unaffected by a terror attack on the long term. Although the overall pattern does not confirm our expectations of post-traumatic growth after a terror attack, it is important to note that our analyses do not show loss of po-

litical, institutional, and social trust either. As such, our results cast doubt upon the effectiveness of terror attacks in eroding political, institutional, and social trust.

Table 1: Per country, information about the ESS waves and measurement moments; and for the corresponding terror attack(s), the location, date, and casualties and injured

| Country | ESS waves (measurement moment) | Attack location | Date | Casualties (injured) |
|---|---|---|---|---|
| Belgium | 1 (01-10-2002 – 30-04-2003)<br>2 (04-10-2004 – 31-01-2005)<br>3 (23-10-2006 – 19-02-2007) | Brussels | 04-06-2003 | 0 (20) |
| Czech Republic | 2 (01-10-2004 – 13-12-2004)<br>4 (08-06-2009 – 08-07-2009)<br>5 (20-01-2011 – 08-03-2011) | Brno | 28-06-2008 | 0 (20) |
| Denmark | 3 (19-09-2006 – 02-05-2007)<br>4 (01-09-2008 – 11-01-2009)<br>5 (20-09-2010 – 31-01-2011) | Odense | 31-12-2008 | 0 (2) |
| Finland | 3 (18-09-2006 – 20-12-2006)<br>4 (19-09-2008 – 05-02-2009)<br>5 (13-09-2010 – 30-12-2010) | Helsinki | 21-10-2008 | 0 (1) |
| Germany | 3 (01-09-2006 – 15-01-2007)<br>4 (27-08-2008 – 31-01-2009)<br>5 (15-09-2010 – 03-02-2012) | Passau | 13-12-2008 | 0 (1) |
| Hungary | 3 (21-11-2006 – 28-01-2007)<br>5 (19-10-2010 – 10-12-2010)<br>6 (10-11-2012 – 17-02-2013) | Piricse | 08-08-2008 | 0 (1) |
| | | Nagycsécs | 03-11-2008 | 2 (1) |
| | | Alsózsolca | 15-12-2008 | 2 (1) |
| | | Tatárszentgyörgy | 24-02-2009 | 2 (1) |
| | | Tiszalök | 22-03-2009 | 1 (0) |
| | | Kisléta | 03-09-2009 | 1 (1) |
| Ireland | 2 (18-01-2005 – 20-06-2005)<br>3 (14-09-2006 – 31-08-2007)<br>4 (11-09-2008 – 12-03-2009) | Belfast | 06-03-2007 | 0 (51) |
| Norway | 4 (25-08-2008 – 20-01-2009)<br>5 (09-09-2010 – 15-02-2011)<br>6 (14-08-2012 – 08-02-2013) | Oslo | 25-01-2010 | 0 (1) |
| Spain | 1 (19-11-2002 – 20-02-2003)<br>2 (27-09-2004 – 31-01-2005)<br>3 (25-10-2006 – 04-03-2007) | Madrid | 11-03-2004 | 37 (450) |
| | | Madrid | 11-03-2004 | 73 (450) |
| | | Madrid | 11-03-2004 | 19 (450) |
| | | Madrid | 11-03-2004 | 62 (450) |
| Sweden | 4 (15-09-2008 – 03-02-2009)<br>5 (27-09-2010 – 01-03-2011)<br>6 (01-09-2012 – 28-01-2013) | Stockholm | 11-12-2010 | 1 (2) |
| Switzerland | 3 (24-08-2006 – 02-04-2007)<br>4 (27-09-2010 – 01-03-2011)<br>5 (02-10-2010 – 23-03-2011) | Crissier | 12-11-2007 | 0 (1) |
| The Netherlands | 1 (01-09-2002 – 24-02-2003)<br>2 (11-09-2004 – 19-02-2005)<br>3 (16-09-2006 – 18-02-2007) | Amsterdam | 02-11-2004 | 2 (1) |
| United Kingdom | 2 (27-09-2004 – 16-03-2005)<br>3 (05-09-2006 – 14-01-2007)<br>4 (01-09-2008 – 19-01-2009) | London | 07-07-2008 | 8 (171) |
| | | London | 07-07-2008 | 27 (340) |
| | | London | 07-07-2008 | 7 (163) |
| | | London | 07-07-2008 | 14 (110) |

Table 2: Collapsed across countries, means (*M*) and standard deviations (*SD*), Levene's tests, Welch's one-way ANOVAs, and Games-Howell post-hoc tests for (the differences in) political, institutional, and social trust between the ESS measurement moments

| Trust type | *M* (*SD*) | Levene's test | One-way ANOVA | Pre-Post 1 | Pre-Post 2 | Post 1-Post 2 |
|---|---|---|---|---|---|---|
| Political | Pre: 4.13 (2.18)<br>Post 1: 4.12 (2.13)<br>Post 2: 4.14 (2.19) | $F(2, 68271) = 9.52$<br>$p < .001$ | $F(2, 43037.02) = .15$<br>$p = .863$,<br>$\eta 2 < .001$ | $p = .922$ | $p = .981$ | $p = .855$ |
| Institutional | Pre: 5.82 (2.20)<br>Post 1:5.62 (2.15)<br>Post 2:5.94 (2.14) | $F(2, 68683) = 19.62$<br>$p < .001$ | $F(2, 43351.44) = 114.01$<br>$p < .001$<br>$\eta 2 = .003$ | $p < .001$ | $p < .001$ | $p < .001$ |
| Social | Pre: 5.34 (1.78)<br>Post 1: 5.31 (1.74)<br>Post 2: 5.33 (1.77) | $F(2, 69056) = 3.80$<br>$p = .022$ | $F(2, 43361.97) = 1.94$<br>$p = .144$,<br>$\eta 2 < .001$ | $p = .142$ | $p = .950$ | $p = .273$ |

Table 3: Per country, the means (*M*) and standard deviations (*SD*) of political trust, as well as the number of participants (*N*), for every measurement moment

| Country | Measurement moment | *M* | *SD* | *N* |
|---|---|---|---|---|
| Belgium | Pre | 4.49 | 2.12 | 1859 |
| | Post-1 | 4.42 | 2.03 | 1768 |
| | Post-2 | 4.62 | 1.95 | 1791 |
| Czech Republic | Pre | 2.97 | 2.09 | 2927 |
| | Post-1 | 3.01 | 2.08 | 2000 |
| | Post-2 | 2.95 | 2.14 | 2348 |
| Denmark | Pre | 5.91 | 1.94 | 3050 |
| | Post-1 | 5.74 | 1.75 | 41 |
| | Post-2 | 5.37 | 1.97 | 1553 |
| Finland | Pre | 5.44 | 1.99 | 2300 |
| | Post-1 | 5.46 | 1.93 | 1770 |
| | Post-2 | 4.88 | 2.09 | 1866 |
| Germany | Pre | 3.85 | 2.09 | 4532 |
| | Post-1 | 4.06 | 1.97 | 1061 |
| | Post-2 | 3.81 | 2.11 | 2998 |
| Hungary | Pre | 2.92 | 2.20 | 1562 |
| | Post-1 | 2.21 | 2.01 | 1502 |
| | Post-2 | 3.66 | 2.32 | 1533 |
| Ireland | Pre | 4.26 | 2.16 | 3342 |
| | Post-1 | 4.43 | 2.13 | 690 |
| | Post-2 | 3.53 | 2.14 | 1758 |
| Norway | Pre | 5.06 | 1.96 | 1541 |
| | Post-1 | 5.47 | 1.91 | 1544 |
| | Post-2 | 5.66 | 1.90 | 1610 |
| Spain | Pre | 4.01 | 2.15 | 1646 |
| | Post-1 | 4.29 | 2.04 | 1621 |
| | Post-2 | 4.22 | 2.09 | 1848 |
| Sweden | Pre | 5.32 | 1.94 | 2748 |
| | Post-1 | 5.73 | 1.78 | 547 |
| | Post-2 | 5.37 | 2.02 | 1829 |
| Switzerland | Pre | 5.34 | 1.81 | 1775 |
| | Post-1 | 5.36 | 1.78 | 1774 |
| | Post-2 | 5.39 | 1.95 | 1480 |
| The Netherlands | Pre | 5.00 | 1.84 | 2493 |
| | Post-1 | 4.97 | 1.78 | 2622 |
| | Post-2 | 5.23 | 1.69 | 989 |
| United Kingdom | Pre | 3.96 | 2.14 | 1884 |
| | Post-1 | 3.83 | 2.09 | 2936 |
| | Post-2 | 3.97 | 2.21 | 2334 |

Table 4: Per country, Levene's tests, Welch's one-way ANOVAs and Games-Howell post-hoc tests for the differences in *political* trust between the ESS measurement moments

| Country | Levene's test | One-way ANOVA | Pre-Post 1 | Pre-Post 2 | Post 1-Post 2 |
|---|---|---|---|---|---|
| Belgium | $F(2, 5421) = 7.50$ $p = .001$ | $F(2, 3612.19) = 4.40$ $p = .012$ | $p = .492$ | $p = .186$ | $p = .009$ |
| Czech Republic | $F(2, 7295) = 2.24$ $p = .107$ | $F(2, 4599.39) = .43$ $p = .653$ | $p = .758$ | $p = .969$ | $p = .649$ |
| Denmark | $F(2, 4648) = .91$ $p = .404$ | $F(2, 110.87) = 38.88$ $p < .001$ | $p = .756$ | $p < .001$ | $p = .411$ |
| Finland | $F(2, 5938) = 11.94$ $p < .001$ | $F(2, 3846.10) = 49.70$ $p < .001$ | $p = .975$ | $p < .001$ | $p < .001$ |
| Germany | $F(2, 8599) = 6.46$ $p = .002$ | $F(2, 2973.13) = 6.27$ $p = .002$ | $p = .006$ | $p = .733$ | $p = 002$ |
| Hungary | $F(2, 4607) = 16.60$ $p < .001$ | $F(2, 3064.18) = 169.30$ $p < .001$ | $p < .001$ | $p < .001$ | $p < .001$ |
| Ireland | $F(2, 5797) = .080$ $p = .923$ | $F(2, 1846.18) = 78.26$ $p < .001$ | $p = .132$ | $p < .001$ | $p < .001$ |
| Norway | $F(2, 4696) = .95$ $p = .388$ | $F(2, 3125.01) = 39.71$ $p < .001$ | $p < .001$ | $p < .001$ | $p = .020$ |
| Spain | $F(2, 5132) = 3.12$ $p = .044$ | $F(2, 3394.74) = 8.37$ $p < .001$ | $p < .001$ | $p = .006$ | $p = .608$ |
| Sweden | $F(2, 5130) = 8.47$ $p < .001$ | $F(2, 1561.59) = 12.33$ $p < .001$ | $p < .001$ | $p = .689$ | $p < .001$ |
| Switzerland | $F(2, 5034) = 8.60$ $p < .001$ | $F(2, 3266.52) = .25$ $p = .781$ | $p = .962$ | $p = .764$ | $p = .889$ |
| The Netherlands | $F(2, 6103) = 4.06$ $p = .017$ | $F(2, 2798.71) = 8.98$ $p < .001$ | $p = .734$ | $p = .001$ | $p < .001$ |
| United Kingdom | $F(2, 7168) = 2.90$ $p = .055$ | $F(2, 4415.46) = 4.19$ $p = .015$ | $p = .057$ | $p = .992$ | $p = .030$ |

Table 5: Per country, the mean (*M*) and standard deviation (*SD*) of institutional trust, as well as the number of participants (*N*), for each measurement moment

| Country | Measurement moment | M | SD | N |
|---|---|---|---|---|
| Belgium | Pre | 4.97 | 2.15 | 1859 |
| | Post-1 | 5.29 | 2.05 | 1768 |
| | Post-2 | 5.37 | 2.04 | 1791 |
| Czech Republic | Pre | 3.98 | 2.26 | 2927 |
| | Post-1 | 4.51 | 2.24 | 2000 |
| | Post-2 | 4.52 | 2.20 | 2348 |
| Denmark | Pre | 7.36 | 1.80 | 3050 |
| | Post-1 | 6.33 | 2.52 | 41 |
| | Post-2 | 7.45 | 1.74 | 1553 |
| Finland | Pre | 7.53 | 1.63 | 2300 |
| | Post-1 | 7.55 | 1.67 | 1770 |
| | Post-2 | 7.44 | 1.67 | 1866 |
| Germany | Pre | 6.15 | 2.09 | 4532 |
| | Post-1 | 6.40 | 2.00 | 1061 |
| | Post-2 | 6.28 | 2.09 | 2998 |
| Hungary | Pre | 4.71 | 2.49 | 1562 |
| | Post-1 | 3.94 | 2.36 | 1502 |
| | Post-2 | 4.87 | 2.30 | 1533 |
| Ireland | Pre | 5.78 | 2.13 | 3342 |
| | Post-1 | 5.61 | 2.22 | 690 |
| | Post-2 | 5.78 | 1.99 | 1758 |
| Norway | Pre | 6.79 | 1.89 | 1541 |
| | Post-1 | 7.01 | 1.88 | 1544 |
| | Post-2 | 7.15 | 1.75 | 1610 |
| Spain | Pre | 4.83 | 2.22 | 1646 |
| | Post-1 | 5.26 | 2.06 | 1621 |
| | Post-2 | 5.55 | 2.03 | 1848 |
| Sweden | Pre | 6.45 | 1.91 | 2748 |
| | Post-1 | 6.74 | 1.85 | 547 |
| | Post-2 | 6.53 | 1.93 | 1829 |
| Switzerland | Pre | 6.61 | 1.89 | 1775 |
| | Post-1 | 6.59 | 1.84 | 1774 |
| | Post-2 | 6.67 | 1.96 | 1480 |
| The Netherlands | Pre | 5.70 | 1.84 | 2493 |
| | Post-1 | 5.80 | 1.76 | 2622 |
| | Post-2 | 5.94 | 1.68 | 989 |
| United Kingdom | Pre | 5.63 | 2.08 | 1884 |
| | Post-1 | 5.51 | 2.10 | 2936 |
| | Post-2 | 5.75 | 2.14 | 2334 |

Table 6: Per country, Levene's tests, Welch's one-way ANOVAs and Games-Howell post-hoc tests for the differences in *institutional* trust between the ESS measurement moments

| Country | Levene's test | One-way ANOVA | Pre-Post 1 | Pre-Post 2 | Post 1-Post 2 |
|---|---|---|---|---|---|
| Belgium | $F(2, 5449) = 6.49$<br>$p = .002$ | $F(2, 3632.19) = 20.15$<br>$p < .001$ | $p < .001$ | $p < .001$ | $p = .482$ |
| Czech Republic | $F(2, 7310) = 1.17$<br>$p = .309$ | $F(2, 4623.39) = 50.85$<br>$p < .001$ | $p < .001$ | $p < .001$ | $p = .984$ |
| Denmark | $F(2, 4676) = 7.62$<br>$p < .001$ | $F(2, 108.98) = 3.80$<br>$p = .025$ | $p = .026$ | $p = .892$ | $p = .023$ |
| Finland | $F(2, 5953) = .01$<br>$p = .993$ | $F(2, 3843.39) = 2.19$<br>$p = .112$ | $p = .939$ | $p = .199$ | $p = .134$ |
| Germany | $F(2, 8667) = 1.48$<br>$p = .229$ | $F(2, 2972.50) = 7.60$<br>$p = .001$ | $p = .001$ | $p = .028$ | $p = .237$ |
| Hungary | $F(2, 4620) = 7.16$<br>$p = .001$ | $F(2, 3077.40) = 68.46$<br>$p < .001$ | $p < .001$ | $p = .120$ | $p < .001$ |
| Ireland | $F(2, 5830) = 7.67$<br>$p < .001$ | $F(2, 1835.59) = 1.98$<br>$p = .138$ | $p = .125$ | $p = .995$ | $p = .171$ |
| Norway | $F(2, 4707) = 4.50$<br>$p = .011$ | $F(2, 3122.96) = 15.95$<br>$p < .001$ | $p = .004$ | $p < .001$ | $p = .053$ |
| Spain | $F(2, 5168) = 6.60$<br>$p = .001$ | $F(2, 3402.15) = 49.42$<br>$p < .001$ | $p < .001$ | $p < .001$ | $p < .001$ |
| Sweden | $F(2, 5157) = 3.09$<br>$p = .046$ | $F(2, 1544.89) = 6.05$<br>$p = .002$ | $p = .002$ | $p = .315$ | $p = .050$ |
| Switzerland | $F(2, 5118) = 4.69$<br>$p = .009$ | $F(2, 3327.81) = .43$<br>$p = .654$ | $p = .976$ | $p = .769$ | $p = .642$ |
| The Netherlands | $F(2, 6117) = 10.63$<br>$p < .001$ | $F(2, 2810.81) = 6.86$<br>$p = .001$ | $p = .118$ | $p = .001$ | $p = .075$ |
| United Kingdom | $F(2, 7204) = .46$<br>$p = .631$ | $F(2, 4460.68) = 8.62$<br>$p < .001$ | $p = .111$ | $p = .161$ | $p < .001$ |

Table 7: Per country, the mean (*M*) and standard deviation (*SD*) of social trust, as well as the number of participants (*N*), for each measurement moment

| Country | Measurement moment | M | SD | N |
|---|---|---|---|---|
| Belgium | Pre | 4.86 | 1.85 | 1859 |
| | Post-1 | 4.89 | 1.71 | 1768 |
| | Post-2 | 5.06 | 1.72 | 1791 |
| Czech Republic | Pre | 4.45 | 1.87 | 2927 |
| | Post-1 | 4.80 | 2.03 | 2000 |
| | Post-2 | 4.68 | 2.00 | 2348 |
| Denmark | Pre | 6.69 | 1.59 | 3050 |
| | Post-1 | 6.54 | 1.82 | 41 |
| | Post-2 | 6.65 | 1.48 | 1553 |
| Finland | Pre | 6.40 | 1.49 | 2300 |
| | Post-1 | 6.31 | 1.53 | 1770 |
| | Post-2 | 6.34 | 1.51 | 1866 |
| Germany | Pre | 5.19 | 1.71 | 4532 |
| | Post-1 | 5.20 | 1.77 | 1061 |
| | Post-2 | 5.19 | 1.74 | 2998 |
| Hungary | Pre | 4.50 | 2.11 | 1562 |
| | Post-1 | 4.27 | 1.90 | 1502 |
| | Post-2 | 4.65 | 1.91 | 1533 |
| Ireland | Pre | 5.93 | 1.82 | 3342 |
| | Post-1 | 5.59 | 1.82 | 690 |
| | Post-2 | 5.84 | 1.58 | 1758 |
| Norway | Pre | 6.45 | 1.50 | 1541 |
| | Post-1 | 6.55 | 1.48 | 1544 |
| | Post-2 | 6.55 | 1.42 | 1610 |
| Spain | Pre | 4.84 | 1.83 | 1646 |
| | Post-1 | 4.77 | 1.79 | 1621 |
| | Post-2 | 4.99 | 1.50 | 1848 |
| Sweden | Pre | 6.36 | 1.52 | 2748 |
| | Post-1 | 6.33 | 1.54 | 547 |
| | Post-2 | 6.20 | 1.59 | 1829 |
| Switzerland | Pre | 5.93 | 1.52 | 1775 |
| | Post-1 | 5.88 | 1.64 | 1774 |
| | Post-2 | 5.88 | 1.67 | 1480 |
| The Netherlands | Pre | 5.70 | 1.84 | 2493 |
| | Post-1 | 5.80 | 1.76 | 2622 |
| | Post-2 | 5.94 | 1.68 | 989 |
| United Kingdom | Pre | 5.46 | 1.60 | 1884 |
| | Post-1 | 5.58 | 1.63 | 2936 |
| | Post-2 | 5.51 | 1.71 | 2334 |

Table 8: Per country, Levene's tests, Welch's one-way ANOVAs and Games-Howell post-hoc tests for the differences in *social* trust between the ESS measurement moments

| Country | Levene's test | One-way ANOVA | Pre-Post 1 | Pre-Post 2 | Post 1-Post 2 |
|---|---|---|---|---|---|
| Belgium | F(2, 5469) = 6.76<br>p = .001 | F(2, 3645.66) = 6.25<br>p = .002 | *P* = .823 | *p* = .003 | *p* = .016 |
| Czech Republic | F(2, 7414) = 14.00<br>p < .001 | F(2, 4581.86) = 10.36<br>p < .001 | *p* < .001 | *p* = .021 | *p* = .173 |
| Denmark | F(2, 4686) = 3.79<br>p = .023 | F(2, 112.88) = .71<br>p = .494 | *p* = .909 | *p* = .487 | *p* = .974 |
| Finland | F(2, 5963) = .49<br>p = .615 | F(2, 3850.00) = 2.04<br>p = .130 | *p* = .135 | *p* = .332 | *p* = .873 |
| Germany | F(2, 8692)= 1.18<br>p = .307 | F(2, 2903.58)= .058<br>p = .943 | *p* = .990 | *p* = .961 | *p* = .951 |
| Hungary | F(2, 4703) = 9.36<br>p < .001 | F(2, 3133.98) = 17.10<br>p < .001 | *p* = .003 | *p* = .050 | *p* < .001 |
| Ireland | F(2, 5852) = 19.45<br>p < .001 | F(2, 1868.13) = 10.27<br>p < .001 | *p* < .001 | *p* = .131 | *p* = .005 |
| Norway | F(2, 4716) = 2.61<br>p = .073 | F(2, 3133.82) = 2.35<br>p = .096 | *p* = .138 | *p* = .145 | *p* = .996 |
| Spain | F(2, 5251) = 35.80<br>p < .001 | F(2, 3399.83) = 8.66<br>p < .001 | *p* < .001 | *p* = .006 | *p* = .608 |
| Sweden | F(2, 5168) = 1.63<br>p = .196 | F(2, 1534.57) = 5.78<br>p = .003 | *p* = .932 | *p* = .002 | *p* = .178 |
| Switzerland | F(2, 5124) = 9.53<br>p < .001 | F(2, 3329.16) = .69<br>p = .502 | *p* = .501 | *p* = .019 | *p* < .001 |
| The Netherlands | F(2, 6130) = .46<br>p = .633 | F(2, 2716.16) = 1.04<br>p = .353 | *p* = .999 | *p* = .386 | *p* = .358 |
| United Kingdom | F(2, 7215) = 5.10<br>p = .006 | F(2, 4472.18) = 2.86<br>p = .057 | *p* = .048 | *p* = .589 | *p* = .376 |

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