



Terrorism and opinions towards migration

Thesis presented by
LECLERC Jeff

Supervisor
DOCQUIER Fr d ric

Reader
MARIANI Fabio

Academic year 2017 – 2018

Master 120 en Sciences  conomiques, Orientation g n rale, Finalit  sp cialis e

Acknowledgments

In the beginning, I would like to thank my thesis supervisor Frédéric Docquier of the Economic School of Louvain at the Université catholique de Louvain. The Professor Docquier was always available when I encountered problems or had questions related to the thesis. He was always reachable to give me a hand or help me find a solution whenever I was stuck at some point.

Furthermore, I would also like to thank the assistant of my supervisor, Riccardo Turati, who was involved in this thesis by creating the initial database, on which the whole study is based. In addition, without his expertise, input, participation and motivation, the realisation of this thesis would not have been possible.

I would also like to acknowledge Professor Fabio Mariani of the Economic School of Louvain at Université catholique de Louvain as reader of this thesis.

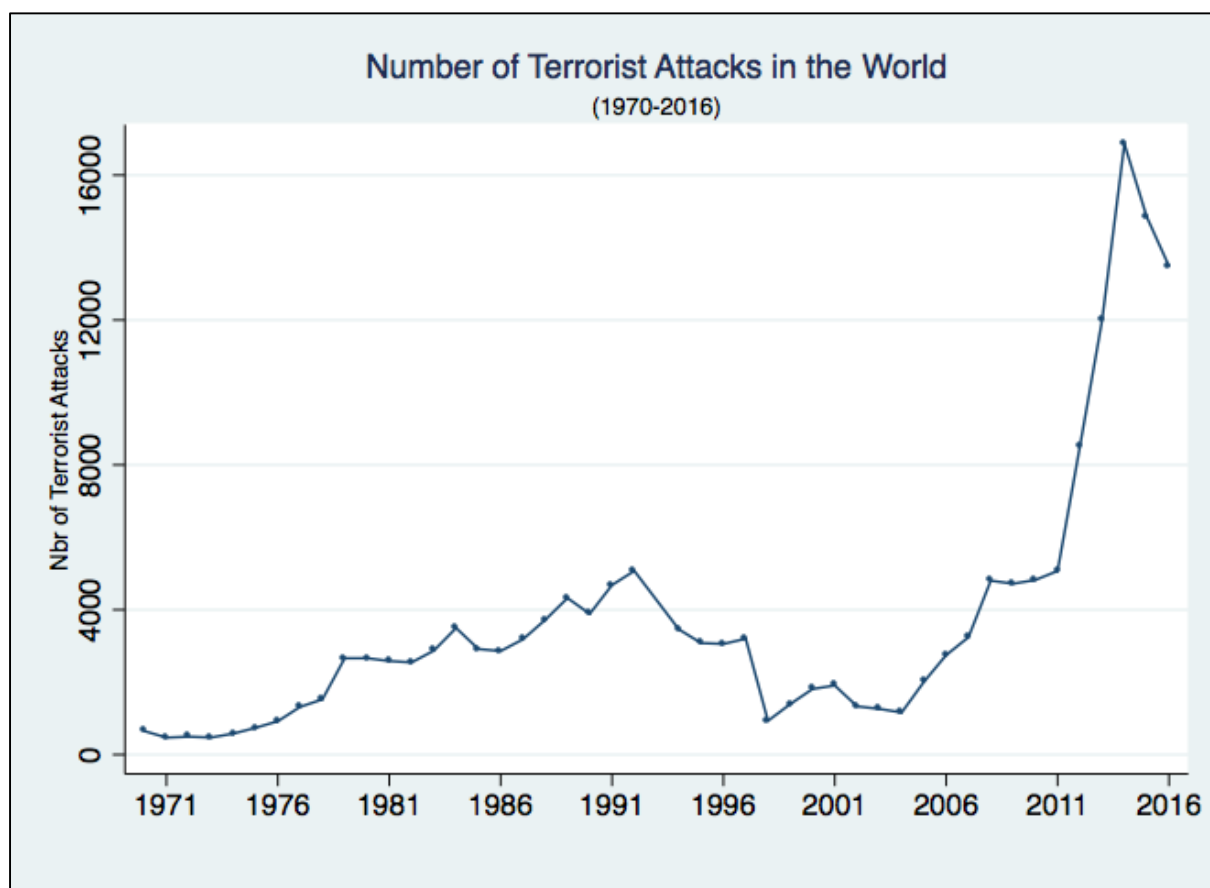
Finally, I need to express my greatest gratitude to my parents, my grandmother, my best friends and my girlfriend, Amy, for providing me with full support and encouragement through all my years of study and the writing of this thesis. Without their support and motivation the accomplishment of all those achievements, over the last years, would not have been possible.

Index

1. Introduction	2
2. Description of the data and the model	8
2.1. <i>Description of the data</i>	8
2.2. <i>Description of the model</i>	16
3. Results	18
3.1. <i>Logistic Regression without fixed effects</i>	18
3.2. <i>Logistic Regression with fixed effects</i>	20
4. Robustness checks	23
4.1. <i>Developed vs developing countries</i>	23
4.2. <i>EU15</i>	26
4.3. <i>Sum of the last 3 years' terrorist attacks</i>	29
4.3.1. <i>Full sample analysis</i>	29
4.3.2. <i>Developed country analysis</i>	31
4.3.3. <i>Developing country analysis</i>	33
4.3.4. <i>EU15 country analysis</i>	34
4.4. <i>Eliminate outliers, focus on the rare attacks</i>	35
4.4.1. <i>Full sample analysis</i>	35
4.4.2. <i>Developed country analysis</i>	38
4.4.3. <i>EU15 country analysis</i>	41
4.4.4. <i>Developing country analysis</i>	43
4.5. <i>Different expressions for the terrorist attacks variable</i>	46
4.5.1. <i>Full sample analysis</i>	46
4.5.2. <i>Developed country analysis</i>	49
4.5.3. <i>Developing country analysis</i>	52
4.5.4. <i>EU15 country analysis</i>	55
4.6. <i>Terrorist attack variable as a binary variable</i>	58
4.6.1. <i>Full sample analysis</i>	58
4.6.2. <i>Developed country analysis</i>	60
4.6.3. <i>Developing country analysis</i>	63
4.6.4. <i>EU15 country analysis</i>	64
5. Conclusion	65
6. Bibliography	68

1. Introduction

In this thesis, we focus on the resident's opinion towards migration after a terrorist attack has happened in the country. The question taken from the *Gallup World poll* to identify the opinion of the people living in a specific country towards migration is the following one: “*In your view, should immigration be kept at its present level, increased, decreased?*” Over time we see that people become more anti-immigration especially in high-income countries (Facchini and Mayda (2008)). Nevertheless, the reason why is not clearly defined yet, one possibility could be the increase of various terrorist attacks over the last years. This increase in terrorist attacks is a general fact like it can be seen in the *Graph 1.1*, even that very often those incidents do not have as consequence, a lot of injured or dead people, they still count as a terrorist attack. To visualize more in detail where and how much the number of terrorist related incidents has increased over our period of study is shown in the next section and in the *Appendix A.2.1.6*.



Graph 1.1: Number of terrorist attacks in the world (1970 – 2016)¹

A terrorist attack is defined as the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation. For an incident to be considered as a terrorist attack in the *Global Terrorism Database* it has to meet all of the three following criteria. The first one is that the attack must be intentional, which means that the consequences cannot be considered as a coincidence. The

¹ University of Maryland. (2017, June). “Overview of the GTD”. <http://www.start.umd.edu/gtd/search/BrowseBy.aspx?category=country>

second one is that the attack must include some level of violence or immediate threat of violence. The last one is that the perpetrators of the attack must be subnational actors which means that the terrorist attacks against the state are excluded. When those three criteria are met the incident must also represent at least two of the three following criteria. One is that the attack must be aimed to obtain a political, economic, religious or social goal. The second one is that there must be evidence of an intention to coerce, intimidate, or convey some other message to a larger audience (or audiences) than the immediate victims. The third one is that the action must be outside the context of legitimate warfare activities.²

Some years ago, a lot of people in Central European countries were not much concerned about terrorist attacks, although that changed in the last few years. The reason for this change is very simple, in the last years, major terrorist attacks have happened to Central European countries. Some of these attacks are well known and everybody realised that severe incidents like those can also happen to themselves and not just to people living in countries where terrorist attacks are more common. Most of these attacks are very recent so they will not have a big influence on our dataset, but they help to understand the main idea.

Starting with the terrorist attack in Nice, France, where a man drove a truck in a mass of people and killed nearly 100 people in 2016³. Another truck incident happened in Berlin, Germany, where a man ran with the truck in a Christmas market and killed around 10 people, also in 2016⁴. We know two other attacks very well that happened in France, but a year earlier than those two mentioned before. The first one happened in January 2015 and is well known because the terrorist said that he was avenging the headline of a newspaper: *Charlie Hebdo*, and killed more than 10 people⁵. The other one was a more severe terrorist attack, where around 130 people lost their life and a lot more civilians got injured. This attack was composed of six different coordinate incidents around Paris, but the most “famous” attack was the one that happened at the Bataclan theatre, where most of the people got killed⁶. Besides this coordinated attack in France we also know another coordinated attack which happened in Brussels, Belgium, in 2016. Two bombs exploded at the Zaventem airport and another one at the Maalbeek metro station, 32 people were killed and more than 300 got injured⁷. Those are the most recent attacks which concerned the Central European countries in the last years, very often those attacks happened without advance warning and the residents were surprisingly shocked that attacks like those could happen just around the corner where they live. In the end, very often you hear in the media that a people link those attacks to the high immigration level which is even increasing over the last years.

² University of Maryland. (2017, June). “CODEBOOK: INCLUSION CRITERIA AND VARIABLES”.
<http://www.start.umd.edu/gtd/downloads/Codebook.pdf>

³ See “Nice killer visited Italy’s ‘Little Calais’ as he was radicalised over a year before July 14 massacre”. *The Telegraph*. 14 October, 2016. Retrieved 9 May 2018

⁴ See Eddy, Melissa (21 December 2016). “Germany Seeks Tunisian Tied to Berlin Christmas Market Attack”. *The New York Times*. Retrieved 9 May 2018

⁵ See “French security forces kill gunmen, end terror rampage”. 9 January, 2015. Retrieved 9 May 2018

⁶ See “Paris attacks death toll rises to 130”. RTE News. 20 November, 2015. Retrieved 9 May 2018

⁷ See “Brussels Attacks Death Toll Lowered To 32”. The Huffington Post. 29 Mars, 2016. Retrieved 9 May 2018

Everybody knows that the opinion towards migration varies a lot through the world, general numbers are that 34% of the people would like to see the level of immigration decrease, 21% increased and 22% to keep it at its present level. This is also the reason why we create some subsamples to see if this might change our results. For example, in Europe more than 50% of the residents suggest that the level of immigration should be reduced, it is seen as the number one issue ahead of terrorism. On the other hand, in the United States, over 60% of the people suggest that the level of immigration should be increased compared to only a little bit more than 20% in Europe. In Facchini and Mayda (2008), they find that around 10% of the respondents of 20 high and middle-income countries wanted to increase the level of immigration.

Nevertheless, we cannot forget that public opinions may not be representative, because everybody should have equal chances to participate, else the results may be biased, but it is true that this is very often not the case. If this is not respected, our sample would be biased and the results would not be robust. In addition, not all the respondents interpret the question in the same manner, so that for example the word “migration” has various meanings for different people. Last, the answers may not show the reason why the respondents have a certain opinion about migration⁸. Nevertheless, in general, we can say that public opinion data taken from the *Gallup World poll* is representative, at least for the native population.

Furthermore, one could think that the rise in terrorist attacks could be a major channel that changes people’s opinion towards migration. Very often, due to the media which links terrorist attacks to Muslim people⁹, terrorist attacks are linked to the immigrants in the country, with the large increase in the level of migration over the last years we also observe a big rise in the number of terrorist attacks. Of course those attacks will not be the only reason which conducts people to change their opinion about migration. Nevertheless, we expect that it has a positive influence on their opinion so that they desire a lower level of immigration after the terrorist attacks.

A general number of how many people are migrating each year is shown in Goldin and Reinert (2006), where the number is around 11 million people per year. Nevertheless, this means that only one out of six hundred people is migrating. A reason for this could be the restrictive migration policies in place. In Facchini and Mayda (2008), they find a very low fraction of people who were hostile to immigration in 2003, but the fraction was a little bit higher than in 1995. The evidence of this survey mentions that people are on average very opposed to migration in a big majority of the countries. Even that maybe the country as a whole might gain from migration, natives will be affected by the increasing number of immigrants and see their income reduced, for example. This idea corresponds to the restrictive policies in place, but nevertheless, those restrictive policies cannot explain the increase of migration over the last years, so there must be other reasons why people migrate much more. Public opinions, for example, play a very large role on how people think about migration and the immigrants.

⁸ Migration Data Portal. (2018, March 23). “Public opinion on migration”. <https://migrationdataportal.org/themes/public-opinion-migration>

⁹ See Boyle T., Schmidt J., Cohen R., Vedantam S., Penman M., Klahr R. (2017, June 19). [When Is It 'Terrorism'? How The Media Cover Attacks By Muslim Perpetrators](#). Retrieved June 4 2018

We know that people's attitude towards migration can be influenced by a lot of different factors, like religion, age, gender, origin or skill level of the immigrants, but it seems reasonable to test if the terrorist attack's influence has the power to change people's opinion, so that they become more anti-immigration¹⁰. The hypothesis we test in this thesis is the following one: after terrorist attacks have occurred in a country, we expect people to be more anti-immigration than they were before the attacks or if no attacks had happened. To do so, we analyse the whole sample but we also create three different subsamples for the developed, developing and the EU15 countries too might pick up some differences. We expect that the respondents from diverse parts in the world react in a different manner, in terms of their opinion about migration, on terrorist attacks and their consequences, depending on what they have experienced already. More precisely, it could be that those who experienced a lot of attacks have a different opinion about migration than those who are not used to a lot of attacks. The models we use are the normal logistic and the weighted logistic regression, in the second we control for the statistical weight of an individual in the country. To do so most of the data comes from the *Gallup World poll* or the *Global Terrorism Database*. The rest of the variables, which do not come directly from one of these databases, are modified variables from the databases or have been created on our own. Furthermore, we run different robustness checks where we modify the variable which describes the terrorist attacks to see what, related to those incidents, is the most important factor or what has the biggest influence on people to change their opinion about migration. So, we already know that the number of terrorist attacks rose a lot over the last years and that the opinion towards migration became more anti-immigration. Nevertheless, we have no proof that the terrorist attacks are a reason why people change their opinion towards migration.

Regarding some other literature reviews talking about people's opinion towards migration, we get some further insight on what influences people to become more anti-immigration. For example, in Facchini and Mayda (2006), if skilled and unskilled labour are complements in a country, skilled native workers favour a higher level of immigration if they are more skilled than the immigrants. Besides, if they have the same skill level, natives desire to reduce the level of immigration because they fear competition and a reduction of their income. The same result is observed in Mayda (2006), natives with a higher skill level than immigrants are less anti-immigration. Similarly, rich countries are less anti-immigration where native people have a higher skill level than the immigrants. Also in the same paper we find that a higher crime level in the country comes with a higher degree of anti-immigration for the people living in this country. In addition, people's attitude towards migration is influenced by security and cultural considerations but also by their feelings towards refugees and immigrants.

Furthermore, regarding the education level of the people living in the country, in Scheve and Slaughter (2001), we observe that people with a higher education level are less anti-immigration than those with a lower education level, because their labour market position is less vulnerable. This idea is consistent with the idea mentioned in Facchini and Mayda (2006) that low-skilled

¹⁰ Migration Data Portal. (2018, March 13). "Public opinion on migration". <https://migrationdataportal.org/themes/public-opinion-migration>

workers desire a lower level of immigration, because they fear labour market competition. In Dustmann and Preston (2005), find that the welfare situation of the people is a bigger factor that influences people's opinion towards migration than labour market competition. Furthermore, in Facchini and Mayda (2009) we find that the origin of the immigrants has a large influence on people's opinion towards migration and that, like mentioned before, the welfare state of the individual has a bigger effect than the labour market. In addition, the individual skill and income level have opposite effects on people's opinion towards migration, they represent the labour market and the welfare state channel. High income levels and low levels of education have as consequence that people are more anti-immigration. The same is mentioned in Dustmann and Preston (2001), where they find that a higher income of the individuals living in the country has as consequence that people are less tolerant towards migration so that they desire to reduce the immigration level in the country. In addition, they also find that people with a higher education are more tolerant towards immigrants.

Another point which highlights why people are less tolerant towards migrants is presented in Krueger and Pischke (1997), where they observe that a high concentration of minorities in the country may lead to outbreaks of hostility against those minorities. A reason for this attitude could be affected by the ethnic composition of the locality where the individuals live. In Dustmann and Preston (2001), people older than 18 and women are less anti-immigration than men, the same can be said about Catholics compared to other religious groups. In the paper, they conclude that high concentrations of ethnic minorities probably lead to hostile attitudes, at least for England.

Furthermore, by looking at the *Appendix A.1.1*, it can be identified that people desire to reduce the immigration level more than they desire to increase or keep it at the level it is, the years the study has been conducted. In addition, this fact is robust and does not change if we look at the subsamples. The only thing that changes, for the subsamples, is how and how much people want to modify the immigration level. Therefore, we can say that the desire to reduce the level of immigration is much stronger for the developed and the EU15 countries than for the developing countries. Besides the fact that those subsamples desire less immigration, also a large part of them says that they would like to keep the immigration level as it is the year the study has been conducted. This opinion is more pronounced for the developed and the EU15 countries than for the developing countries. Nevertheless, we can also see in the data for the developing countries that a much larger part of the various respondent's desire to increase the level of immigration compared to the other two subsamples.

After the general results and the various robustness checks created and tested, we can say that the terrorist attacks are not a major driver which conducts residents of a country to be more anti-immigration after terrorist attacks have happened in this country. Even that for most of the tests we find that those incidents do not lead people to be more-anti-immigration, we also need to mention that we find some other results which give us hope that we might find some trueness

in the hypothesis we test. If the variable defining the terrorist attacks is modified a little bit, we can get the results we expected.

First, we define the terrorist attack variable as the consequences in dead and injured people of those attacks. For these definitions of the terrorist attacks, we find that, for the full sample and the developing countries, the variables remain with a positive coefficient after introducing the fixed effects, so that people are more anti-immigration afterwards. In addition, the same is observed for the developed countries but only regarding the consequences in deaths, for the consequences in injured people, the variable is insignificant.

Second, when we define the terrorist attack variable as a binary variable, we also find that, for the full sample and the developing countries, the influence of this variable on the dependent variable is positive. So that people are more anti-immigration after observing at least one incident per year. In this case, it does not matter if we survey hundreds of attacks per year or only one, the only thing that matters is the fact that we detect attacks per year.

This thesis is organized as follows. After the short introduction highlighting the importance of the study and exposing some major facts will follow a part where the data and variables will be explained followed by the section which describes and explains the models used to test the hypothesis. After this descriptive part, we will focus on the empirical analysis starting with the analysis of our general results followed by various robustness checks trying to put more weight on the conclusions drawn from the first outcome. In the end, we will finish the thesis with a short conclusion which highlights the main findings and outcomes that can be drawn from our analyses.

2. Description of the data and the model

2.1. Description of the data

First, before the analysis of the different variables, we will give some general information about our sample. Starting with some information regarding the countries, we can say that our study is based on 142 different countries around the world, represented by the **Country** variable. Nevertheless, we need to add that those are not all the countries that we could have analysed. Some countries will not be included in this study because for some of them no study has been conducted from the *Gallup World poll* for our period of analysis. Another reason possible why the country is not included in the study is that there were no records about terrorist attacks between 2006 and 2016 in the *Global Terrorism Database*. Besides, that some countries are not taken into account for our study, we are looking at a sample with 280570 different observations. In addition, we can say that for the developing countries we have 238076 observations, for the developed countries 42494 and for the EU15 countries we have a subsample of 27000 observations. We can clearly say that most of our observations in the full sample come from the developing country sample, so we also expect that most of the results regarding the full sample will be driven by the results from this larger subsample. Another

important information that needs to be added is the fact that the study will be based on the period from 2006 to 2016, so more in detail, over 11 years, **Year**. We choose this precise period of analysis because the *Gallup World poll* study has been conducted for those years.

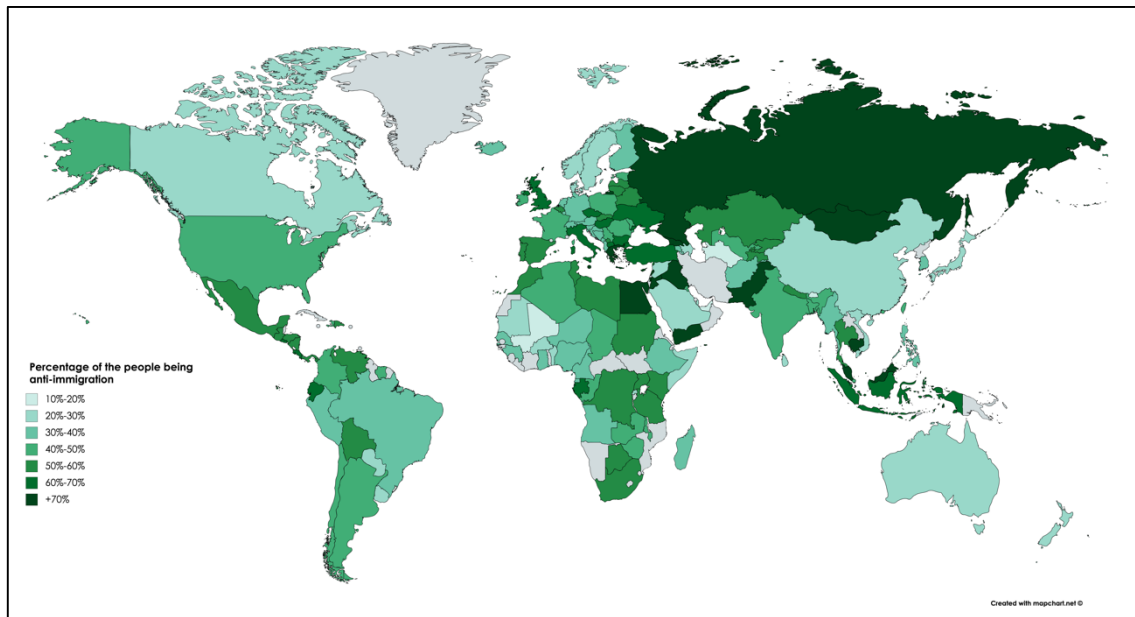
Second, after this general information about the database, we can also give some further insight on the people participating in the study, who are those who give their opinion about the immigration level in the country. Starting with the fact that the youngest people participating in the study are still teenagers, they are only 15 years old. Continued by the observation that the oldest people participating are 100 years old or older, but they represent only 0,25% of the whole sample. Furthermore, we can say that most of the people are aged between 20 and 65, they represent a little bit more than 78% of the full sample (*Appendix A.2.1.1*). Furthermore, we can say that the mean age of our sample is 43 years of age and the median value is at 40 years. Besides, regarding men and women in our sample, we observe that there are more women (55,32%) participating in the study than men (44,68%) (*Appendix A.2.1.2*). In addition, like it will be mentioned in the *Appendix A.2.1.10*, women to be more anti-immigration than men.

In addition, we can say that everybody living in the country is allowed to participate in the study, not only natives, but it can also be that immigrants are participating.

Starting with the variable describing people's opinion towards migration, which is probably the most important and also the dependent variable of the study. Like we mentioned before, this data comes from the *Gallup World poll* using the question: "*In your view, should immigration be kept at its present level, increased, decreased?*" Three different answer possibilities were available, already suggested in the question itself. To define our variable so that we can use it to test our hypothesis, we modified the answer possibilities to get a binary variable. This transformation of the variable, to act as a binary variable, is necessary because the logistic regressions, we perform afterwards, can only be executed with a dependent binary variable. It analyses the probabilities a person has to be either the one or the other, anti-immigration or not. The variable's name for the logistic regressions is **opinion_immigr** and takes the value 1 if the residents responded that they desire a reduction in the number of immigrants and 0 if they want to increase or keep the level of immigrants like it is the year the study has been conducted. Furthermore, we excluded from our study those who refused to answer and those where they do not know the result.

In addition, how people think about the immigration level in each country separately is shown in a table in the *Appendix A.2.1.3*. Even there we see that, in general, people are more anti-immigration than pro-immigration or indifferent regarding the migration situation in the country. Furthermore, to see how high the level of anti-immigration is per country can be seen in the *Map 1.1* and in the maps in the *Appendix A.2.1.4*. On those maps you can clearly identify that for some countries, they have become more anti-immigration over time. Nevertheless, we cannot identify this relation for all the countries because for some there are just 1 or 2 studies done over the whole sample.

The next variable explained, the first control variable, will be the one capturing the number of terrorist attacks, **teratt**. This variable will be in the focus through the whole thesis because it is the most important control variable and is modified several times. This variable is defined as a numeric variable which captures the number of terrorist attacks per country per year¹¹. Nevertheless, we need to mention that we only include the incidents where there is no doubt, which means that at the moment the data was added to the database, it is absolutely sure that we are talking about a terrorist attack. The way the *Global Terrorism Database* defines a terrorist attack has already been explained in the introduction.

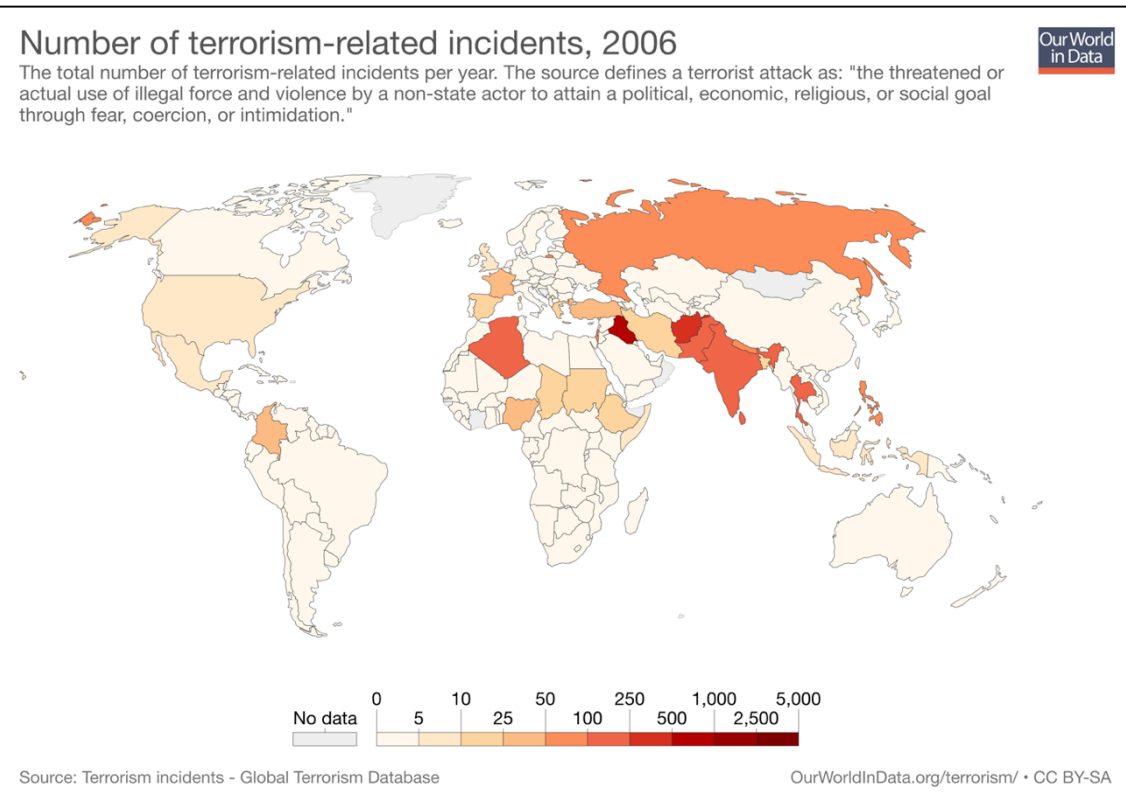


Map 1.1: Percentage of anti-immigration per country (2006-2016)

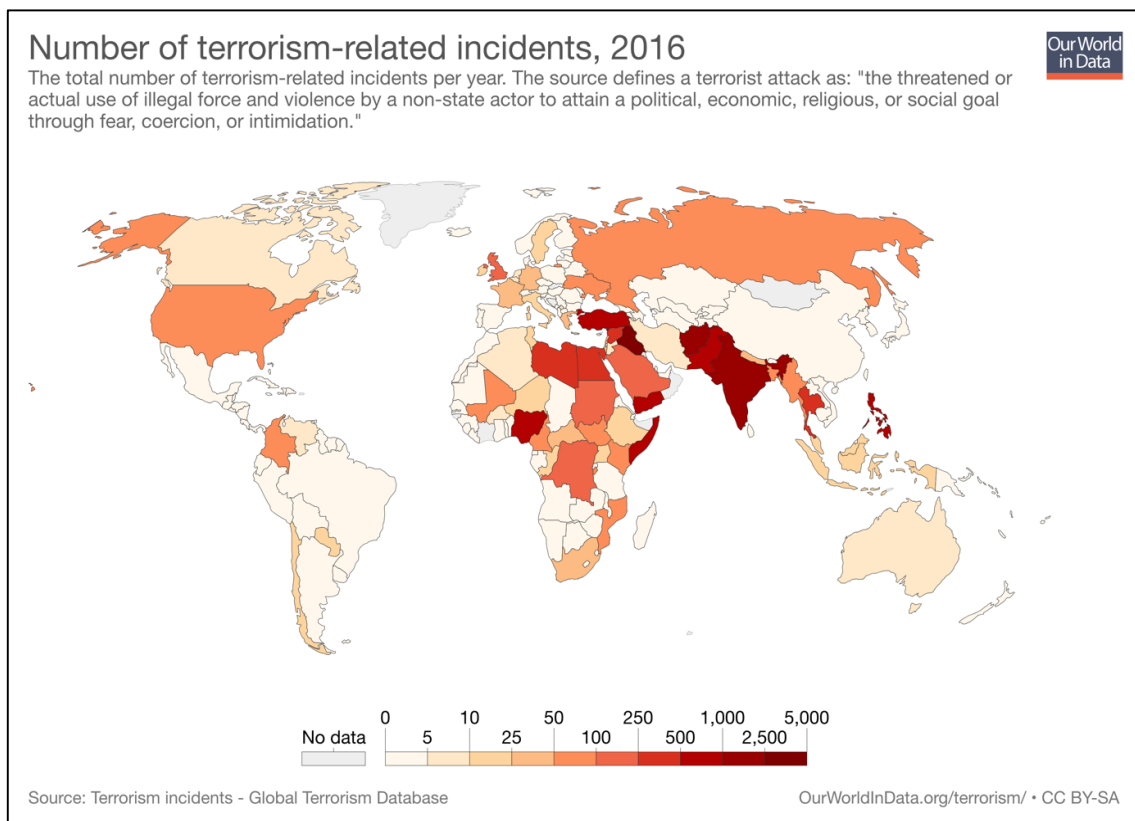
From our data in the *Appendix A.2.1.5*, we can see that for most of the countries the database reports 0 (45,11%) or 1 terrorist attack (12,04%) per year. In addition, only for around 10% of the data we observe more than 100 attacks per year. In addition, we also look at some outliers which need to be mentioned, for different years we observe between 1000 and nearly 2000 attacks for a country. Hence, they are really big outliers and only around 3% of the data reports show countries with more than 500 incidents per year.

We know that the number of terrorist attacks has increased over our period of study, precise statistics on how much the number of terrorist attacks has increased can be seen in the *Appendix A.2.1.6*. In 2006 we observe a little bit less than 2400 terrorist attacks per year compared to a little bit more than 11600 in 2016. Furthermore, we need to mention that for the last two years, the number of terrorist attacks has been decreasing again so that we observed the maximum of incidents in the year 2014 with a little bit more than 14000 attacks around the world. To see how the number of terrorist attacks evolved in each country over time is shown on the following maps for the years 2006 and 2016. The map regarding the year 2014, where we observe most of the attacks, is in the *Appendix A.2.1.7*.

¹¹ University of Maryland. (2017, June). "Overview of the GTD". <http://www.start.umd.edu/gtd/search/BrowseBy.aspx?category=country>



Map 1.5: Number of terrorist attacks in the world in 2006¹²



Map 1.7: Number of terrorist attacks in the world in 2016¹³

¹² Roser, M. Nagdy, M. and Ritchie, H. (2018). – "Terrorism". Published online at [OurWorldInData.org](https://ourworldindata.org/terrorism). Retrieved from: <https://ourworldindata.org/terrorism> [Online Resource]

¹³ ibidem

For later robustness checks we create different variables that replace the number of terrorist attacks variable. For the three following variables which will replace the variable describing the terrorist attacks, we can say that they originate from the *Global Terrorism Database*. For instance, we substitute the number of terrorist attacks variable by a variable that captures the fatalities during those attacks, **fatalities**. We are talking about a binary variable which takes the value 1 if we witness one or more dead people during the incident and 0 if none are observed. After looking at the fatalities during a terrorist attack we focus on a more eased outcome, the injuries. Another binary variable is created to replace the number of terrorist attacks variable, **injuries**, which takes the value 1 if we note at least one injured person during the incidents and 0 if none are detected. In the *Appendix A.2.1.8.*, we can see that besides the fact that the number of terrorist attacks, also the number of dead and injured people as consequence of those attacks has strongly increased in the world over the last years.

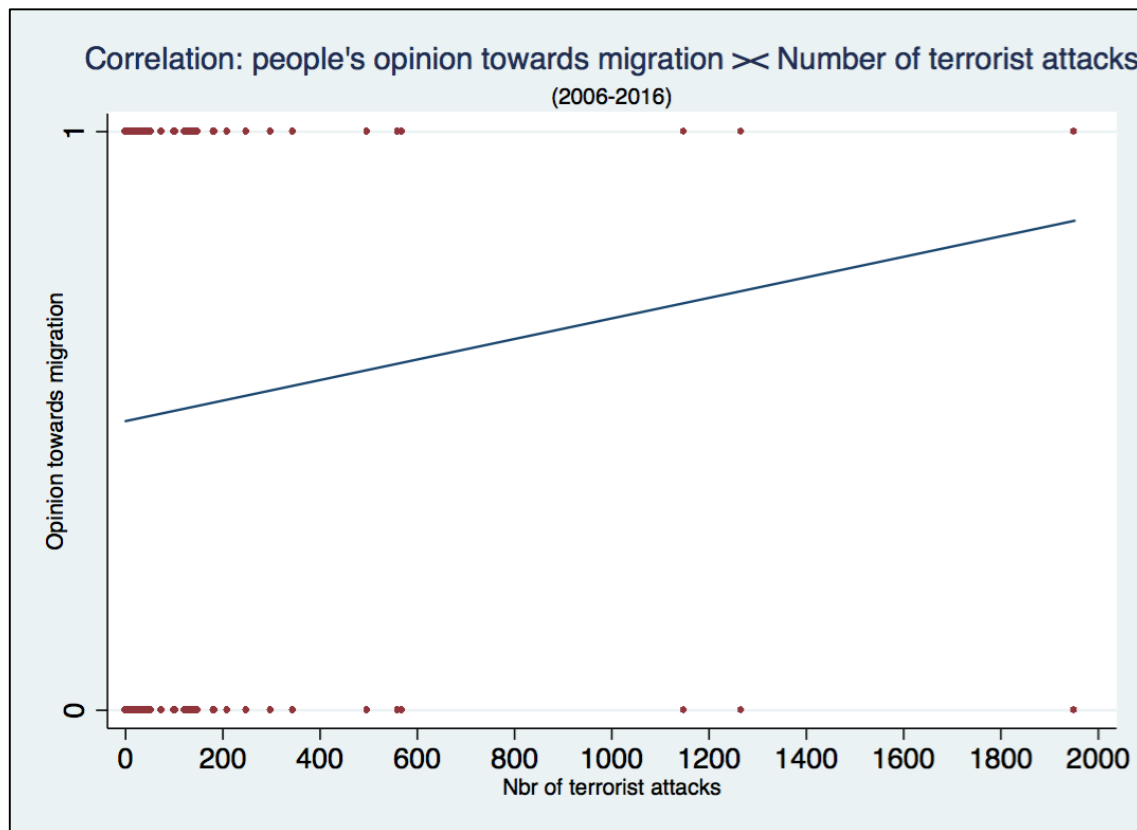
The third possibility would be to look at the targets of those attacks. For this, we create another binary variable, **pr_cit_pro**, which will have the value 1 if the target of the attack was private citizens and property and 0 if the target was something else.

For further robustness checks, we modify the variable which represents the number of terrorist attacks in different manners. First, we will create a sum, instead of looking at each year separately, for example, the year 2008 includes the number of terrorist attacks from 2006, 2007 and 2008, **terrat_3**. So each year includes the values of the two years before. Adding up those years will help us draw maybe a different conclusion if the terrorist attacks from 2006 or 2007 have an effect on people's opinion towards migration in 2008.

In the end, we will represent the terrorist attack variable as a binary variable, **terattb**, which means that it takes the value 1 if we detect at least one incident during the year and 0 if none. The advantage of this definition describing the terrorist attacks is that the influence of the outliers is eliminated and the most important is not the quantity of the terrorist attacks, but just the fact that incidents occurred during the year. Now it does not matter if we witness hundreds of terrorist attacks per year or only one, because the whole sum of terrorist attacks, if it is more than 0 will be represented by the value 1.

To see how both variables are correlated, we can look at the *Graph 2.1.3.* and the other graphs in the *Appendix A.2.1.9.* where we represented the same correlation for the years 2006, 2014 and 2016. All those various graphs show that both variables are positively correlated, for the separate years but also over the whole period.

After the most important control variable, we will mention the individual control variables used in this study, all the variables that follow are based on the *Gallup World poll* database, most of them have been modified afterwards but the initial data comes from this database.



Graph 2.1.3: Correlation between opinion towards migration and terrorist attacks (2006 - 2016)¹⁴

The first one used is a variable which captures the income per capita in international dollars per year. We decided to focus on the income in international dollars and not in the home currency so that the different inflation rates between countries will not bias the results. Nevertheless, this variable is too widely distributed, so we decided to take the natural logarithm of the numeric variable and include this one in the analysis, **lnincomepcd**. In Facchini and Mayda (2009) and in Dustmann and Preston (2001), they find that a higher income has as consequence that people are more anti-immigration.

After describing the income of the participants, we will continue with two different indexes. The first one is the Law and Order Index, **Law_Order_index**, it measures how safe the respondent feels for himself but also for his family. The index is based on two different elements, the first one is how much confidence each respondent puts in the local police and how safe they feel alone outside during the night. The second one is based on two questions relative to the respondents experience with crimes.

The second index is the National Institution Index, **National_inst_index**. This index measures the confidence the respondent puts in national institutions responsible to lead the country, like for example, the military, the judicial system, the national government but also the honesty of the elections.

¹⁴ University of Maryland. (2017, June). "Overview of the GTD". Retrieved 26 Mars, 2018. from: <https://www.start.umd.edu/gtd/about/>

A higher value as a response from the person participating in the study is a good thing because this means that people feel safe and that they have confidence in the national institutions ruling the country. People who feel safe in their country may see the immigration situation from a different angle than those who do not feel safe or have no confidence in the institutions responsible to lead the country.

After the two indexes, we include the variables that capture the age of the different respondents, **age** and their squared value, **age_2**, both times the variable is a numeric one. It is important to include the age of the respondents because very often we observe that young and old people have a different point of view around things in life. We will see later in the empirical analysis that the age squared variable's coefficient has the opposite sign than the age variable itself. This means that people change their opinion towards migration after a specific age. We include the square of the age value which can help us identify the year after which they change their opinion, on average.

Besides the age of the people, we also need to include the gender of those, because men and women see things differently or at least have different opinions about things in life. The variable, **gender**, is defined as a binary variable, it has the value 1 if the person is a man and the value 0 if it is a woman. For example, by looking at the *Appendix A.2.1.10*, we can see that, for the full sample, women tend to be more anti-immigration than men. In Dustmann and Preston (2001), they found the opposite so that women were less anti-immigration than men.

The following numeric variable is important because it captures, how many children younger than 15 years of age are living in the household of the respondent, **child_under15**. It is interesting to include a more specific variable like this one, because parents care a lot about their children, even more, when they are young because they need more protection than adults. When the respondent links terrorist attacks to the level of immigration we would expect this variable to have a positive coefficient.

Another important variable is the level of education of the respondent. We do not take the variable like it is in the *Gallup World poll* but we create two different binary variables. The first one, **educ_M**, takes the value 1 if the respondent has completed secondary education and some education beyond, which means between 9 and 15 years of education and 0 for the other education levels.

The second binary variable, **educ_H**, takes the value 1 if the respondent has completed four years of education beyond high school, it is not important if he has received a college degree or not and 0 for the other education levels. Different education levels can influence people in a separate way so that they react to diverse challenges in a different manner. We expect the same when the challenge is to rate the level of immigration in a country, maybe those with a higher education level are more tolerant or see more opportunities in a higher level of immigration

than those with less education. In Scheve and Slaughter (2001) and in Facchini and Mayda (2006), they find that people with a higher education level are less anti-immigration.

Last but not least, we include a variable which specifies where the respondent lives, **Large_city**. The variable is also defined as a binary variable which has the value 1 if the respondent lives in a large city and 0 if he lives somewhere else. Here again, people coming from different places, have diverse opinions on how to face challenges in the world. Maybe those living in a rural area or a rural farm do not perceive the rise of immigration as such an imminent threat than those living in a big city, regarding the recent evolution.

Our last control variable is also a binary one, and it describes the employment situation of the respondent. The variable, **employment**, has the value 0 if the person is out of the workforce or unemployed and the value 1 if he is working and there it does not matter if it is a full time or part-time job. The employment situation of a resident can also have an influence on people's opinion about the level of immigration in a country. A lot of people are convinced that immigrants steal their jobs so that they see themselves unemployed as a consequence of the increasing level of immigration. Hence, one could think that those out of the workforce or those who are unemployed would desire a reduction in the level of immigration.

In the end, we only need to mention the two fixed effects we added to the regression, which help us remove the unobserved heterogeneity which is present in the error term when we run the regressions without fixed effects. Those fixed effects concern the countries but also the different years. A more detailed explanation on why they need to be included, will be given in the next section.

Other variables that need to be mentioned because they define our subsamples or because they will help us perform the different models will be presented now.

Another variable that will be used to perform our regressions is the one which represents the statistical weight of each individual in the country, **wgt**. The variable will be used afterwards to run the weighted logistic regressions and limit the sampling bias to make this regression more representative.

For the robustness checks later, we also create two different binary variables which will help us build the diverse subsamples and give us the possibility to run our analyses only on a part of the full sample. First, we make the difference between developed and developing countries, **dev_indev**. Those countries classified as developed countries are, in general, those with the highest income per capita. This binary variable takes the value 1 if the country is developed and 0 if it is not. Those countries defined as a developed country are: Andorra, Australia, Austria, Belgium, Bermuda, Canada, Denmark, Faroe Islands, Finland, France, Germany, Greece, Holy See, Iceland, Ireland, Israel, Italy, Japan, Liechtenstein, Luxembourg, Malta, Monaco, Netherlands, New Zealand, Norway, Portugal, San Marino, South Africa, Spain, Sweden,

Switzerland, Turkey, United Kingdom, United States.¹⁵ Some of them are not included in our study because of the reasons already mentioned before where we described the country variable itself.

The second variable that we create is the EU15 country variable, which separates the EU15 countries from the other countries in the world. Here again, we are talking about a binary variable, **EU_15**, which takes the value 1 if the country is a member of the EU15 and 0 if it is not. Those countries defined as a member of the EU15 are: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.¹⁶

2.2. Description of the model

The main model used for the study and to test the hypothesis is the logistic regression. The major difference between the logistic regression and the general regression is the point that the dependent variable, the opinion of the residents towards migration, is expressed as a binary variable which is not necessarily the case in a normal regression. Furthermore, talking about the control variables, by looking at a logistic regression the control variable's coefficients represent probabilities. This means that if the control variable's coefficient is positive, the person has a higher probability to be anti-immigration, which means that he wants to decrease the level immigration, in our case. Compared to the normal regression where it would mean that if this variable would increase by one point the person's degree of anti-immigration would increase by the value of the coefficient.

It makes more sense in this study to focus on the logistic regression because we want to know how high the probabilities are that people are anti-immigration after terrorist attacks and not their degree of anti-immigration. So with this model, we can clearly show what the probabilities for the people with different individual characteristics are to be anti-immigration or not after a terrorist attack has happened.

Like already mentioned before, our main model is the normal logistic regression and it includes all the control variables mentioned before without those designed for the robustness checks. We know that for this model we need a dependent variable defined as a binary form. For this, the $\hat{\pi}$ represents people's opinion towards migration in the case they desire to reduce the level of immigration and the ε represents the error term. The regression has the following form:

$$\ln\left(\frac{\hat{\pi}}{1-\hat{\pi}}\right) = \beta_0 + \beta_1 \text{teratt} + \beta_2 \text{lincomepcd} + \beta_3 \text{Law_Order_index} + \beta_4 \text{National_inst_index} + \beta_5 \text{age} + \beta_6 \text{age_2} + \beta_7 \text{gender} + \beta_8 \text{child_under15} + \beta_9 \text{educ_M} + \beta_{10} \text{educ_H} + \beta_{11} \text{teratt_educ_H} + \beta_{12} \text{Large_city} + \beta_{13} \text{employment} + \varepsilon \quad (2.1)$$

¹⁵ CIA. "The World Factbook". <https://www.cia.gov/library/publications/the-world-factbook/appendix/appendix-b.html>

¹⁶ OECD. (2007, July 24). "GLOSSARY OF STATISTICAL TERMS". <https://stats.oecd.org/glossary/detail.asp?ID=6805>

Of course, this is the most basic regression used in this study which is only designed to analyse the first results, after that, the regression and the terrorist attack variable itself will be modified.

Furthermore, for our regression to have more weight we include another command, which captures the statistical weight of an individual in the country. This option gives us the possibility to run weighted logistic regressions with the command `[pweight = wgt]`, like can be seen in the formula (2.2) in the *Appendix A.2.2.1*.

Nevertheless, by looking at this very simple logistic regression we will have some heterogeneity in the error term because we did not control for the country and time fixed effects. Therefore, to remove this bias we include in our regression those fixed effects (*Appendix A.2.2.2*). Later on, we will see that by adding those two fixed effects to the regressions our results will change a lot. Most of the time even, by adding the fixed effects, the sign of the variable's coefficient regarding the terrorist attacks is reversed, so that the sign becomes negative.

By including the country fixed effects we control for the average difference across countries in observable and unobservable predictors, such as differences in size, income or employment situation between countries. The introduction of them reduces the threat that the omitted variables could bias the results and it eliminates the between-country variations so that only the within-country differences persist.¹⁷ Similarly, for the time fixed effects, it controls for the differences in time for the various control variables that do not vary between countries but over time. It removes the observed and unobserved differences in the variables over time that could bias the results.

Those are the most basic commands and control variables that will be used through the whole study, but at some point, we need to focus on the robustness checks, so some of the variables will be replaced and some other commands will be added.

First, we can start with the very simple changes where the variable representing the terrorist attacks, **teratt**, is replaced by either the **fatalities**, the **injuries** or the **pr_cit_pro** binary variable. We mentioned already before what these different variables express. We expect to gain some further information on the influence those variables have on the dependent variable. The next variables that will replace the one representing the terrorist attacks will be, first, the one that represents the sum of the last three years' terrorist attacks, **teratt_3**, and second, the one that represents the terrorist attacks as a binary variable, **terattb**. The basic normal logistic formulas without fixed effects, for the different cases her above, can be found in the *Appendix A.2.2.3*.

In the end, for the other robustness checks where we run regressions only on a certain number of terrorist attacks, we create three different threshold values, 5, 10, and 500. Each of them has been selected for a specific reason. By only running the regression for those countries where we observe fewer than 5 incidents per year, we focus on the countries where the terrorist attacks

¹⁷ Wai S. (2017, July 6). "Fixed Effects Models". <http://www.jblumenstock.com/files/courses/econ174/FEModels.pdf>

are very rare. Nevertheless, we know that those countries with fewer than 5 incidents per year still represent the large majority of the whole sample. Followed by the next threshold level analysis with fewer than 10 terrorist attacks per year, we include more countries so also those, where terrorist attacks are more common, but they are not so many. The last threshold level with fewer than 500 incidents per year eliminates the biggest outliers, because like we mentioned above, only 3% of the countries report more than 500 terrorist attacks per year.

3. Results

3.1. *Logistic Regression without fixed effects*

Variables	logistic regression		weighted logistic regression	
Dependent variable				
Opinion towards migration (constant)	-0,44728 (0,00)***	1,57549 (0,00)***	-0,47479 (0,00)***	1,62260 (0,00)***
Explanatory variables				
Number of terrorist attacks	0,00078 (0,00)***	-0,00196 (0,00)***	0,00071 (0,00)***	-0,00210 (0,00)***
Income per capita in international dollars in log	0,07070 (0,00)***	-0,04827 (0,00)***	0,07737 (0,00)***	-0,04460 (0,00)***
Law and Order Index	-0,00334 (0,00)***	-0,00226 (0,00)***	-0,00323 (0,00)***	-0,00210 (0,00)***
National Institution Index	-0,00578 (0,00)***	-0,00572 (0,00)***	-0,00587 (0,00)***	-0,00587 (0,00)***
Age	0,14421 (0,00)***	0,01305 (0,00)***	0,01355 (0,00)***	0,01335 (0,00)***
Age^2	-0,00009 (0,00)***	-0,0008 (0,00)***	-0,00007 (0,00)***	-0,00008 (0,00)***
Gender	-0,06075 (0,00)***	-0,00978 (0,318)	-0,02315 (0,034)**	-0,00084 (0,942)
Number of children younger than 15 per household	-0,0008 (0,224)	-0,00184 (0,009)***	-0,00122 (0,135)	-0,00228 (0,009)***
Medium education level (Secondary)	0,09328 (0,00)***	0,03157 (0,019)**	0,10299 (0,00)***	0,03651 (0,021)**
High education level (College)	-0,11164 (0,00)***	-0,23220 (0,00)***	-0,12030 (0,00)***	-0,23449 (0,00)***
Large city	0,07075 (0,00)***	-0,01573 (0,146)	0,03314 (0,00)***	-0,00922 (0,479)
Employment	-0,09507 (0,00)***	-0,05682 (0,00)***	-0,09022 (0,00)***	-0,04331 (0,001)***
Country and time fixed effects	No	Yes	No	Yes
Pseudo R squared	0,0216	0,1103	0,0208	0,1055
Observations	208033	208033	208033	208033

Table 3.1: logit and weighted logit regression for the full sample with the dependant variable: Nbr of terrorist attacks
Notes: significance levels - (1%)***, (5%)**, (10%)*

The results without fixed effects suffer from unobserved heterogeneity problems because we do not include the fixed effects in the regression so we will not analyse those results too much

in detail. The same accounts for the different robustness checks we will do later, when we look at the logistic regressions without fixed effects.

Like already mentioned in the section before, we focus on logistic regressions to test our hypothesis that after terrorist attacks have happened, people become more anti-immigration. The normal and the weighted logistic regressions give us very similar results when the fixed effects are not included (*Table 3.1.*).

We observe that the Pseudo-R-squared value is reduced a little bit for the weighted logistic regression compared to the normal one.

Without the fixed effects, we find that the terrorist attacks have a positive effect on the opinion towards migration variable, which means that people are more anti-immigration after the terrorist attacks than before. The variable is statistically significant for both regressions which means that we can take the results as they are and draw our conclusion. Nevertheless, we need to mention that, because we did not include the fixed effects in the different regressions, our results are biased, so that we do not exclude all the variations between countries and some unobserved heterogeneity problems remain in the error term.

Now that we talked about the most important control variable we will focus, more in detail, on the individual control variables not mentioned until now. Starting with the variable which accounts for the income per capita in international dollars, we find that it has a positive effect on the dependent variable. This means that if people have a higher income, they tend to be more anti-immigration.

The next variables we will mention are both indexes, the Law and Order index and the National Institutions index, both have a negative influence on people's opinion towards migration. The same reasoning as before, a negative coefficient for the index means that the individual is less anti-immigration.

Continuing with the age and the age squared variable like mentioned before, we decided to include the squared value because if both variables have the same sign, then in general people have the same opinion about the migration situation no matter the age. This means that there would not be a certain age threshold level after which people would, in general, change their opinion towards migration. Nevertheless, in our case, the age variable has a positive coefficient and the age squared variable has a negative coefficient. So after a certain threshold age, their opinion about immigrants is become more tolerant.

Followed by the age of the people, we will analyse if some gender differences are present in this first model. This variable has a negative impact on the dependent variable which means that if the respondent of the study is male, he is less anti-immigration than if the respondent would be a woman.

All those variables explained above and also all those that will follow after, are all highly significant for the normal and the weighted logistic regression. The only thing that can be pointed out is that the gender binary variable becomes insignificant at the 1% significance level when we run the weighted logistic regression. Now we will analyse the number of children younger than 15 years of age per household variable, where we need to say that, besides the fact that the coefficient is negative, the variable is also statistically insignificant for both regression types.

Now we will have a look at how the education level influences people's opinion towards migration. First, we find that if people have a medium education level, they tend to be more anti-immigration than those who have a high education level, this means that people with a higher education level are less anti-immigration.

Last but not least, the binary variable which says if the respondent lives in a large city or somewhere else has a positive influence on people's opinion towards migration. This means that it seems that if people live in large cities, they seem to see more threats in a higher immigration level than those in more rural places.

The last variable is the employment situation binary variable which mentions if the respondent is working or unemployed. By looking at the results, people who are working seem to be less anti-immigration than those who are unemployed.

All these results seem pretty much like we would expect by intuition. Nevertheless, the results need to be interpreted with caution, because the fixed effects are not included and so they are biased. In the following section, we will see what happens when we include the country and time fixed effects.

3.2. Logistic Regression with fixed effects

Now that we introduced the fixed effects to both regression types, we remove some of the heterogeneity which was present in the error term and the bias, which was present before, is eliminated (*Table 3.1.*). We remove the between-country differences and only focus on the within-country differences. After these effects are introduced, we see that the variable, defining the terrorist attacks, becomes negative, so that the effect on people's opinion towards migration is reversed. Hence, people would be less anti-immigration after the terrorist attacks, which would mean that the hypothesis we test is not verified. We did not expect this change, but like the variable is statistically significant we have to accept that after removing some heterogeneity from the regression, the terrorist attacks have as a consequence that people are less anti-immigration.

Furthermore, by removing some of the heterogeneity from the regression the Pseudo-R-squared value has increased a lot. It went up by more than 8 percentage points, from 2,08% to 10,55%. It is still a small value so that all our control variables only explain a little bit more than 10% of the dependent variable. Here again, like we saw for the case without fixed effects, the Pseudo-R-squared value is decreased a little bit when we run the weighted logistic regression. This means that, regarding the full sample, when we weigh each observation to limit the sampling bias to make the weighted sample more representative, less of the dependent variable is explained by the control variables present in the regressions.

The income per capita variable changes its sign and the coefficient becomes negative so that after the introduction of the fixed effects, it has a negative impact on people's opinion towards migration and in addition, the variable is statistically significant. More precisely, a higher income in this regression means that people are less anti-immigration after the terrorist attacks. This result is the opposite of what was found in Facchini and Mayda (2009) and Dustmann and Preston (2001), where they say that people with a higher income level are more anti-immigration.

Considering the two different indexes, we do not observe any changes, their coefficients remain negative and they are still statistically significant. So that here we have for the first time no difference in the results when we look at the regressions with and without the fixed effects. Furthermore, this would mean that if people feel safe in the country and have trust in the national institutions, they are less anti-immigration than when they are afraid to be alone outside at night, for example. A similar idea related to the safety in the country was mentioned in Mayda (2006), where they looked at the crime level in the country. A higher crime level would have as consequence that people would be more anti-immigration.

The variables related to the age of the respondent also remain with the same sign as for the regression without the fixed effects. So here again it seems that younger people are more anti-immigration than older people. The threshold level for the normal logistic regression with fixed effects is at 83 years, for the weighted logistic regression it is at 82 years. This means that after those years, people tend to be less anti-immigration than before. Furthermore, those variables also remain statistically significant, so that we can say that even with the fixed effects, the idea that younger people are more anti-immigration becomes some weight.

We cannot say the same about the gender binary variable, because besides the fact that it remains with a negative coefficient, the variable becomes statistically insignificant so we cannot take it into account for any conclusions. One could think that men and women have a different opinion about the immigration situation in the country, like they say in Dustmann and Preston (2001), that women are less anti-immigration than men, but like the variable is insignificant, we cannot base too much weight on the coefficients sign in this regression.

The exact opposite is observed for the number of children younger than the age of 15 per household variable, it also remains with a negative coefficient like for the case without the fixed effects, but this time the variable is highly significant. Furthermore, this means that if the respondent has more children at home, who are younger than 15 years of age, it seems that the respondent is less anti-immigration than he would be with fewer children.

The signs for both education variables remain the same as for the logistic regression without fixed effects, and in addition they are still statistically significant. Nevertheless, the medium education binary variable loses a bit in significance when we run the weighted logistic regression, it is only significant after the smallest significance level. So, here again, like already for the case with no fixed effects, people with a lower education level tend to be more anti-immigration than those with a higher education level. Like we mentioned earlier, when we described the different variables, it seems that the idea might be true that people who have a higher education level see more advantages in a higher immigration level or are just more tolerant than those with a lower education level. The same is found in Scheve and Slaughter (2001) and in Facchini and Mayda (2009), where they show that people with a higher education level tend to be less anti-immigration than those with less education.

Last but not least, we focus on the binary variable which defines where the respondent lives. Here we need to mention that, after including the fixed effects, the variable becomes highly insignificant so that we cannot base our conclusion on the following intuition. One could think that people who live in large cities are more concerned about the fact that the immigration is increasing than those living in more rural places, but because the variable is insignificant we cannot count on this conclusion.

The last variable we need to mention is the employment situation binary variable which remains highly significant even after introducing the fixed effects to both regressions. Besides that, the sign of the coefficient does not change, which means that we could draw the same conclusion for both types of regressions. The intuition would be that the people who are not working see the reason for their unemployment situation in the high-level immigration, because they have in mind that the immigrants steal their jobs. A logic conclusion for this idea would be that those who are unemployed desire a lower level of immigration. Those who work are less anti-immigration than those who are unemployed or out of the workforce, because their labour force situation is less vulnerable.

We wanted to test the hypothesis that after terrorist attacks have happened, people become more anti-immigration, this is also what we found in the beginning with our biased results without fixed effects. Nevertheless, after introducing the fixed effects, the coefficient of the terrorist attack variable becomes negative, this is not what we expected but like the variable is highly significant we have to accept the fact that terrorist do not lead people to become more anti-immigration. Hence, we will run different robustness checks in the following section to see if

this result is just a coincidence or if it is a fact so that the terrorist attacks have no major influence on people. This would mean that they do not end up being more anti-immigration than before.

4. Robustness checks

We will run some different robustness checks to put more weight on the results found in the section before or to find a different result, the one we expected. We were not able to accept the hypothesis we defined at the beginning. Hence, we modify and change the variable representing the terrorist attacks to see if we can draw a different conclusion or if we get the same results for the various robustness checks. If we get the same results for those checks, this means that the conclusion will be strong and we can say that the terrorist attacks are not a major channel that has as a consequence that people are more-anti-immigration. Furthermore, the conclusion will be based on more than one simple analysis, which reinforces the first results even that they may not be like what we expected in the beginning.

Also for those robustness checks, we need to mention that we focus more on the variables related to the terrorist attacks so that we do not explain as much in detail the individual control variables than we did for the section before.

4.1. Developed vs developing countries

The first robustness check we will have a look at is the one where we reduce the whole sample to two subsamples. We analyse the developed and developing countries separately, here again, we run the normal logistic regression and weighted logistic regression with and without fixed effects (*Table 4.1*). The reason why it could be interesting to reduce the whole sample to two smaller subsamples instead of analysing the full sample all at once has two explanations. First, there are a lot more developing country observations (238076) than developed country observations (42494) in the whole sample, so it could be that the result in the full sample is driven by the developing countries. Second, for the developed countries there are much fewer terrorist attacks per year than for the developing countries. Maybe we could already expect here the first difference in the results so that we could say that the results for the full sample are driven by one of the two subsamples.

First, we will have a look at the developed countries regression without fixed effects, where we find, like for the full sample before, that the terrorist attacks have a positive impact on people's opinion towards migration, but those results are biased. We get the same results when we look at the weighted logistic regression so that there is, for now, no difference observed between the full sample and the first subsample.

Even when we look at the Pseudo-R-squared value, we observe the same as before for the full sample, the value is decreasing a little bit for the weighted logistic regression compared to the normal one.

For the individual control variables, we observe some similarities but also differences for the developed countries compared to the full sample. First, we see that both index variables, both age-related variables, the number of children younger than 15 years of age per household variable, the high education binary variable, the large city binary variable and the employment situation binary variable have the same coefficient sign for the developed countries than for the full sample. Second, for the income per capita in international dollars' variable, for the gender binary variable, and for the medium education binary variable we observe different signs for the coefficients.

For the weighted logistic regression, we observe the same difference in signs between the samples than before so no more differences are added when we weigh each observation to make the weighted sample more representative.

Second, we will run the same regressions for the developing countries. By looking at the normal and the weighted logistic regression we can see that the results are very similar. In both cases, the terrorist attacks have as a consequence that people are more anti-immigration after those attacks. So, still no difference, we get the same results for the full sample, the developed and the developing countries.

In addition, we observe the small drop in the Pseudo-R-squared value when we run the weighted logistic regression, like for both samples before.

For the rest of the control variables, we get nearly the same results as we got for the full sample, there is only one major difference when looking at the signs of the coefficients regarding the normal logistic regression. This difference is observed for the high education binary variable; the coefficient has a positive sign for the developing countries but a negative one regarding the full sample.

For the weighted logistic regression, the only difference in the variable's signs that we observed between both samples disappears so that now all the variables have the same sign as in the full sample.

Furthermore, the fixed effects are not included, which means that the results are biased, because some heterogeneity due to the between-country differences is included in the error term. After the analysis without the fixed effects for developed and developing countries, we will add the fixed effects to the normal and weighted logistic regression so that we can remove this bias.

Besides, we need to say that the Pseudo-R-squared value went up a lot by adding the fixed effects, which means that we are talking about a much better regression than the one without fixed effects. This means that the inclusion of the fixed effects captures some part of the heterogeneity which was present in the error term. Again, this value is decreasing a little bit when we run the weighted logistic regression compared to the normal one.

Variables	logistic regression		weighted logistic regression	
	developed countries	developing countries	developed countries	developing countries
Dependent variable				
Opinion towards migration (constant)	2,61453 (0,00)***	1,50126 (0,00)***	-0,79374 (0,00)***	7,11962 (0,00)***
Explanatory variables				
Number of terrorist attacks	0,01049 (0,00)***	-0,00356 (0,00)***	0,00082 (0,00)***	-0,00192 (0,00)***
Income per capita in international dollars in log	-0,22781 (0,00)***	-0,05589 (0,00)***	0,10051 (0,00)***	-0,04989 (0,00)***
Law and Order Index	-0,00455 (0,00)***	-0,00432 (0,00)***	-0,00286 (0,00)***	-0,00188 (0,00)***
National Institution Index	-0,00923 (0,00)***	-0,00633 (0,00)***	-0,00496 (0,00)***	-0,00555 (0,00)***
Age	0,01983 (0,00)***	0,01964 (0,00)***	0,01295 (0,00)***	0,01256 (0,00)***
Age ²	-0,00013 (0,00)***	-0,00012 (0,00)***	-0,00007 (0,00)***	-0,00008 (0,00)***
Gender	0,09305 (0,00)***	0,06739 (0,00)***	-0,09144 (0,00)***	-0,02215 (0,00)***
Number of children younger than 15 per household	-0,00227 (0,152)	-0,00246 (0,134)	-0,00079 (0,284)	-0,00184 (0,018)**
Medium education level (Secondary)	-0,19601 (0,00)***	-0,08247 (0,021)**	0,14076 (0,00)***	0,05192 (0,00)***
High education level (College)	-0,64242 (0,00)***	-0,56451 (0,00)***	0,03892 (0,024)**	-0,15636 (0,00)***
Large city	0,04023 (0,09)*	-0,13678 (0,00)***	0,04997 (0,00)***	0,00719 (0,545)
Employment	-0,13669 (0,00)***	-0,07916 (0,003)***	-0,05515 (0,00)***	-0,04943 (0,00)***
Country and time fixed effects	No Yes	Yes	No Yes	Yes
Pseudo R squared	0,074	0,1401	0,0222	0,1050
Observations	36550	36550	171483	171483

Table 4.1: logit and weighted logit regressions with the dependant variable: Nbr of terrorist attacks

Notes: significance levels - (1%)***, (5%)**, (10%)*

Regarding the individual control variables, after adding the fixed effects, only the difference in the coefficient's sign for the gender binary variable and the medium education binary variable remain. Besides, the sign of the income per capita variable changes for the full sample, while it remains for the developed countries.

For the weighted logistic regression, the old differences in the signs of the coefficients for the regression without fixed effects remain and no more differences are added.

In addition, supplementary significance analysis regarding the control variables can be found in the *Appendix A.4.1.1*, for the normal and in the *Appendix A.4.1.2* for the weighted logistic regression.

For the developing countries, we observe similar results, the most important one is the change of sign for the terrorist attack variable, again it becomes negative and is strengthening the results we found before. So also when we add the fixed effects to the different regressions of those two subsamples, we get the same results as for the full sample.

In addition, like already for the developed countries, the Pseudo-R-squared value went up a lot by adding the fixed effects, which means that the regression with fixed effects is much better than the one without. Once again, the Pseudo-R-squared value is decreasing a bit when we run the weighted logistic regression.

For the individual control variables, we observe that the old difference observed for the high education binary variable is eliminated, because the sign changed for the developing countries when we add the fixed effects. Nevertheless, another difference appears related to the large city binary variable. This difference appears because the variable is changing its sign when we add the fixed effects to the full sample.

When we run the weighted logistic regression, we observe the same difference in signs between the variables than those observed for the normal logistic regression.

Further insight regarding the significance levels of the individual control variables can be found in the *Appendix A.4.1.3* and in the *Appendix A.4.1.4*, regarding the normal and the weighted logistic regressions.

4.2. EU15

After focusing on the differences between developed and developing countries, we will focus on a narrower subsample, the EU15 countries (*Table 4.2.*). Above we mentioned which countries are included in the EU15 so we do not need to mention them again. The point why it might be interesting to focus on them is that there are even fewer attacks per year registered than for the developed countries and the subsample is smaller, only 27000 observations. Maybe, because the residents of these 15 countries are not so much used to terrorist attacks it might be that they perceive those attacks more severely so that they will have a stronger influence on people's opinion towards migration.

Starting with the regressions without fixed effects, we find, like for the subsamples before, that after terrorist attacks, people tend to be more anti-immigration. It seems that the first result we found, has a lot of weight, besides the fact that it is biased, but without controlling for cross-country differences people tend to be more anti-immigration after an attack has happened.

Variables	logistic regression		weighted logistic regression	
Dependent variable				
Opinion towards migration (constant)	3,05052 (0,00)***	2,42363 (0,00)***	2,68553 (0,00)***	1,99111 (0,00)***
Explanatory variables				
Number of terrorist attacks	0,02013 (0,00)***	-0,00572 (0,035)**	0,01675 (0,00)***	-0,00347 (0,290)
Income per capita in international dollars in log	-0,27746 (0,00)***	-0,05476 (0,003)***	-0,25867 (0,00)***	-0,05259 (0,029)**
Law and Order Index	-0,00512 (0,00)***	-0,00471 (0,00)***	-0,00512 (0,00)***	-0,00469 (0,00)***
National Institution Index	-0,00968 (0,00)***	-0,00660 (0,00)***	-0,00956 (0,00)***	-0,00670 (0,00)***
Age	0,02317 (0,00)***	0,02305 (0,00)***	0,02808 (0,00)***	0,02558 (0,00)***
Age^2	-0,00015 (0,00)***	-0,00013 (0,00)***	-0,00019 (0,00)***	-0,00016 (0,001)***
Gender	0,13600 (0,00)***	0,09871 (0,00)***	0,13385 (0,00)***	0,09288 (0,009)***
Number of children younger than 15 per household	-0,00203 (0,269)	-0,00206 (0,273)	-0,00387 (0,112)	-0,00390 (0,128)
Medium education level (Secondary)	-0,29637 (0,00)***	-0,07440 (0,088)*	-0,25381 (0,00)***	-0,06098 (0,256)
High education level (College)	-0,68007 (0,00)***	-0,57847 (0,00)***	-0,63270 (0,00)***	-0,58832 (0,00)***
Large city	0,05151 (0,061)*	-0,19024 (0,00)***	0,07606 (0,033)**	-0,18407 (0,00)***
Employment	-0,10719 (0,00)***	-0,04923 (0,110)	-0,06734 (0,078)*	0,00199 (0,960)
Country and time fixed effects	No	Yes	No	Yes
Pseudo R squared	0,0909	0,1452	0,0803	0,1278
Observations	26869	26869	26869	26869

Table 4.2: logit and weighted logit regression for the EU15 countries with the dependant variable: Nbr of terrorist attacks

Notes: significance levels - (1%)***, (5%)**, (10%)*

Even for the Pseudo-R-squared value, we observe the same pattern as we did for the other two subsamples, it is decreasing for the weighted logistic regression.

For the other control variables, we observe some more differences in the coefficient's signs with the full sample than for the other two subsamples. The income per capita in international dollars' variable, the gender binary variable and the medium education binary variable have the opposite sign for the EU15 countries than for the full sample.

For the weighted logistic regression, we can say that the same differences between the variable's signs are observed than for the normal logistic regression.

After the introduction of the country and time fixed effects, the effect of the terrorist attack variable changes its influence on the dependent variable and it becomes negative. So we can say that even when we look at the EU15 countries the same change, then for the other samples will be observed, at least for the variable of interest. Nevertheless, one major difference appears between the normal and the weighted logistic regression, the terrorist attack variable becomes statistically insignificant with a p-value of over 20% which means that in fact, we cannot base too much weight on the sign of the coefficient.

Once again, like for the subsample before, we observe the drop of the Pseudo-R-squared value regarding the weighted logistic regression compared to the normal one, but the value increased a lot compared to the regressions without the fixed effects.

Regarding the individual control variables, we can say that after adding the fixed effects, the only difference in the coefficient's signs that are present, are those for the gender binary variable and the medium education binary variable. The one regarding the income per capita variable is not present anymore because the sign has changed for the full sample analysis when we add the fixed effects.

Regarding the weighted logistic regression, one more difference regarding the coefficient's signs is added and it is related to the employment situation binary variable because it changes the sign for the EU15 countries. The other differences observed for the normal logistic regression also remain.

More information about the significance levels of the individual control variables can be found in the *Appendix A.4.2.1*, for the normal logistic regression, and in the *Appendix A.4.2.2*, for the weighted logistic regression.

For now, it seems really interesting to see that the statistical weight of an individual can modify the results so much. Generally, the signs of the coefficient are not modified, but the significance levels of the individual control variables see their p-values modified.

This result is strengthening those we found before and it does not prove that the people in the EU15 countries respond differently, even that they are not used to a lot of terrorist attacks. Even that by introducing the fixed effects to the weighted logistic regression, the terrorist attack variable becomes insignificant does not mean a lot because the sign was still negative.

In the following robustness checks, we will still check for the differences between developed and developing countries and also look at the EU15 countries separately, but it will not account for the major analysis of those parts. We already know that, in general, there are no major differences observed between those samples, at least not when we look at the number of terrorist attacks as a numeric variable. To see if we can get different results, we will modify the terrorist

attack variable or only analyse different parts of the whole sample in the robustness checks that will follow.

4.3. Sum of the last 3 years' terrorist attacks

In the sections before we looked at the influence of the number of terrorist attacks per year on people's opinion towards migration, but what if it takes some time so that the attacks have an influence on people's opinion? Maybe if there are just a few attacks in the first year it will not have an influence on people's opinion but what if those attacks continue, maybe the sum of them will make a difference. To test this, the terrorist attack variable is defined as the sum of the last 3 years' terrorist attacks, we look at the normal logistic regressions (*Table 4.3(a)*) and the weighted logistic regressions (*Table 4.3(b)*). With this sum of terrorist attacks, we can also check if a terrorist attack that happened one or two years before the year the study has been conducted, has an influence on people's opinion towards migration the year of the study, instead of only focusing on the attacks that happened in the same year.

4.3.1. Full sample analysis

Furthermore, the Pseudo-R-squared value is much less than it was in the regressions before. This means that the sum of the last three years' terrorist attacks explains less of people's opinion towards migration than does the number of terrorist attacks per year. By running the weighted logistic regression, we get the same result as we got with the normal logistic regression, even though the Pseudo-R-squared value is reduced a little bit.

Regarding the individual control variables, we can say that all of them have the same coefficient signs as for the normal regression with the previous definition of the terrorist attacks variable. When we run the weighted logistic regression, we see one difference appearing regarding the gender binary variable, because the sign becomes positive for the regression with the sum of the last three years' terrorist attack variable.

The next step will be to look at the same regressions as before but this time, the fixed effects will be included. The first thing we observe is not surprising, the sign of the sum of the last three years' terrorist attack variable becomes negative again. So we have the same result as we got for the case where the variable was defined as the number of terrorist attacks per year.

Nevertheless, by introducing the fixed effects, the Pseudo-R-squared value went up a lot for both regressions so that those effects capture a large part of the heterogeneity that was present in the error term. For both regressions, it went up by nearly eight percentage points which means that its value nearly quadrupled. In addition, we observe the traditional small drop of this value when we have a look at the weighted logistic regression compared to the normal one.

Variables	logistic regression					
	full sample		developed countries		developing countries	
						EU15 countries
Dependent variable						
Opinion towards migration (constant)	-0.43532 (0,00)***	1,48379 (0,00)***	2,23409 (0,00)***	1,66478 (0,00)***	-0,77106 (0,00)***	4,22934 (0,00)***
Explanatory variables						
Sum of the last three years' terrorist attacks	0,00036 (0,00)***	-0,00050 (0,00)***	0,00650 (0,00)***	-0,00235 (0,00)***	0,00035 (0,00)***	-0,00046 (0,00)***
Income per capita in international dollars in log	0,07303 (0,00)***	-0,04529 (0,00)***	-0,20029 (0,00)***	-0,05512 (0,00)***	0,10199 (0,00)***	-0,04629 (0,00)***
Law and Order Index	-0,00424 (0,00)***	-0,00273 (0,00)***	-0,00457 (0,00)***	-0,00431 (0,00)***	-0,00391 (0,00)***	-0,00243 (0,00)***
National Institution Index	-0,00584 (0,00)***	-0,00569 (0,00)***	-0,00887 (0,00)***	-0,00635 (0,00)***	-0,00502 (0,00)***	-0,00551 (0,00)***
Age	0,01606 (0,00)***	0,01431 (0,00)***	0,01999 (0,00)***	0,01964 (0,00)***	0,01493 (0,00)***	0,01415 (0,00)***
Age^2	-0,00011 (0,00)***	-0,00009 (0,00)***	-0,00013 (0,00)***	-0,00012 (0,00)***	-0,00009 (0,00)***	-0,00010 (0,00)***
Gender	-0,02197 (0,017)**	0,00747 (0,446)	0,08227 (0,00)***	0,06570 (0,006)***	-0,04564 (0,00)***	-0,00155 (0,877)
Number of children younger than 15 per household	-0,00052 (0,436)	-0,00183 (0,009)***	-0,00232 (0,145)	-0,00232 (0,157)	-0,00045 (0,541)	-0,00184 (0,019)**
Medium education level (Secondary)	0,08412 (0,00)***	0,02242 (0,094)*	-0,17638 (0,00)***	-0,07757 (0,029)**	0,13069 (0,00)***	0,04064 (0,005)***
High education level (College)	-0,11846 (0,00)***	-0,23503 (0,00)***	-0,59514 (0,00)***	-0,55900 (0,00)***	0,02864 (0,096)*	-0,16064 (0,00)***
Large city	0,05956 (0,00)***	-0,02049 (0,058)*	-0,01427 (0,413)	-0,13634 (0,00)***	0,03814 (0,00)***	0,00184 (0,877)
Employment	-0,10882 (0,00)***	-0,06691 (0,00)***	-0,13429 (0,00)***	-0,07716 (0,003)***	-0,07103 (0,00)***	-0,06206 (0,00)***
Country and time fixed effects	No	Yes	No	Yes	No	Yes
Pseudo R squared	0,0226	0,1062	0,0832	0,1403	0,0228	0,0999
Observations	206186	206186	36550	36550	169636	169636
26869						

Table 4.3(a): logit regressions with the dependant variable: Sum of last three years' terrorist attacks

Notes: significance levels - (1%)***, (5%)**, (10%)*

When we run the weighted logistic regression, we observe only one difference for the variable's signs between the regression in this section and the general one. It still concerns the gender binary variable, but nevertheless, the variable is highly insignificant for both regressions. The other variables all remain significant when we run the weighted logistic regression, besides the variable which says if you live in a large city or somewhere else. For this specific variable, we need to mention that for both samples, it loses in significance and it becomes clearly insignificant after changing the coefficient's sign.

In the next three sections, we will have a look at how the results change for the subsamples, or not, by running the regressions with the sum of the last three years' terrorist attacks.

4.3.2. Developed country analysis

For the developed countries and both logistic regressions without fixed effects, we find a positive coefficient for the sum of the last three years' terrorist attack variable, just like for the full sample.

Nevertheless, in this case, the Pseudo-R-squared value is much higher than the one before but still smaller than for the case where the terrorist attack variable was defined as the number of incidents per year. Again this value is reduced a little bit when we run the weighted logistic regression compared to the normal one.

For the other control variables, we can say that we observe some differences compared to the full sample. The income per capita variable, the gender binary variable, the medium education binary variable and the large city binary variable, have the opposite sign for the developed country sample than for the full sample in this section.

When we run the weighted logistic regression, the gender binary variable changes its sign for the developed countries so that it has the same sign as in the full sample, the other three differences persist.

After the introduction of the fixed effects, we observe the same modification as already for the sample before, the sum of the last three years' terrorist attack variable changes its sign and becomes negative.

Furthermore, we observe a very large increase of the Pseudo-R-squared value which is due to the introduction of the country and time fixed effects, which eliminate the bias we had when they were not present. Once again, besides the fact that the Pseudo-R-squared value has increased, it remains smaller for the weighted logistic regression than for the normal one.

Regarding the individual control variables, the only difference in the coefficients' sign that persists after the introduction of the fixed effects with the normal logistic regression, is related to the medium education binary variable.

Variables	weighted logistic regression									
	full sample		developed countries		developing countries		EU15 countries			
Dependent variable										
Opinion towards migration (constant)	-0,46812 (0,00)***	1,55390 (0,00)***	1,87439 (0,00)***	1,66953 (0,00)***	-0,72679 (0,00)***	4,89521 (0,00)***	2,02994 (0,00)***	1,37867 (0,00)***		
Explanatory variables										
Sum of the last three years' terrorist attacks	0,00037 (0,00)***	-0,00068 (0,00)***	0,00627 (0,00)***	-0,00283 (0,00)***	0,00036 (0,00)***	-0,00063 (0,00)***	0,00973 (0,00)***	0,00069 (0,542)		
Income per capita in international dollars in log	0,07909 (0,00)***	-0,04170 (0,00)***	-0,18013 (0,00)***	-0,05327 (0,005)***	0,10742 (0,00)***	-0,04325 (0,00)***	-0,20805 (0,00)***	-0,05189 (0,031)**		
Law and Order Index	-0,00397 (0,00)***	-0,00257 (0,00)***	-0,00428 (0,00)***	-0,00404 (0,00)***	-0,00367 (0,00)***	-0,00228 (0,00)***	-0,00463 (0,00)***	-0,00470 (0,00)***		
National Institution Index	-0,00592 (0,00)***	-0,00586 (0,00)***	-0,00913 (0,00)***	-0,00673 (0,00)***	-0,00517 (0,00)***	-0,00564 (0,00)***	-0,00917 (0,00)***	-0,00667 (0,00)***		
Age	0,01499 (0,00)***	0,01432 (0,00)***	0,02262 (0,00)***	0,02199 (0,00)***	0,01169 (0,00)***	0,01322 (0,00)***	0,02741 (0,00)***	0,02555 (0,00)***		
Age^2	-0,00009 (0,00)***	-0,00009 (0,00)***	-0,00015 (0,00)***	-0,00014 (0,005)***	-0,00005 (0,005)***	-0,00009 (0,00)***	-0,00018 (0,00)***	-0,00016 (0,001)***		
Gender	0,00722 (0,511)	0,01501 (0,197)	0,09448 (0,001)***	0,06544 (0,028)**	-0,01240 (0,301)	0,00844 (0,507)	0,12301 (0,00)***	0,09278 (0,009)***		
Number of children younger than 15 per household	-0,00103 (0,208)	-0,00227 (0,009)***	-0,00322 (0,001)***	-0,00345 (0,114)	-0,00078 (0,377)	-0,00211 (0,026)**	-0,00374 (0,127)	-0,00384 (0,135)		
Medium education level (Secondary)	0,09783 (0,00)***	0,02868 (0,070)*	-0,09818 (0,014)**	-0,05980 (0,168)	0,14167 (0,00)***	0,04799 (0,005)***	-0,21724 (0,00)***	-0,06220 (0,246)		
High education level (College)	-0,11976 (0,00)***	-0,23532 (0,00)***	-0,53838 (0,00)***	-0,57211 (0,00)***	-0,01166 (0,567)	-0,16237 (0,00)***	-0,60642 (0,00)***	-0,58780 (0,00)***		
Large city	0,02289 (0,048)**	-0,01476 (0,256)	-0,00832 (0,787)	-0,13365 (0,00)***	-0,00796 (0,530)	0,00765 (0,586)	-0,00445 (0,903)	-0,18479 (0,00)***		
Employment	-0,10512 (0,00)***	-0,05281 (0,00)***	-0,09550 (0,002)***	-0,02334 (0,483)	-0,06865 (0,00)***	-0,05586 (0,00)***	-0,06027 (0,118)	0,00210 (0,958)		
Country and time fixed effects	No	Yes	No	Yes	No	Yes	No	Yes		
Pseudo R squared	0,0225	0,1034	0,0753	0,1279	0,0228	0,0989	0,0947	0,1278		
Observations	206186	206186	36550	36550	169636	169636	26869	26869		

Table 4.3(b): weighted logit regressions with the dependant variable: Sum of last three years' terrorist attacks

Notes: significance levels - (1%)***, (5%)**, (10%)*

Even when we run the weighted logistic regression, we do not observe any more differences related to the signs of the coefficients than we did for the normal logistic regression.

Further insight regarding the different significance levels of the individual control variables regarding the normal and the weighted logistic regressions are presented in the *Appendix A.4.3.2.1.* and in the *Appendix A.4.3.2.2,* respectively.

4.3.3. Developing country analysis

For the developing countries, without controlling for the fixed effects we get a positive effect for the sum of the last three years' terrorist attack variable on people's opinion towards migration for both regressions. So here once again, we find the same result as we did for the developed countries and the full sample.

The Pseudo-R-squared value is small, 2,28%, but it stays nearly identical between both regressions.

The control variables do not change very much between the developing country and the full sample analysis when we run the normal logistic regression. The only difference that needs to be mentioned, concerns the high education binary variable which has a positive coefficient for the developing countries and a negative one for the full sample.

When we run the weighted logistic regression, the difference for the high education binary variable is eliminated but there is another one that is added and it concerns the gender binary variable. The reason for this is that the sign is changing for the full sample but it remains for the developing countries.

After the introduction of the fixed effects to both regressions, we observe that the terrorist attack's variable becomes negative again, like for both samples before.

The Pseudo-R-squared value is increasing after the introduction of the fixed effects, which removed the bias from the regression without fixed effects and is now close to 10% for both regressions. The difference between both regressions is minimal but the value of the Pseudo-R-squared value remains smaller for the weighted logistic regression.

When we introduce the fixed effects to the normal logistic regression we observe some major changes. First, the difference we had before related to the high education binary variable disappears, but therefore two other differences appear. The first one is related to the gender binary variable and the second one to the binary variable which captures if you live in a large city or not. Both times the sign is changing for the full sample, but it remains for the developing countries.

For the weighted logistic regression, the same differences as for the normal logistic regression remain present.

Besides, more information regarding the various significant levels of the individual control variables can be found in the *Appendix A.4.3.3.1.* and in the *Appendix A.4.3.3.2.* for the normal and the weighted logistic regressions.

4.3.4. EU15 country analysis

For the very restricted subsample of the EU15 countries without including the fixed effects, we find again that the variable of the sum of the last three years' terrorist attack has a positive coefficient for the normal logistic regression as well as for the weighted one. Nevertheless, besides the fact that both coefficients are positive, the value is decreasing for the weighted logistic regression.

Again, regarding the Pseudo-R-squared value, we see that it is reduced when we run the weighted logistic regression, like for the regressions before.

Regarding the other control variables, we observe way more differences compared to the full sample than we did for the other two subsamples. The income per capita in international dollars' variable has a negative sign for the EU15 countries but a positive one for the full sample. In addition, also the gender binary variable, the medium education binary variable and the large city binary variable have different signs than in the full sample.

When we run the weighted logistic regression, we see that the difference related to the gender binary variable has disappeared but the other differences remain.

By adding the country and time fixed effects to the regressions, we get an unexpected result, the variable describing the terrorist attacks remains positive but it loses in significance. For the EU15 countries, it seems so that the sum of the last three years' terrorist attacks has a positive impact on people's opinion towards migration. For the normal regression this variable is insignificant at the 1% significance level and for the weighted regression, it is completely insignificant. Besides the fact that the coefficient remains positive if it is not significant it cannot be taken into consideration for the analysis.

Furthermore, we can mention that we observe a pretty high Pseudo-R-squared value which is decreasing again when we look at the weighted logistic regression.

After adding the fixed effects, the only difference that persists is related to the medium education binary variable, all the other differences are eliminated.

For the weighted logistic regression, the difference related to the medium education binary variable persists but we also observe that the sign for the employment situation binary variable changes for the EU15 countries.

Supplementary information for the significance levels of the diverse individual control variables can be analysed in the *Appendix A.4.3.4.1.* and in the *Appendix A.4.3.4.2.* for both types of regressions respectively.

So even when we define the terrorist attack variable as the sum of the last three years' attacks we do not get a positive coefficient for this variable. In addition, this means that the attacks from one or two years' age do not have as consequence that people become more anti-immigration. Nevertheless, we need to mention that for the EU15 countries we still get a positive coefficient for the sum of the last three years' terrorist attacks, but the variable becomes insignificant when we run the weighted logistic regression.

4.4. Eliminate outliers, focus on the rare attacks

For the following robustness checks we only look at a subgroup of terrorist attacks. The variable is defined as the number of terrorist attacks per year, but we only analyse those groups where the number of incidents is smaller than a specific threshold level. The results for the normal logistic regressions are presented in the *Table 4.4.1(a)* and for the weighted one, they are shown in the *Table 4.4.1(b)*. For example, we run the study only in the case if there are fewer than 5 terrorist attacks per years, in this precise case we only look at the countries where the attacks are really rare. We expect to get a different result focusing on the really rare attacks, because in those countries a supplementary attack is felt much more severely than for example in a country where there are hundreds of attacks per year, on average.

Another possibility is to only analyse those cases where we have fewer than 10 terrorist attacks per year. This is still the waste majority and includes nearly 76% of the whole sample, but still focuses on the countries where the attacks are not very common.

The last possibility is to look at the subgroup where we observe fewer than 500 attacks per year, this eliminates the outliers which knew really high numbers of attacks per year and could therefore bias the results. We already know that only around 3% of the results represent more than 500 terrorist attacks per year, so we really just eliminate the biggest outliers.

4.4.1. *Full sample analysis*

Starting with the regression for the smallest subgroup, without fixed effects, where we observe fewer than 5 terrorist attacks per year for the full sample. This specific subgroup reduces the full sample and focuses only on those years and countries where the attacks are really rare, but nevertheless, it still represents a large part of the whole sample. As result, for both regressions, we get a positive coefficient for the terrorist attack variable, which means that people seem to be more anti-immigration after the attacks, but like we do not include the fixed effects, the result will be biased. For the medium subgroup, we do the same regressions as before but this time we look at the subgroup where we observe fewer than 10 terrorist attacks per year, we get very similar results than those found in the previous subgroup. The reason for this is pretty simple because we analyse nearly the same sample. For the medium subgroup, there are only a little bit more than 6000 observations added to the sample we analysed before. For the largest subgroup where we include all the cases with fewer than 500 attacks per year, which means that only the biggest outliers are eliminated, we still get a positive coefficient for

both regressions. Nevertheless, it has weakened a lot compared to both subgroups before. This subgroup represents nearly the full sample because only 3% of the reports show more than 500 incidents per year.

	logistic regression					
	< 5 terrorist attacks		< 10 terrorist attacks		< 500 terrorist attacks	
Variables						
Dependent variable						
Opinions towards migration (constant)	-0,00695 (0,879)	0,41221 (0,00)***	0,01363 (0,759)	0,71703 (0,00)***	-0,42315 (0,00)***	1,55567 (0,00)***
Explanatory variables						
Number of terrorist attacks	0,07127 (0,00)***	-0,01862 (0,034)**	0,06697 (0,00)***	-0,00988 (0,114)	0,00239 (0,00)***	-0,00203 (0,00)***
Income per capita in international dollars in log	-0,00884 (0,053)*	-0,05115 (0,00)***	-0,01081 (0,016)**	-0,05228 (0,00)***	0,07303 (0,00)***	-0,04460 (0,00)***
Law and Order Index	-0,00326 (0,00)***	-0,00249 (0,00)***	-0,00330 (0,00)***	-0,00253 (0,00)***	-0,00429 (0,00)***	-0,00286 (0,00)***
National Institution Index	-0,00628 (0,00)***	-0,00579 (0,00)***	-0,00632 (0,00)***	-0,00585 (0,00)***	-0,00579 (0,00)***	-0,00562 (0,00)***
Age	0,01689 (0,00)***	0,01494 (0,00)***	0,01662 (0,00)***	0,01494 (0,00)***	0,01572 (0,00)***	0,01452 (0,00)***
Age^2	-0,00011 (0,00)***	-0,00010 (0,00)***	-0,00011 (0,00)***	-0,00010 (0,00)***	-0,00011 (0,00)***	-0,00009 (0,00)***
Gender	-0,00492 (0,641)	0,00741 (0,505)	-0,00757 (0,465)	0,00387 (0,722)	-0,01289 (0,166)	0,00395 (0,691)
Number of children younger than 15 per household	-0,00214 (0,013)**	-0,00141 (0,111)	-0,00232 (0,006)***	-0,00171 (0,050)*	-0,00044 (0,512)	-0,00191 (0,007)***
Medium education level (Secondary)	0,08208 (0,00)***	0,01360 (0,375)	0,08253 (0,00)***	0,01549 (0,301)	0,07743 (0,00)***	0,02122 (0,120)
High education level (College)	-0,15422 (0,00)***	-0,29914 (0,00)***	-0,13418 (0,00)***	-0,28086 (0,00)***	-0,13788 (0,00)***	-0,24489 (0,00)***
Large city	0,00278 (0,804)	-0,02991 (0,015)**	0,00252 (0,819)	-0,02991 (0,013)**	0,04019 (0,00)***	-0,02211 (0,043)**
Employment	-0,09898 (0,00)***	-0,05530 (0,00)***	-0,08892 (0,00)***	-0,05211 (0,00)***	-0,11410 (0,00)***	-0,06442 (0,00)***
Country and time fixed effects	No	Yes	No	Yes	No	Yes
Pseudo R squared	0,0188	0,0858	0,0199	0,0861	0,0238	0,1065
Observations	154188	154188	160386	160386	200988	200988

Table 4.4.1(a): logit regression for the full sample analysis with the dependant variable: Nbr of terrorist attacks

Notes: significance levels - (1%)***, (5%)**, (10%)*

Table 4.4.1(a): logit regression for the full sample analysis with the dependant variable: Nbr of terrorist attacks

Notes: significance levels - (1%)***, (5%)*, (10%)*

By looking at the Pseudo-R-squared value, we observe that it is constantly increasing when we include more observations in the regressions. In addition, it nearly stays constant when we compare both types of regressions, there are some minor changes of 0,01% or 0,02% but nothing more.

Regarding the individual control variables, the only difference that can be observed between this regression and the general regression at the beginning of the thesis concerns the income per capita in international dollars' variable. Nevertheless, this difference only accounts for the subgroups with fewer than 5 and 10 terrorist attacks per year.

When we run the weighted logistic regressions, the only difference related to the income per capita variable we observed before, also disappears so that all the variables have the same sign as in the general regression.

Variables	weighted logistic regression					
	< 5 terrorist attacks		< 10 terrorist attacks		< 500 terrorist attacks	
Dependent variable						
Opinions towards migration (constant)	-0,07681 (0,157)	0,48497 (0,00)***	-0,04872 (0,358)	0,84338 (0,00)***	-0,46604 (0,00)***	1,61413 (0,00)***
Explanatory variables						
Number of terrorist attacks	0,07592 (0,00)***	-0,01621 (0,116)	0,07051 (0,00)***	-0,01122 (0,134)	0,00244 (0,00)***	-0,00214 (0,00)***
Income per capita in international dollars in log	0,00253 (0,642)	-0,05039 (0,00)***	0,00155 (0,773)	-0,05109 (0,00)***	0,07932 (0,00)***	-0,04223 (0,00)***
Law and Order Index	-0,00295 (0,00)***	-0,00233 (0,00)***	-0,00308 (0,00)***	-0,00242 (0,00)***	-0,00404 (0,00)***	-0,00268 (0,00)***
National Institution Index	-0,00644 (0,00)***	-0,00596 (0,00)***	-0,00648 (0,00)***	-0,00599 (0,00)***	-0,00593 (0,00)***	-0,00579 (0,00)***
Age	0,01566 (0,00)***	0,01530 (0,00)***	0,01482 (0,00)***	0,01479 (0,00)***	0,01542 (0,00)***	0,01471 (0,00)***
Age^2	-0,00010 (0,00)***	-0,00010 (0,00)***	-0,00008 (0,00)***	-0,00009 (0,00)***	-0,00009 (0,00)***	-0,00009 (0,00)***
Gender	0,01501 (0,231)	0,01539 (0,243)	0,00920 (0,455)	0,00978 (0,450)	0,00972 (0,382)	0,01138 (0,336)
Number of children younger than 15 per household	-0,00310 (0,004)***	-0,00245 (0,026)**	-0,00343 (0,001)***	-0,00286 (0,008)***	-0,00096 (0,242)	-0,00233 (0,008)***
Medium education level (Secondary)	0,07050 (0,00)***	0,01662 (0,356)	0,07353 (0,00)***	0,02124 (0,228)	0,07772 (0,00)***	0,02582 (0,109)
High education level (College)	-0,15636 (0,00)***	-0,28806 (0,00)***	-0,13932 (0,00)***	-0,26706 (0,00)***	-0,14782 (0,00)***	-0,24661 (0,00)***
Large city	0,01059 (0,430)	-0,01756 (0,234)	0,01191 (0,366)	-0,01839 (0,204)	0,01414 (0,227)	-0,01370 (0,296)
Employment	-0,08937 (0,00)***	-0,03857 (0,009)***	-0,07677 (0,00)***	-0,03375 (0,019)**	-0,10940 (0,00)***	-0,05024 (0,00)***
Country and time fixed effects	No	Yes	No	Yes	No	Yes
Pseudo R squared	0,0186	0,0824	0,0200	0,0828	0,0238	0,1034
Observations	154188	154188	160386	160386	200988	200988

Table 4.4.1(b): weighted logit regression for the full sample analysis with the dependant variable: Nbr of terrorist attacks

Notes: significance levels - (1%)***, (5%)**, (10%)*

By adding the fixed effects to the regressions we observe that the sign of the terrorist attacks becomes negative for the subgroup where we look at fewer than 5 attacks per year. The variable is insignificant for the smallest significance level at 1% and completely insignificant when we run the weighted logistic regression. We expected another result because for this subgroup the attacks are rarer and people might react in a different manner, but this is not the case. The same is observed for the medium subgroup, where the coefficient is also getting negative when we include the fixed effects. For both regressions, the variable is statistically insignificant. Again the explanation can be the same as before because the number of observations is just increasing a bit from the smallest to the medium subgroup. Last, for the largest subgroup we also observe the same change for the terrorist attack coefficient, so even when we exclude the outliers, the result is robust and the variable has a negative effect on people's opinion towards migration. So people tend to be less anti-immigration after the terrorist attacks.

For the Pseudo-R-squared value, we observe a similar pattern than we did for the regressions without the fixed effects, the value is constantly increasing when the number of observations

does. Nevertheless, there is also a difference that can be mentioned, the value is increased when we move from the normal to the weighted logistic regression.

For the other control variables, after adding the fixed effects, the only difference from before related to the income per capita variable disappears. Nevertheless, another one is added and it concerns the gender binary variable because it changes its sign for the three different subgroups in this section. Nevertheless, in terms of significance, this variable is clearly insignificant for all three subgroups and also for the general regression. Furthermore, the medium education binary variable is also highly insignificant for all three subgroups in this section, but it is significant after the smallest significance level in the general regression. The number of children younger than 15 years of age per household variable is significant in the general regression but in this section it is only significant for the largest subgroup. For the smallest subgroup it is clearly insignificant and for the medium one, it is only significant for the largest significance level. Last, the large city binary variable is insignificant for the smallest significance level in all three subgroups and highly insignificant in the general regression.

When we look at the weighted logistic regressions, the same difference as before consists regarding the gender binary variable, all the other variables have the same signs as in the general regression. Once again the gender binary variable is highly insignificant for all three subgroups, the variable was also insignificant for the general regression, the same can be said about the large city binary variable. The same is observed for the medium education binary variable, but here it is significant for the two larger significance level in the general regression. The number of children under the age of 15 per household variable is highly significant for the general regression and for the two larger subgroups, but for the smallest subgroup, it is insignificant for the smallest significance level.

4.4.2. Developed country analysis

The next subsample we will analyse is the one where we look at the developed countries (*Table 4.4.2*). For this and the next subsample we do not need to analyse the largest subgroup, because there are no observations in the subsample with more than 500 incidents per year, so we would only analyse the whole developed or EU15 country sample again.

Considering the Pseudo-R-squared value, we see that its value is increased when more observations are added, which can be seen when we move from the first to the second subgroup. Furthermore, we can mention that the value is decreasing a little bit when we look at the weighted logistic regression compared to the normal one.

For the other control variables, we observe that we have a positive coefficient for both subgroups when looking at the gender binary variable which is not the case in the full sample. In addition, we observe negative coefficients for both subgroups in relation with the medium

education binary variable and the large city binary variable, those variables have positive coefficients for the full sample.

For the weighted logistic regressions, the income per capita variable changes its sign for the full sample but not for the developed country regressions. The difference related to the gender binary variable disappears but the other two, for the medium education binary variable and the large city binary variable, remain.

By adding the fixed effects to the different subgroups and regressions we see that the coefficient of the terrorist attack variable becomes negative for the developed countries regarding the subgroup with fewer than 5 terrorist attacks per year. It is only significant after the 1% significance level for the normal logistic regression, and insignificant for the weighted logistic regression. For the next analysis where we focus on the subgroup with fewer than 10 terrorist attacks per year, the sign for the terrorist attack variable also becomes negative for both regressions. Again, the terrorist attack variable is insignificant for the 1% significance level regarding the normal logistic regression and highly insignificant for the weighted one.

For the Pseudo-R-squared value, we observe nearly the exact same thing as we did for the case without the fixed effects. The only difference here is that the value is much higher because of the introduction of the fixed effects which eliminated some heterogeneity which was present in the error term. Furthermore, we can add that the value is slightly reduced for the weighted logistic regression compared to the normal one.

For the individual control variables, after adding the fixed effects, we observe that the difference regarding the gender binary variable and the large city binary variable disappear but the one relative to the medium education binary variable persists.

When we look at the weighted logistic regressions, the only difference that is still present is the one related to the medium education binary variable.

More precise information for the individual control variables, regarding their significance levels can be found in the *Appendix A.4.4.2.1.* and in the *Appendix A.4.4.2.2.* for both types of regressions.

Variables	logistic regression		weighted logistic regression	
	< 5 terrorist attacks	< 10 terrorist attacks	< 5 terrorist attacks	< 10 terrorist attacks
Dependent variable				
Opinion towards migration (constant)	2,48575 (0,00)***	0,35957 (0,086)*	2,18208 (0,00)***	0,90010 (0,00)***
Explanatory variables				
Nbr of terrorist attacks	-0,02567 (0,045)**	-0,07742 (0,043)**	0,03620 (0,00)***	-0,02872 (0,031)**
Income per capita in international dollars in log	-0,21502 (0,00)***	-0,07206 (0,00)***	-0,19304 (0,00)***	-0,06814 (0,00)***
Law and Order Index	-0,00436 (0,00)***	-0,00350 (0,00)***	-0,00385 (0,00)***	-0,00367 (0,00)***
National Institution Index	-0,00907 (0,00)***	-0,00759 (0,00)***	-0,00903 (0,00)***	-0,00721 (0,00)***
Age	0,01748 (0,00)***	0,01948 (0,00)***	0,01745 (0,00)***	0,01814 (0,00)***
Age^2	-0,00014 (0,00)***	-0,00014 (0,00)***	-0,00013 (0,00)***	-0,00012 (0,00)***
Gender	0,09418 (0,001)***	0,08479 (0,004)**	0,08875 (0,001)***	0,07601 (0,006)***
Number of children younger than 15 per household	-0,00046 (0,815)	-0,00276 (0,175)	-0,00091 (0,636)	-0,00306 (0,124)
Medium education level (Secondary)	-0,10717 (0,011)**	-0,02924 (0,519)	-0,15500 (0,00)***	-0,05059 (0,227)
High education level (College)	-0,50261 (0,00)***	-0,57976 (0,00)***	-0,53483 (0,00)***	-0,56696 (0,00)***
Large city	-0,10456 (0,001)***	-0,17041 (0,00)***	-0,08208 (0,004)***	-0,15105 (0,00)***
Employment	-0,18236 (0,00)***	-0,10017 (0,002)***	-0,14038 (0,00)***	-0,07589 (0,012)**
Country and time fixed effects	No Yes	Yes No	No Yes	Yes No
Pseudo R squared	0,0484	0,0921	0,506	0,0923
Observations	22882	22882	25713	25713

Table 4.4.2: logit and weighted logit regressions for the developed countries with the dependant variable: Nbr of terrorist attacks

Notes: significance levels - (1%)***, (5%)**, (10%)*

4.4.3. EU15 country analysis

After the analysis of the developed countries will follow the analysis of the EU15 countries (Table 4.4.3.), because for this robustness check, the results are nearly identical. In addition, for both subsamples, we do not need to analyse the largest subgroup with fewer than 500 terrorist attacks per year.

Starting with the smallest subgroup where we look at the regressions with fewer than 5 terrorist attacks per year. We observe, for the normal logistic regression, a positive coefficient and for the weighted one a negative coefficient regarding the variable representing the terrorist attacks. Besides, for both regressions, the variables are highly insignificant so that they cannot be taken too seriously. Furthermore, we cannot forget that the bias of the missing fixed effects is still present. For the medium subgroup with fewer than 10 terrorist attacks per years, we find a positive coefficient for the terrorist attack variable for both types of regressions, and this time it is highly significant.

Regarding the Pseudo-R-squared value, we observe that it is increasing when we move from the smallest to the medium subgroup, which makes sense because the number of observations is increasing. Besides, we can add that when we look at the weighted logistic regression the value is slightly reduced compared to the normal logistic regression. Which means that the statistical weight of an individual influences the results and less of the dependent variable can be explained.

For the rest of the control variables, we can say that we observe the exact same differences with the full sample than we do for the developed country analysis.

For the weighted logistic regressions, we observe again the same modification in the variable's signs than for the subsample before. Nevertheless, one more difference needs to be added, it concerns the employment situation binary variable which gets a positive sign for the medium subgroup regarding the EU15 country regression.

By adding the fixed effects to the regressions, we see that the coefficient of the terrorist attack variable becomes negative for the subgroup with fewer than 5 terrorist attacks per year. The variable remains significant after the 1% significance level for the normal logistic regression and insignificant for the two lower significance levels regarding the weighted logistic regression. For the medium subgroup with fewer than 10 terrorist attacks per year, the terrorist attack variable also becomes negative. In this case, the variable is clearly insignificant for the weighted logistic regression, but for the normal logistic regression, the variable is only insignificant for the two lower significance levels.

For the Pseudo-R-squared value, we observe nearly the exact same thing as for the regressions without fixed effects. The only difference is that the value is much higher because of the introduction of the fixed effects which removes the bias that was present before. The value is lower for the weighted logistic regression than for the normal logistic regression.

Variables	logistic regression		weighted logistic regression	
	< 5 terrorist attacks	< 10 terrorist attacks	< 5 terrorist attacks	< 10 terrorist attacks
Dependent variable				
Opinion towards migration (constant)	2,36414 (0,00)***	0,41794 (0,092)*	2,29044 (0,00)***	0,90357 (0,00)***
Explanatory variables				
Nbr of terrorist attacks	0,01109 (0,587)	-0,09458 (0,017)**	0,05356 (0,00)***	-0,02386 (0,075)*
Income per capita in international dollars in log	-0,21764 (0,00)***	-0,07825 (0,00)***	-0,21267 (0,00)***	-0,07366 (0,00)***
Law and Order Index	-0,00482 (0,00)***	-0,00428 (0,00)***	-0,00462 (0,00)***	-0,00440 (0,00)***
National Institution Index	-0,00927 (0,00)***	-0,00722 (0,00)***	-0,00889 (0,00)***	-0,00678 (0,00)***
Age	0,01896 (0,00)***	0,02044 (0,00)***	0,01746 (0,00)***	0,01879 (0,00)***
Age^2	-0,00013 (0,002)***	-0,00013 (0,002)***	-0,00011 (0,006)***	-0,00011 (0,005)***
Gender	0,15218 (0,00)***	0,14347 (0,00)***	0,14493 (0,00)***	0,12447 (0,00)***
Number of children younger than 15 per household	-0,00075 (0,725)	-0,00324 (0,137)	-0,00117 (0,572)	-0,00363 (0,086)*
Medium education level (Secondary)	-0,13408 (0,009)***	-0,02933 (0,590)	-0,18499 (0,00)***	-0,05870 (0,229)
High education level (College)	-0,49447 (0,00)***	-0,59436 (0,00)***	-0,54204 (0,00)***	-0,59255 (0,00)***
Large city	-0,14579 (0,00)***	-0,20002 (0,00)***	-0,12800 (0,00)***	-0,17328 (0,00)***
Employment	-0,09653 (0,008)***	-0,05843 (0,119)	-0,05298 (0,115)	-0,03377 (0,328)
Country and time fixed effects	No Yes	Yes No	No Yes	Yes No
Pseudo R squared	0,0450	0,0731	0,0512	0,0778
Observations	16789	16789	19620	16789

Table 4.4.3: logit and weighted logit regressions for the EU15 countries with the dependant variable: Nbr of terrorist attacks

Notes: significance levels - (*), (**), (***)

For the individual control variables, after adding the fixed effects, we observe the exact same modifications as for the developed countries. So the only difference that is present concerns the medium education binary variable.

When we look at the weighted logistic regressions, the only difference in the variable's sign that is still present is related to the medium education binary variable, just like for the developed countries before.

Additional information regarding the significance levels of the different individual control variables is shown in the *Appendix A.4.4.3.1.* and in the *Appendix A.4.4.3.2.* for the normal and the weighted logistic regression respectively.

4.4.4. Developing country analysis

The last subsample we analyse is the developing country sample, the results for the normal logistic regression are presented in the (*Table 4.4.4(a)*) and those for the weighted logistic regressions in the (*Table 4.4.4(b)*). Starting with the regressions without fixed effects, where we find a positive coefficient for the terrorist attack variable for both regressions when we look at fewer than 5 terrorist attacks per year. Furthermore, we can say that for both regressions the variable is statistically significant and that the results correspond with those found before so that by focusing on the rare attacks we do not find a change in the results. The same result is observed when we run the regressions for the subgroup with fewer than 10 terrorist attacks per year. The coefficient remains positive but is weakened a little bit by those observations that are added to the subsample, the number of observations added is not very numerous, so that the study is based on nearly the same sample. And even for the largest subgroup, we get a positive coefficient for the terrorist attack variable, but the variable is even more weakened. It seems that if we take into account more observations, the influence the terrorist attack variable has on people's opinion towards migration is reduced. Nevertheless, we do not need to forget that the fixed effects are not included in the regression so that all the results are biased.

For the Pseudo-R-squared value, we observe that it is constantly increasing when we introduce more observations in the analysis for both types of regressions. Furthermore, we can mention that for the weighted logistic regressions the value is always a little bit higher than for the normal ones, we observed the opposite for the developed and the EU15 countries.

Variables	logistic regression					
	< 5 terrorist attacks		< 10 terrorist attacks		< 500 terrorist attacks	
Dependent variable						
Opinions towards migration (constant)	-0,41409 (0,00)***	0,56038 (0,00)***	-0,41452 (0,00)***	0,55523 (0,00)***	-0,74859 (0,00)***	1,47164 (0,00)***
Explanatory variables						
Number of terrorist attacks	0,07448 (0,00)***	-0,01272 (0,161)	0,06682 (0,00)***	-0,01076 (0,132)	0,00204 (0,00)***	-0,00199 (0,00)***
Income per capita in international dollars in log	0,03661 (0,00)***	-0,04940 (0,00)***	0,03567 (0,00)***	-0,05119 (0,00)***	0,10117 (0,00)***	-0,04536 (0,00)***
Law and Order Index	-0,00304 (0,00)***	-0,00234 (0,00)***	-0,00310 (0,00)***	-0,00233 (0,00)***	-0,00400 (0,00)***	-0,00256 (0,00)***
National Institution Index	-0,00551 (0,00)***	-0,00551 (0,00)***	-0,00553 (0,00)***	-0,00559 (0,00)***	-0,00493 (0,00)***	-0,00542 (0,00)***
Age	0,01609 (0,00)***	0,01432 (0,00)***	0,01638 (0,00)***	0,01482 (0,00)***	0,01456 (0,00)***	0,01431 (0,00)***
Age^2	-0,00010 (0,00)***	-0,00009 (0,00)***	-0,00010 (0,00)***	-0,00010 (0,00)***	-0,00009 (0,00)***	-0,00010 (0,00)***
Gender	-0,01479 (0,196)	-0,00268 (0,824)	-0,01966 (0,082)*	-0,00652 (0,584)	-0,03603 (0,00)***	-0,00629 (0,565)
Number of children younger than 15 per household	-0,00199 (0,037)**	-0,00112 (0,255)	-0,00230 (0,014)**	-0,00148 (0,128)	-0,00038 (0,610)	-0,00193 (0,015)**
Medium education level (Secondary)	0,08486 (0,00)***	0,01800 (0,269)	0,09395 (0,00)***	0,02396 (0,136)	0,12849 (0,00)***	0,04018 (0,007)***
High education level (College)	-0,11948 (0,00)***	-0,24569 (0,00)***	-0,09862 (0,00)***	-0,23343 (0,00)***	0,01164 (0,508)	-0,17006 (0,00)***
Large city	-0,00860 (0,481)	-0,00904 (0,497)	-0,00640 (0,596)	-0,00959 (0,466)	0,01932 (0,075)*	-0,00002 (0,999)
Employment	-0,07705 (0,00)***	-0,04656 (0,00)***	-0,07330 (0,00)***	-0,04619 (0,00)***	-0,07511 (0,00)***	-0,05899 (0,00)***
Country and time fixed effects	No	Yes	No	Yes	No	Yes
Pseudo R squared	0,0169	0,0841	0,0180	0,0849	0,0232	0,1000
Observations	131306	131306	134673	134673	164438	164438

Table 4.4.4(a): logit regression for the developing country analysis with the dependant variable: Nbr of terrorist attacks

Notes: significance levels - (1%)***, (5%)**, (10%)*

For the weighted logistic regression, the only difference from the regression before that persists is the one related to the large city binary variable. Nevertheless, another one appears and it concerns the gender binary variable because the sign has changed for the full sample.

By adding the fixed effects to the different subgroups and regressions, we observe that for the first subgroup, where we analyse the case with fewer than 5 terrorist attacks per years, the coefficient of the terrorist attacks variable becomes negative. So, no changes compared to the other tests even when we base the analyses only on the rare attacks. Nevertheless, the result is observed for both regressions but both variables are statistically insignificant so that we cannot put too much weight on those numbers. Once again, when we look at the medium subgroup with fewer than 10 incidents per year we find a negative coefficient for the terrorist attack variable. In addition, the variable is insignificant for both regressions so we cannot put too much weight on those results either. For the largest subgroup with fewer than 500 attacks per year we find a negative coefficient for the terrorist attack variable but this time it is significant for the normal and the weighted logistic regression.

Variables	weighted logistic regression					
	< 5 terrorist attacks		< 10 terrorist attacks		< 500 terrorist attacks	
Dependent variable						
Opinions towards migration (constant)	-0,37888	0,58689	-0,36903	0,59072	-0,71101	1,63684
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Explanatory variables						
Number of terrorist attacks	0,08440	-0,01067	0,07301	-0,01528	0,00208	-0,00207
	(0,00)***	(0,314)	(0,00)***	(0,065)*	(0,00)***	(0,00)***
Income per capita in international dollars in log	0,04022	-0,04976	0,04019	-0,05144	0,10646	-0,04374
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Law and Order Index	-0,00284	-0,00225	-0,00296	-0,00227	-0,00378	-0,00241
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
National Institution Index	-0,00577	-0,00565	-0,00580	-0,00571	-0,00513	-0,00556
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Age	0,01401	0,01416	0,01373	0,01422	0,01217	0,01357
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Age^2	-0,00008	-0,00009	-0,00007	-0,00009	-0,00006	-0,00009
	(0,00)***	(0,00)***	(0,001)***	(0,00)***	(0,002)***	(0,00)***
Gender	-0,00088	0,00379	-0,00659	-0,00120	-0,01033	0,00353
	(0,948)	(0,788)	(0,619)	(0,931)	(0,396)	(0,784)
Number of children younger than 15 per household	-0,00289	-0,00177	-0,00344	-0,00235	-0,00072	-0,00215
	(0,011)**	(0,130)	(0,002)***	(0,041)**	(0,419)	(0,024)**
Medium education level (Secondary)	0,07374	0,01929	0,08686	0,02924	0,12422	0,04509
	(0,00)***	(0,309)	(0,00)***	(0,118)	(0,00)***	(0,009)***
High education level (College)	-0,13041	-0,23679	-0,12657	-0,23093	-0,03875	-0,17342
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,061)*	(0,00)***
Large city	-0,00327	-0,00111	-0,00326	-0,00209	-0,01568	0,00909
	(0,820)	(0,944)	(0,819)	(0,893)	(0,222)	(0,523)
Employment	-0,07257	-0,03720	-0,06706	-0,03687	-0,07245	-0,05279
	(0,00)***	(0,018)**	(0,00)***	(0,017)**	(0,00)***	(0,00)***
Country and time fixed effects	No	Yes	No	Yes	No	Yes
Pseudo R squared	0,0172	0,0829	0,0185	0,0836	0,0233	0,988
Observations	131306	131306	134673	134673	164438	164438

Table 4.4.4(b): weighted logit regression for the developing country analysis with the dependant variable: Nbr of terrorist attacks

Notes: significance levels - (1%)***, (5%)**, (10%)*

Regarding the Pseudo-R-squared value, we observe that it is increasing with the number of the observations and that it is decreasing when we run the weighted logistic regression compared to the normal one. These changes are the same as those observed for the two subsamples before.

For the individual control variables, after adding the fixed effects, the old differences disappear, because the signs are modified for the full sample, regarding the large city binary variable and modified for the developing countries regarding the other two variables. Besides, a new difference appeared and it is related to the gender binary variable because the sign is reversed for the full sample.

When we look at the weighted logistic regressions, the first difference is observed when we look at the medium subgroup and the gender binary variable. We observe a negative coefficient for the developing countries and a positive one for the full sample. The second difference is observed for the largest subgroup and the large city binary variable, we have a positive coefficient for the developing countries but a negative one for the full sample.

The different significance levels for the normal and the weighted logistic regressions are highlighted in the *Appendix A.4.4.4.1.* and in the *Appendix A.4.4.4.2.* respectively.

In the end, we can say that even when we look at some subgroups by excluding those observations with more incidents than the threshold level, the variable defining the terrorist attacks remains with a negative coefficient when we include the fixed effects. This does not change for the different subsamples, so that we get the same result for the developed, the developing and the EU15 countries.

4.5. Different expressions for the terrorist attacks variable

Like we have seen in the sections before, where the terrorist attack variable is defined as the number of terrorist attacks, that, in general, these variable gets a negative coefficient after introducing the fixed effects. This result is observed for the full sample, the developed countries, the developing countries but also for the EU15 countries even when in the last case, sometimes, the variable becomes insignificant. Nevertheless, this result is observed for nearly all the tests we tried before.

Here in this section we express the terrorist attack variable in different manners so that it does not represent the number of incidents, but three different binary variables. The first one is the binary variable of fatalities which has the value 1 if there was at least one dead person during the attacks per year. The second one is nearly identical to the first one; the only difference is that here we look at people who got injured. The third variable differs from the two before, because here we look at the target type, so if the target of the terrorist attacks was private citizens and property, the variable has the value 1 and 0 if the target was something else.

Once again we will do the analysis for the full sample and the different subsamples mentioned before, running both regression types, with and without fixed effects. The results for the normal logistic regressions are presented in the *Table 4.5.1(a) – Table 4.5.4(a)*, and those for the weighted logistic regressions in the *Table 4.5.1(b) – Table 4.5.4(b)*.

4.5.1. *Full sample analysis*

Starting with the analysis without fixed effects and looking at the fatalities binary variable first, we see that for both regressions, the normal and the weighted ones, the coefficient is negative. Immediately at the beginning, we see that the modification of the terrorist attack variable changes the result. Nevertheless, we need to mention that for both regressions the variable is statistically insignificant. We cannot say the same about the injuries binary variable, because, besides the fact that we also find a negative coefficient for the variable, the variable is significant for both regressions. Which means that people tend to be less anti-immigration after the terrorist attacks have as consequence injured people. For the last variable which captures if the target of the attack was private citizens and property, we have a negative coefficient for both regressions. So we get for each variable that replaced the number of terrorist attacks a negative coefficient which is most of the time significant. Nevertheless, we cannot forget that the results are still biased because we do not include the fixed effects.

Variables	logistic regression					
	with fatalities		with injuries		private property	
Dependent variable						
Opinions towards migration (constant)	-0,17680	1,22416	-0,09667	1,19147	-0,12339	1,40508
	(0,001)***	(0,00)***	(0,078)*	(0,00)***	(0,024)**	(0,00)***
Explanatory variables						
Fatalities (binary)	-0,00522	0,07915				
	(0,710)	(0,001)***				
Injuries (binary)			-0,13333	0,10123		
			(0,00)***	(0,00)***		
Private citizens and property (binary)					-0,13902	-0,24467
					(0,00)***	(0,00)***
Income per capita in international dollars in log	0,05741	-0,04267	0,05369	-0,04320	0,05503	-0,04239
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Law and Order Index	-0,00232	-0,00164	-0,00238	-0,00162	-0,00241	-0,00167
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
National Institution Index	-0,00427	-0,00574	-0,00428	-0,00573	-0,00421	-0,00573
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Age	0,01337	0,01309	0,01336	0,01309	0,01327	0,01309
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Age^2	-0,00009	-0,00008	-0,00009	-0,00008	-0,00009	-0,00008
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Gender	-0,10769	-0,03331	-0,1065	-0,03365	-0,10411	-0,03344
	(0,00)***	(0,014)**	(0,00)***	(0,013)**	(0,00)***	(0,013)**
Number of children younger than 15 per household	-0,00133	-0,00207	-0,00126	-0,00200	-0,00145	-0,00218
	(0,095)*	(0,015)**	(0,112)	(0,019)**	(0,068)*	(0,010)**
Medium education level (Secondary)	0,09650	0,06711	0,09263	0,06663	0,09938	0,06640
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
High education level (College)	-0,10910	-0,16323	-0,11272	-0,16418	-0,10583	-0,16368
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Large city	0,13487	0,03549	0,13214	0,03681	0,12797	0,03587
	(0,00)***	(0,016)**	(0,00)***	(0,013)**	(0,00)***	(0,015)**
Employment	-0,13516	-0,05186	-0,13755	-0,05140	-0,13914	-0,05264
	(0,00)***	(0,00)***	(0,00)***	(0,001)***	(0,00)***	(0,00)***
Country and time fixed effects	No	Yes	No	Yes	No	Yes
Pseudo R squared	0,0134	0,1103	0,0141	0,1104	0,0139	0,1108
Observations	113261	113261	113261	113261	113261	113261

Table 4.5.1(a): logit regression for the full sample analysis with the dependant variables: consequences and target of the attacks (binary)

Notes: significance levels - (1%)***, (5%)**, (10%)*

Besides the fatalities variable, the other two variables are statistically significant for both logistic regressions, the normal and the weighted one.

Furthermore, the Pseudo-R-squared value is also pretty similar for the different regressions but we need to mention that we observe an increase of its value when we look at the weighted logistic regression compared to the normal one.

For the other control variables, we observe no difference in the coefficient's signs between the three binary variable regressions in this section and the general one where the terrorist attack variable is defined as the number of terrorist attacks per year.

When we run the weighted logistic regressions, we still do not observe any differences between the variable's sign in this section and the general regression.

Variables	weighted logistic regression					
	with fatalities		with injuries		private property	
Dependent variable						
Opinions towards migration (constant)	-0,38652 (0,00)***	1,30961 (0,00)***	-0,31201 (0,00)***	1,28670 (0,00)***	-0,35360 (0,00)***	1,46972 (0,00)***
Explanatory variables						
Fatalities (binary)	-0,02356 (0,162)	0,08766 (0,001)***				
Injuries (binary)			-0,14042 (0,00)***	0,08984 (0,00)***		
Private citizens and property (binary)					0,11128 (0,00)***	-0,20775 (0,00)***
Income per capita in international dollars in log	0,08040 (0,00)***	-0,03631 (0,00)***	0,07675 (0,00)***	-0,03680 (0,00)***	0,07863 (0,00)***	-0,03607 (0,00)***
Law and Order Index	-0,00239 (0,00)***	-0,00145 (0,00)***	-0,00243 (0,00)***	-0,00143 (0,00)***	-0,00244 (0,00)***	-0,00145 (0,00)***
National Institution Index	-0,00458 (0,00)***	-0,00606 (0,00)***	-0,00459 (0,00)***	-0,00604 (0,00)***	-0,00454 (0,00)***	-0,00605 (0,00)***
Age	0,01464 (0,00)***	0,01239 (0,00)***	0,01459 (0,00)***	0,01245 (0,00)***	0,01472 (0,00)***	0,01247 (0,00)***
Age ²	-0,00008 (0,00)***	-0,00007 (0,007)***	-0,00008 (0,00)***	-0,00007 (0,006)***	-0,00008 (0,00)***	-0,00007 (0,006)***
Gender	-0,06653 (0,00)***	-0,02982 (0,066)*	-0,06576 (0,00)***	-0,02988 (0,065)*	-0,06549 (0,00)***	-0,03024 (0,062)*
Number of children younger than 15 per household	-0,00141 (0,149)	-0,00229 (0,030)**	-0,00135 (0,168)	-0,00222 (0,036)**	-0,00153 (0,118)	-0,00236 (0,025)**
Medium education level (Secondary)	0,11813 (0,00)***	0,05968 (0,007)***	0,11564 (0,00)***	0,05946 (0,008)***	0,11823 (0,00)***	0,05976 (0,007)***
High education level (College)	-0,11813 (0,00)***	-0,18277 (0,00)***	-0,12287 (0,00)***	-0,18283 (0,00)***	-0,11750 (0,00)***	-0,18327 (0,00)***
Large city	0,07622 (0,00)***	0,03644 (0,042)**	0,07503 (0,00)***	0,03731 (0,037)**	0,07108 (0,00)***	0,03652 (0,042)**
Employment	-0,13306 (0,00)***	-0,04785 (0,008)***	-0,13481 (0,00)***	-0,04778 (0,008)***	-0,13665 (0,00)***	-0,04915 (0,006)***
Country and time fixed effects	No	Yes	No	Yes	No	Yes
Pseudo R squared	0,0151	0,1065	0,0158	0,1066	0,0154	0,1069
Observations	113261	113261	113261	113261	113261	113261

Table 4.5.1(b): weighted logit regression for the full sample analysis with the dependant variables: consequences and target of attacks (binary)

Notes: significance levels - (1%)***, (5%)**, (10%)*

By adding the fixed effects to the regressions of all three variables, we observe that not all of them are changing the sign. Starting with the fatalities binary variable regression again, we observe that the sign of the coefficient becomes positive, and in addition, it becomes strongly significant. So after adding the fixed effects, we find the result we expected, which is that people tend to be more anti-immigration after the terrorist attacks have as consequence deaths. The same is observed for the injuries binary variable, it also becomes positive, so people think about it in the same way they do about the fatalities case and here again, the variable is highly significant. For the last variable, we observe no changes so that it remains negative and highly significant. All those results mentioned before also account for the weighted logistic regression.

Regarding the Pseudo-R-squared value, it is increasing for all the different variables and regressions, which means that the introduction of the fixed effects captures some part of the heterogeneity that was present in the error term for the regressions without fixed effects. Nevertheless, here we observe a small decrease in its value when we run the weighted logistic

regression compared to the normal one, the opposite was observed for the analysis without fixed effects.

For the individual control variables, after adding the fixed effects, we observe one difference which concerns the large city binary variable, because the sign is changing in the general regression but does not in the three regressions of this section. In terms of significance, we observe that for all three types of regressions, the gender binary variable, the number of children younger than 15 years of age per household variable and the large city binary variable are only significant after the smallest significance level. Nevertheless, for the full sample, the gender binary variable and the large city binary variable are clearly insignificant and the number of children younger than 15 years of age per household variable is strongly significant.

When we run the weighted logistic regression, we observe the same modifications in the significance levels than before with the normal logistic regression. The only difference is that the gender binary variable loses in significance and is now only significant for the largest significance level. For the general regression, the three variables mentioned above, remain with the same significance levels as they did in the normal logistic regression.

4.5.2. Developed country analysis

Here again, we follow the same scheme as we did for the full sample analysis and we start with the analysis without fixed effects of the fatalities binary variable regression followed by the other two.

For the fatalities binary variable, we find a strong coefficient but it is negative again, so the same as for the full sample. This value becomes even stronger when we run the weighted logistic regression. So it seems that people in developed countries are less anti-immigration when the terrorist attacks have as consequence deaths. The same is observed for the injuries binary variable, where we find again a negative coefficient but this time it is less strong than for the fatalities case. Once again, the coefficient becomes stronger when we run the weighted logistic regression. Even when there are injuries during terrorist attacks it seems that people in developed countries are less anti-immigration than for attacks where there are no injuries. Regarding the last variable that captures, which was the target of the terrorist attacks, we also find a strong negative coefficient which also coincides with the one we found for the whole sample analysis. But here, the coefficient remains pretty stable when we run the weighted logistic regression.

Variables	logistic regression					
	with fatalities		with injuries		private property	
Dependent variable						
Opinions towards migration (constant)	3,23179	0,87408	3,07626	1,12045	3,27309	1,16693
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Explanatory variables						
Fatalities (binary)	-0,36210	0,54134				
	(0,00)***	(0,00)***				
Injuries (binary)			-0,25968	0,12429		
			(0,00)***	(0,055)*		
Private citizens and property (binary)					-0,48081	0,02781
					(0,00)***	(0,615)
Income per capita in international dollars in log	-0,24997	-0,03955	-0,23455	-0,04183	-0,24793	-0,04189
	(0,00)***	(0,029)**	(0,00)***	(0,021)**	(0,00)***	(0,021)**
Law and Order Index	-0,00471	-0,00390	-0,00426	-0,00394	-0,00507	-0,00395
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
National Institution Index	-0,00787	-0,00571	-0,00823	-0,00567	-0,00767	-0,00563
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Age	0,01465	0,01909	0,01536	0,01905	0,01509	0,01890
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Age^2	-0,00007	-0,00010	-0,00008	-0,00010	-0,00008	-0,00010
	(0,042)**	(0,006)***	(0,036)**	(0,006)***	(0,028)**	(0,007)***
Gender	0,12138	0,04713	0,11556	0,04985	0,11893	0,05049
	(0,00)***	(0,114)	(0,00)***	(0,095)*	(0,00)***	(0,090)*
Number of children younger than 15 per household	-0,00179	-0,00088	-0,00126	-0,00117	-0,00225	-0,00116
	(0,300)	(0,0626)	(0,465)	(0,519)	(0,193)	(0,520)
Medium education level (Secondary)	-0,27603	-0,05308	-0,29284	-0,05849	-0,24112	-0,06255
	(0,00)***	(0,230)	(0,00)***	(0,185)	(0,00)***	(0,156)
High education level (College)	-0,99614	-0,50645	-1,01976	-0,51371	-0,98239	-0,51515
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Large city	0,11325	-0,10350	0,12093	-0,10518	0,08388	-0,10875
	(0,00)***	(0,002)***	(0,00)***	(0,002)***	(0,00)***	(0,001)***
Employment	-0,12969	-0,10628	-0,11972	-0,10476	-0,14449	-0,10333
	(0,00)***	(0,001)***	(0,00)***	(0,001)***	(0,00)***	(0,002)***
Country and time fixed effects	No	Yes	No	Yes	No	Yes
Pseudo R squared	0,0621	0,1382	0,0617	0,1374	0,0658	0,1373
Observations	23672	23672	23672	23672	23672	23672

Table 4.5.2(a): logit regression for the developed countries with the dependant variables: consequences and target of attacks (binary)

Notes: significance levels - (1%)***, (5%)**, (10%)*

Nevertheless, we need to mention that the results are still biased because we do not include the fixed effects in the regressions, so we cannot put too much weight on these negative coefficients.

Regarding the Pseudo-R-squared values, we observe a similar decrease for all three variables when we move to the weighted regression.

For the individual control variables, we observe a positive sign for the income per capita variable and the gender binary variable regarding the three different regressions for the full sample, which is not the case for the developed countries. In addition, we get a negative sign for the medium education binary variable coefficient regarding the developed countries which is positive for the full sample.

When we look at the weighted logistic regressions, we observe the exact same difference in the variable's signs than we did for the normal logistic regression.

Variables	weighted logistic regression					
	with fatalities		with injuries		private property	
Dependent variable						
Opinions towards migration (constant)	3,00919 (0,00)***	0,86558 (0,00)***	2,85585 (0,00)***	1,11438 (0,00)***	2,99301 (0,00)***	1,12529 (0,00)***
Explanatory variables						
Fatalities (binary)	-0,41694 (0,00)***	0,51855 (0,00)***				
Injuries (binary)			-0,31770 (0,00)***	0,07439 (0,357)		
Private citizens and property (binary)					-0,47195 (0,00)***	0,04532 (0,514)
Income per capita in international dollars in log	-0,25158 (0,00)***	-0,03880 (0,094)*	-0,23062 (0,00)***	-0,04031 (0,081)*	-0,24464 (0,00)***	-0,04006 (0,083)*
Law and Order Index	-0,00454 (0,00)***	-0,00353 (0,00)***	-0,00405 (0,00)***	-0,00358 (0,00)***	-0,00474 (0,00)***	-0,00359 (0,00)***
National Institution Index	-0,00822 (0,00)***	-0,00619 (0,00)***	-0,00863 (0,00)***	-0,00618 (0,00)***	-0,00822 (0,00)***	-0,00615 (0,00)***
Age	0,02030 (0,00)***	0,02124 (0,00)***	0,02015 (0,00)***	0,02118 (0,00)***	0,02079 (0,00)***	0,02105 (0,00)***
Age ²	-0,00012 (0,010)***	-0,00013 (0,010)**	-0,00012 (0,012)**	-0,00013 (0,010)***	-0,00013 (0,007)***	-0,00013 (0,011)**
Gender	0,09291 (0,009)***	0,03439 (0,358)	0,08771 (0,013)**	0,03493 (0,350)	0,09229 (0,009)***	0,03498 (0,349)
Number of children younger than 15 per household	-0,00219 (0,307)	-0,00095 (0,680)	-0,00154 (0,470)	-0,00128 (0,580)	-0,00264 (0,221)	-0,00122 (0,597)
Medium education level (Secondary)	-0,18970 (0,00)***	-0,04327 (0,420)	-0,22654 (0,00)***	-0,04825 (0,368)	-0,15688 (0,001)***	-0,05083 (0,343)
High education level (College)	-0,84415 (0,00)***	-0,53991 (0,00)***	-0,89097 (0,00)***	-0,54574 (0,00)***	-0,81198 (0,00)***	-0,54677 (0,00)***
Large city	0,12895 (0,001)***	-0,11782 (0,006)***	0,13313 (0,00)***	-0,11863 (0,006)***	0,09236 (0,014)**	-0,11972 (0,005)***
Employment	-0,11984 (0,002)***	-0,06530 (0,116)	-0,11068 (0,005)***	-0,06395 (0,124)	-0,14094 (0,00)***	-0,06283 (0,130)
Country and time fixed effects	No	Yes	No	Yes	No	Yes
Pseudo R squared	0,0548	0,1269	0,0546	0,1261	0,0575	0,1261
Observations	23672	236672	23672	23672	23672	23672

Table 4.5.2(b): weighted logit regression for the developed countries with the dependant variables: consequences and target of attacks (binary)
Notes: significance levels - (1%)***, (5%)**, (10%)*

After adding the fixed effects to the different regressions, we get the following results. Starting with the binary fatalities variable, the sign of the coefficient becomes positive and is highly significant, so here again, we observe the same change as we did for the full sample. For the binary variable capturing the injuries, we find that the coefficient also becomes positive when we include the fixed effects but it is insignificant so that we cannot put too much weight on this result. For the private citizens and property binary variable we see that the variable also becomes positive but just like for the injuries variable it is highly insignificant so we cannot use it. All these results mentioned above account for the normal, and the weighted logistic regressions.

Like for the other regressions, when we add the fixed effects to the regressions, the Pseudo-R-squared value is increasing a lot and captures some of the heterogeneity that was present in the error term. In addition, the value is decreasing when we look at the weighted logistic regression compared to the normal one.

For the rest of the control variables, we can mention that the difference related to the income per capita in international dollars' variable disappears. Nevertheless, those regarding the gender binary variable and the medium education binary variable remain and one more is added, related to the large city binary variable, because the sign changes for the developed countries.

When we look at the weighted logistic regressions we observe the same differences as for the normal logistic regression.

Additional information for the different significance levels of the individual control variables regarding the normal and the weighted logistic regression are shown in the *Appendix A.4.5.2.1.* and in the *Appendix A.4.5.2.2.*

4.5.3. Developing country analysis

Starting with the regressions without the fixed effects and the fatalities binary variable for the developing countries. We find a positive coefficient, contrary to the analysis we did for the developed countries and the full sample. Here we find that people are more anti-immigration after terrorist attacks have as consequences deaths, but the opposite is observed for the weighted logistic regression and besides, both variables are statistically insignificant. For the binary variable capturing the injuries, we find again a negative coefficient like for the full sample and the developed countries. Here the variable remains statistically significant also for the weighted logistic regression so that it seems that people are less anti-immigration after terrorist attacks have injuries as consequence. Looking at the regressions with the binary variable capturing the targets of the terrorist attacks, we find a negative coefficient for the variable for both regressions, this is also what we found for the full sample and the developed countries. Nevertheless, the variable is insignificant when we run the weighted logistic regression.

Regarding the Pseudo-R-squared value, we observe that it is increased for the weighted logistic regression compared to the normal logistic regression, this is the opposite we found for the developed countries. Nevertheless, this result is also observed for the full sample.

For the rest of the control variables, the only difference in the signs of the variables is observed for the high education binary variable which is positive for the developing countries but negative for the full sample.

For the weighted logistic regressions, the only difference in the variable's sign remains for the high education binary variable and no more are added.

Variables	logistic regression					
	with fatalities		with injuries		private property	
Dependent variable						
Opinions towards migration (constant)	-0,78503	3,20968	-0,71505	3,15008	-0,75392	3,42212
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Explanatory variables						
Fatalities (binary)	0,01341	0,04630				
	(0,379)	(0,055)*				
Injuries (binary)			-0,11391	0,10613		
			(0,00)***	(0,00)***		
Private citizens and property (binary)					-0,06157	-0,33873
					(0,001)***	(0,00)***
Income per capita in international dollars in log	0,11289	-0,04644	0,10992	-0,04712	0,11141	-0,04573
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Law and Order Index	-0,00143	-0,00104	-0,00146	-0,00101	-0,00145	-0,00105
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
National Institution Index	-0,00309	-0,00571	-0,00311	-0,00570	-0,00307	-0,00572
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Age	0,01384	0,01308	0,01391	0,01305	0,01374	0,01292
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Age^2	-0,00010	-0,00009	-0,00010	-0,00009	-0,00010	-0,00008
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Gender	-0,15382	-0,05115	-0,15293	-0,05141	-0,15218	-0,05199
	(0,00)***	(0,001)***	(0,00)***	(0,001)***	(0,00)***	(0,001)***
Number of children younger than 15 per household	-0,00146	-0,00257	-0,00139	-0,00250	-0,00147	-0,00269
	(0,109)	(0,008)***	(0,126)	(0,010)***	(0,105)	(0,006)***
Medium education level (Secondary)	0,15706	0,09997	0,15364	0,09871	0,15705	0,09959
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
High education level (College)	0,08280	-0,06449	0,07884	-0,06684	0,08326	-0,06653
	(0,001)***	(0,020)**	(0,001)***	(0,016)**	(0,001)***	(0,017)**
Large city	0,10470	0,69344	0,10398	0,07063	0,10331	0,07030
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Employment	-0,11106	-0,03294	-0,11422	-0,03159	-0,11225	-0,03224
	(0,00)***	(0,049)**	(0,00)***	(0,059)*	(0,00)***	(0,054)*
Country and time fixed effects	No	Yes	No	Yes	No	Yes
Pseudo R squared	0,0146	0,1048	0,0151	0,1050	0,0147	0,1059
Observations	89589	89589	89589	89589	89589	89589

Table 4.5.3(a): logit regression for the developing countries with the dependant variables: consequences and target of attacks (binary)

Notes: significance levels - (1%)***, (5%)**, (10%)*

After adding the fixed effects to all the regressions, we find for the fatalities binary variable regression a positive sign for the variable's coefficient in both regressions. Which is not highly significant but at least it is significant for the largest significance level at 10%, the result is similar to the one we got for the developed countries. Regarding the injuries binary variable, we find, after adding the fixed effects to the regressions, a positive sign for the variable too. For both regressions, this is the case and even more, the variables are highly significant which means that people seem to be more anti-immigration after terrorist attacks have as consequence injuries, when we look at the developing countries and the unbiased results. For the last variable capturing if the target of the terrorist attacks was private citizens and property or not, we find a strong negative coefficient which is also significant for both types of regressions. Even that the value loses a little bit of weight for the weighted logistic regression, it seems that people from developing countries react with less anti-immigration to terrorist attacks which have as target private citizens and property. We observed the same for the full sample and the developed countries.

Variables	weighted logistic regression					
	with fatalities		with injuries		private property	
Dependent variable						
Opinions towards migration (constant)	-0,95382 (0,00)***	2,93499 (0,00)***	-0,88723 (0,00)***	2,88658 (0,00)***	-0,94631 (0,00)***	3,12684 (0,00)***
Explanatory variables						
Fatalities (binary)	-0,00587 (0,748)	0,05585 (0,052)*				
Injuries (binary)			-0,12000 (0,00)***	0,09993 (0,00)***		
Private citizens and property (binary)					-0,02259 (0,306)	-0,29510 (0,00)***
Income per capita in international dollars in log	0,14177 (0,00)***	-0,04018 (0,00)***	0,13839 (0,00)***	-0,04092 (0,00)***	0,14116 (0,00)***	-0,03962 (0,001)***
Law and Order Index	-0,00154 (0,00)***	-0,00087 (0,008)***	-0,00156 (0,00)***	-0,00085 (0,010)***	-0,00154 (0,00)***	-0,00086 (0,008)***
National Institution Index	-0,00348 (0,00)***	-0,00598 (0,00)***	-0,00351 (0,00)***	-0,00596 (0,00)***	-0,00348 (0,00)***	0,00598 (0,00)***
Age	0,01201 (0,00)***	0,01071 (0,00)***	0,01200 (0,00)***	0,01073 (0,00)***	0,01201 (0,00)***	0,01069 (0,00)***
Age^2	-0,00006 (0,023)**	-0,00006 (0,043)**	-0,00006 (0,022)**	-0,00006 (0,042)**	-0,00006 (0,023)**	-0,00006 (0,045)**
Gender	-0,10131 (0,00)***	-0,04185 (0,020)**	-0,10042 (0,00)***	-0,04186 (0,020)**	-0,10113 (0,00)***	-0,04255 (0,018)**
Number of children younger than 15 per household	-0,00146 (0,183)	-0,00291 (0,013)**	-0,00142 (0,194)	-0,00283 (0,017)**	-0,00148 (0,176)	-0,00296 (0,012)**
Medium education level (Secondary)	0,18535 (0,00)***	0,09283 (0,00)***	0,18526 (0,00)***	0,09211 (0,00)***	0,18497 (0,00)***	0,09271 (0,00)***
High education level (College)	0,01922 (0,501)	-0,08906 (0,007)***	0,01705 (0,550)	-0,08962 (0,006)***	0,01810 (0,506)	-0,09230 (0,005)***
Large city	0,02315 (0,199)	0,07285 (0,00)***	0,02329 (0,196)	0,07389 (0,00)***	0,02281 (0,206)	0,07413 (0,00)***
Employment	-0,10438 (0,00)***	-0,03941 (0,049)**	-0,10660 (0,00)***	-0,03838 (0,056)*	-0,10471 (0,00)***	-0,03961 (0,048)**
Country and time fixed effects	No	Yes	No	Yes	No	Yes
Pseudo R squared	0,0167	0,1027	0,0173	0,1028	0,0167	0,1036
Observations	89589	89589	89589	89589	89589	89589

Table 4.5.3(b): weighted logit regression for the developing countries with the dependant variables: consequences and target of attacks (binary)

Notes: significance levels - (1%)***, (5%)**, (10%)*

Regarding the Pseudo-R-squared value, it is increasing a lot by introducing the fixed effects, because like we mentioned in some cases before, it eliminates the bias present in the regressions without fixed effects. In addition, it captures some of the heterogeneity that is present in the error term. In addition, here we observe that the value is decreasing a little bit when we run the weighted logistic regression compared to the normal one.

For the rest of the control variables, after adding the fixed effects, the only difference we observed before related to the high education binary variable is eliminated so that now all the control variables for the developing countries have the same sign as they do for the full sample. For the weighted logistic regressions, we also observe no difference in the signs of the different variables between both samples.

Further insight regarding the significance levels of the different control variables for the normal and the weighted logistic regressions are shown in the *Appendix A.4.5.3.1.* and in the *Appendix A.4.5.3.2.*

4.5.4. EU15 country analysis

Variables	logistic regression					
	with fatalities		with injuries		private property	
Dependent variable						
Opinions towards migration (constant)	3,83948	1,37605	3,86515	1,27725	3,66132	1,36049
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Explanatory variables						
Fatalities (binary)	-0,38137	-0,52737				
	(0,644)	(0,540)				
Injuries (binary)			-0,13635	-0,43675		
			(0,002)***	(0,00)***		
Private citizens and property (binary)					-0,69362	-0,22368
					(0,00)***	(0,001)***
Income per capita in international dollars in log	-0,33072	-0,03184	-0,33059	-0,02949	-0,30323	-0,03144
	(0,00)***	(0,173)	(0,00)***	(0,207)	(0,00)***	(0,178)
Law and Order Index	-0,00535	-0,00459	-0,00523	-0,00461	-0,00559	-0,00462
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
National Institution Index	-0,00858	-0,00571	-0,00867	-0,00562	-0,00813	-0,00580
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Age	0,02339	0,02552	0,02334	0,02507	0,02278	0,02592
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Age^2	-0,00013	-0,00014	-0,00013	-0,00014	-0,00013	-0,00015
	(0,002)***	(0,001)***	(0,002)***	(0,002)***	(0,003)***	(0,001)***
Gender	0,14934	0,05605	0,14948	0,05579	0,14666	0,05712
	(0,00)***	(0,117)	(0,00)***	(0,119)	(0,00)***	(0,110)
Number of children younger than 15 per household	-0,00144	0,00021	-0,00118	0,00040	-0,00205	-0,00004
	(0,480)	(0,921)	(0,563)	(0,852)	(0,314)	(0,986)
Medium education level (Secondary)	-0,37511	-0,07351	-0,38890	-0,07846	-0,28997	-0,06849
	(0,00)***	(0,186)	(0,00)***	(0,158)	(0,00)***	(0,218)
High education level (College)	-1,09740	-0,55130	-1,10957	-0,54701	-1,01168	-0,55003
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Large city	0,16138	-0,17649	0,15997	-0,18551	0,10620	-0,17160
	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***	(0,00)***
Employment	-0,13017	-0,07413	-0,12378	-0,07132	-0,14931	-0,07778
	(0,007)***	(0,060)*	(0,001)***	(0,071)*	(0,00)***	(0,049)**
Country and time fixed effects	No	Yes	No	Yes	No	Yes
Pseudo R squared	0,0765	0,1611	0,0761	0,1618	0,0856	0,1615
Observations	17120	17120	17120	17120	17120	17120

Table 4.5.4(a): logit regression for the EU15 countries with the dependant variables: consequences and target of attacks (binary)

Notes: significance levels - (1%)***, (5%)**, (10%)*

From the last subsample, we expect similar results than those found in the developed country analysis.

For the fatalities binary variable regression, without fixed effects, we find a strong negative coefficient, which is even reinforced when we look at the weighted logistic regression. Nevertheless, we found the same for the developed countries and in addition, for both regressions, the variable is largely insignificant, so we cannot base a conclusion on this variable. Regarding the injuries binary variable, we get the same result as we got for the fatalities binary variable above, but this time the variable is highly significant. For the last binary variable which captures if the target of the terrorist attacks was private citizens and property or not, we find a strong negative coefficient which remains pretty much the same when we run the weighted

logistic regression. Once again, this result corresponds to the one we found for the developed countries, where we also had a strong negative coefficient for this variable.

Taking a look at the Pseudo-R-squared value, we observe that it is decreased when we run the weighted logistic regression compared to the normal one, but the value is pretty much the same we found for the developed countries, just a little bit higher.

For the individual control variables, we observe that the income per capita variable and the medium education binary variable have a negative sign for the EU15 countries, although those variables have a positive sign for the full sample. Furthermore, the gender binary variable has a positive sign for the EU15 countries while it has a negative one for the full sample.

The same differences between the signs of the variables are observed when we run the weighted logistic regressions.

After adding the country and time fixed effects to the different regressions, we will have a look at how those regressions with the different binary variables have changed. First, we start with the fatalities binary variable regression, where we find a negative coefficient for the fatalities binary variable which is even stronger when we run the weighted logistic regression and also much stronger than for the case without fixed effects. Furthermore, we need to mention that for both regressions the variable is statistically insignificant which means that we cannot really take this result, as a result, to base a conclusion on. Second, we will analyse the injuries binary variable regression where we find, against the results of the subsamples before, a strong negative coefficient, and in addition, this variable gains a bit of weight when we run the weighted logistic regression. Furthermore, this variable is statistically significant for both regressions. The last variable is the binary variable which defines if the target of the terrorist attacks was private citizens and property or not. We find a strong negative coefficient for the binary variable, which is weakened a bit when we run the weighted logistic regression. The variable is highly significant for the normal logistic regression and for the weighted logistic regression, it is significant after the 1% significance level.

Considering the Pseudo-R-squared value, we observe again that it increased a lot after adding the fixed effects to the regressions, but is decreasing a little bit when we run the weighted logistic regression.

For the rest of the control variables, we observe that the difference related to the income per capita in international dollars' variable disappeared, but therefore two more are added. The medium education binary variable and the gender binary variable remain among them, but they are joined by the large city binary variable and the number of children younger than 15 years of age per household variable. The last one changes its sign for the fatalities and the injuries regressions regarding the EU15 countries.

Variables	weighted logistic regression					
	with fatalities		with injuries		private property	
Dependent variable						
Opinions towards migration (constant)	3,42241 (0,00)***	1,25553 (0,00)***	3,45507 (0,00)***	1,14178 (0,001)***	3,27224 (0,00)***	1,25325 (0,00)***
Explanatory variables						
Fatalities (binary)	-0,50108 (0,627)	-0,55307 (0,422)				
Injuries (binary)			-0,19009 (0,001)***	-0,47837 (0,001)***		
Private citizens and property (binary)					-0,64654 (0,00)***	-0,19085 (0,031)**
Income per capita in international dollars in log	-0,31813 (0,00)***	-0,02849 (0,354)	-0,31569 (0,00)***	-0,02585 (0,401)	-0,29196 (0,00)***	-0,02884 (0,349)
Law and Order Index	-0,00549 (0,00)***	-0,00439 (0,00)***	-0,00533 (0,00)***	-0,00446 (0,00)***	-0,00574 (0,00)***	-0,00440 (0,00)***
National Institution Index	-0,00852 (0,00)***	-0,00589 (0,00)***	-0,00864 (0,00)***	-0,00578 (0,00)***	-0,00819 (0,00)***	-0,00596 (0,00)***
Age	0,03081 (0,00)***	0,02849 (0,00)***	0,03059 (0,00)***	0,02785 (0,00)***	0,03032 (0,00)***	0,02872 (0,00)***
Age^2	-0,00020 (0,001)***	-0,00018 (0,003)***	-0,00020 (0,001)***	-0,00017 (0,004)***	-0,00019 (0,001)***	-0,00018 (0,003)***
Gender	0,11820 (0,006)***	0,04560 (0,320)	0,11701 (0,006)***	0,04565 (0,320)	0,11287 (0,009)***	0,04522 (0,324)
Number of children younger than 15 per household	-0,00238 (0,358)	-0,00056 (0,836)	-0,00201 (0,435)	-0,00024 (0,929)	-0,00293 (0,257)	-0,00077 (0,775)
Medium education level (Secondary)	-0,26895 (0,00)***	-0,07188 (0,296)	-0,30086 (0,00)***	-0,07627 (0,269)	-0,20150 (0,002)***	-0,06364 (0,355)
High education level (College)	-0,91972 (0,00)***	-0,59738 (0,00)***	-0,95328 (0,00)***	-0,59329 (0,00)***	-0,82147 (0,00)***	-0,59185 (0,00)***
Large city	0,19674 (0,00)***	-0,17951 (0,00)***	0,19593 (0,00)***	-0,18611 (0,00)***	0,14236 (0,002)***	-0,17909 (0,00)***
Employment	-0,13051 (0,007)***	-0,05379 (0,295)	-0,12301 (0,011)**	-0,05091 (0,321)	-0,15299 (0,002)***	-0,05775 (0,261)
Country and time fixed effects	No	Yes	No	Yes	No	Yes
Pseudo R squared	0,0665	0,1451	0,0673	0,1460	0,0753	0,1454
Observations	17120	17120	17120	17120	17120	17120

Table 4.5.4(b): weighted logit regression for the EU15 countries with the dependant variables: consequences and target of attacks (binary)
Notes: significance levels - (1%)***, (5%)**, (10%)*

Regarding the weighted logistic regressions, we remain with three variables which have a different sign for the EU15 countries than for the full sample, the gender binary variable, the medium education binary variable and the large city binary variable.

The significance levels of the individual control variables regarding the EU15 countries for the normal and the weighted logistic regression are shown in the *Appendix A.4.5.4.1.* and in the *Appendix A.4.5.4.2.*

In this section, we find for the first time in this thesis, the result we expected at the beginning. Nevertheless, this does not account for all the variables replacing the number of terrorist attacks variable neither for all the subsamples. For the full sample and the developing countries, we find that the fatalities and the injuries binary variable have a positive influence on people's opinion towards migration when we add the fixed effects, so that the people become more anti-immigration. In addition, for the developed countries this is only true regarding the fatalities

binary variable. For the EU15 countries, we find that all three variables do not influence people to become more anti-immigration.

4.6. Terrorist attack variable as a binary variable

This last robustness check differs from the others for the simple reason that this time the variable describing the terrorist attacks is not defined as a numerical but a binary variable. The results for the normal logistic regressions are presented in the *Table 4.6(a)* and those for the weighted logistic regressions in the *Table 4.6(b)*. This test gives us some further insight on how people evaluate the terrorist attacks, with this binary terrorist attack variable it does not matter if there are hundreds of attacks per year or just one. Hence, we have the possibility to analyse the fact that terrorist attacks, in general, influence people's opinion towards migration, because even for the biggest outliers with more than 500 attacks per years the value of terrorist attacks is reduced to 1. We expect that the biggest change in the results will be observed for the developing countries and maybe for the full sample. Because for those two, to replace the number of terrorist attacks by 1 is a much bigger change than for the developed or the EU15 countries, where the attacks are much rarer.

4.6.1. Full sample analysis

Starting with the logistic regression without including the fixed effects, we get a positive sign for the coefficient of the binary variable that represents the terrorist attacks, which is not very surprising because for nearly all the tests done before we found the same. Nevertheless, one major difference is observed, the value of the coefficient is much higher than those before, which means that the idea with the binary variable seems to be working. It does not make a difference if there are a lot of attacks per year or just one, the only thing that matters is that there must be some attacks during the year. Furthermore, this result is also observed when we run the weighted logistic regression and even here we observe another difference to most of the tests before, regarding the Pseudo-R-squared value.

Besides the fact that it is very small, only a little bit more than 2%, it is a little bit higher for the weighted logistic regression than for the normal logistic regression.

For the other control variables in the normal logistic regression without the fixed effects, we do not observe any difference in the variable's signs between this analysis and the one we did first with the numeric definition of the terrorist attacks.

When we run the weighted logistic regression, we still observe no difference in the coefficient's signs between the two regressions.

Variables	logistic regression					
	full sample		developed countries		developing countries	
						EU15 countries
Dependent variable						
Opinion towards migration (constant)	-0,51503 (0,00)***	1,35604 (0,00)***	2,67795 (0,00)***	1,46412 (0,00)***	-0,83789 (0,00)***	3,27164 (0,00)***
Explanatory variables						
Nbr of terrorist attacks (binary)	0,42753 (0,00)***	0,06624 (0,00)***	0,31379 (0,00)***	-0,13795 (0,004)***	0,41154 (0,00)***	0,09602 (0,00)***
Income per capita in international dollars in log	0,06627 (0,00)***	-0,04705 (0,00)***	-0,23784 (0,00)***	-0,05630 (0,00)***	0,09742 (0,00)***	-0,04830 (0,00)***
Law and Order Index	-0,00329 (0,00)***	-0,00224 (0,00)***	-0,00446 (0,00)***	-0,00433 (0,00)***	-0,00286 (0,00)***	-0,00185 (0,00)***
National Institution Index	-0,00555 (0,00)***	-0,00568 (0,00)***	-0,00890 (0,00)***	-0,00635 (0,00)***	-0,00466 (0,00)***	-0,00551 (0,00)***
Age	0,01371 (0,00)***	0,01301 (0,00)***	0,01918 (0,00)***	0,01968 (0,00)***	0,01279 (0,00)***	0,01251 (0,00)***
Age^2	-0,00009 (0,00)***	-0,00008 (0,00)***	-0,00013 (0,00)***	-0,00012 (0,00)***	-0,00008 (0,00)***	-0,00008 (0,00)***
Gender	-0,06304 (0,00)***	-0,00973 (0,00)***	0,10993 (0,00)***	0,06763 (0,005)***	-0,09037 (0,00)***	-0,02182 (0,043)**
Number of children younger than 15 per household	-0,00135 (0,041)**	-0,00179 (0,011)**	-0,00215 (0,172)	-0,00247 (0,133)	-0,00128 (0,082)*	-0,00177 (0,024)**
Medium education level (Secondary)	0,02296 (0,052)*	0,03148 (0,019)**	-0,22285 (0,00)***	-0,08301 (0,020)**	0,05601 (0,00)***	0,05143 (0,00)***
High education level (College)	-0,19312 (0,00)***	-0,22381 (0,00)***	-0,76733 (0,00)***	-0,56135 (0,00)***	-0,06907 (0,00)***	-0,14751 (0,00)***
Large city	0,05363 (0,00)***	-0,01600 (0,139)	0,05722 (0,015)**	-0,13833 (0,00)***	0,03404 (0,001)***	0,00723 (0,543)
Employment	-0,10502 (0,00)***	-0,05649 (0,00)***	-0,14594 (0,00)***	-0,07964 (0,002)***	-0,07653 (0,00)***	-0,04916 (0,00)***
Country and time fixed effects	No	Yes	No	Yes	No	Yes
Pseudo R squared	0,0245	0,1100	0,0677	0,1401	0,230	0,1047
Observations	208033	208033	36550	36550	171483	171483
Table 4.6(a): logit regressions with the dependant variable: Nbr of terrorist attacks (binary variable)						
Notes: significance levels - (1%)***, (5%)**, (10%)*						

The next move is to add the country and time fixed effects, and we would expect that the variable capturing the terrorist attacks changes its sign and it becomes negative, but against all expectations, the sign of the coefficient remains positive. Nevertheless, the value of the coefficient drops a lot so that its influence on people's opinion towards migration is reduced. Nevertheless, in any case, we found a result that against the expectation of this study, proves that somehow there is some trueness in the hypothesis we test in the beginning. On the other hand, of this unexpected result, we find that the Pseudo-R-squared value is largely increased due to the introduction of the fixed effects and that it is decreased a little bit when we look at the weighted logistic regression compared to the normal one.

Regarding the individual control variables, even after adding the fixed effects, we observe no difference in the coefficient's signs between the two regressions with the different definitions of the terrorist attacks variable. Even in terms of significance, there is not much that needs to be mentioned, but the gender binary variable and the large city binary variable are both highly insignificant for both samples. In addition, the number of children younger than the age of 15 per household variable is insignificant for the lowest significance level in this section but remains significant in the general regression. The last variable we can point out concerns the medium education binary variable which is, for both types of regressions, insignificant for the lowest significance level at 1%.

When we run the weighted logistic regression, we observe again that there is no difference in the signs for the control variables between both regressions. Furthermore, for the significance levels, we can say that for both types of regressions, the gender binary variable and the large city binary variable are highly insignificant, just like for the normal logistic regression. The number of children under the age of 15 per household variable is highly significant for the general regression, but it is insignificant for the lowest significance level in this section. In addition, the medium education binary variable is insignificant for the lowest significance level in both samples, like already for the normal logistic regression.

4.6.2. Developed country analysis

Similar results are expected than those found for the full sample when we look at the developed countries and this is also the case, for the analyses without fixed effects we find a strong positive coefficient for the binary variable capturing the terrorist attacks. The value is smaller than the one we found for the full sample, which means that the effect on the dependent variable is reduced, but it is still way larger than the one we found for the numeric definition of the terrorist attacks variable.

		weighted logistic regression									
Variables		full sample		developed countries		developing countries		EU15 countries			
Dependent variable											
Opinion towards migration (constant)		-0,60230 (0,00)***	1,3871 (0,00)***	2,26381 (0,00)***	1,35001 (0,00)***	-0,85391 (0,00)***	2,93245 (0,00)***	2,80340 (0,00)***	1,64416 (0,00)***		
Explanatory variables											
Nbr of terrorist attacks (binary)		0,41373 (0,00)***	0,06825 (0,00)***	0,31889 (0,00)***	-0,09766 (0,109)	0,39256 (0,00)***	0,09347 (0,00)***	0,35677 (0,00)***	-0,09405 (0,125)		
Income per capita in international dollars in log		0,07452 (0,00)***	-0,04288 (0,00)***	-0,22212 (0,00)***	-0,05449 (0,004)***	0,10485 (0,00)***	-0,04453 (0,00)***	-0,28360 (0,00)***	-0,05204 (0,031)**		
Law and Order Index		-0,00325 (0,00)***	-0,00209 (0,00)***	-0,00413 (0,00)***	-0,00406 (0,00)***	-0,00288 (0,00)***	-0,00172 (0,00)***	-0,00544 (0,00)***	-0,00468 (0,00)***		
National Institution Index		-0,00571 (0,00)***	-0,00583 (0,00)***	-0,00910 (0,00)***	-0,00672 (0,00)***	-0,00490 (0,00)***	-0,00562 (0,00)***	-0,00919 (0,00)***	-0,00672 (0,00)***		
Age		0,01380 (0,00)***	0,01335 (0,00)***	0,02387 (0,00)***	0,02195 (0,00)***	0,01093 (0,00)***	0,01195 (0,00)***	0,02826 (0,00)***	0,02555 (0,00)***		
Age^2		-0,00008 (0,00)***	-0,00008 (0,00)***	-0,00016 (0,00)***	-0,00014 (0,00)***	-0,00005 (0,00)***	-0,00007 (0,00)***	-0,00019 (0,00)***	-0,00016 (0,00)***		
Gender		-0,02604 (0,017)**	-0,00083 (0,944)	0,10913 (0,00)***	0,06659 (0,025)**	-0,05006 (0,00)***	-0,01046 (0,410)	0,14247 (0,00)***	0,09314 (0,009)***		
Number of children younger than 15 per household		-0,00169 (0,038)**	-0,00222 (0,011)**	-0,00327 (0,105)	-0,00360 (0,10)	-0,00141 (0,110)	-0,00202 (0,033)**	-0,00435 (0,069)*	-0,00385 (0,134)		
Medium education level (Secondary)		0,05164 (0,00)***	0,03593 (0,023)**	-0,13523 (0,001)***	-0,06225 (0,151)	0,08701 (0,00)***	0,05658 (0,001)***	-0,20935 (0,00)***	-0,06484 (0,227)		
High education level (College)		-0,18026 (0,00)***	-0,22864 (0,00)***	-0,67412 (0,00)***	-0,57098 (0,00)***	-0,08698 (0,00)***	-0,15484 (0,00)***	-0,72392 (0,00)***	-0,59032 (0,00)***		
Large city		0,02434 (0,035)**	-0,01013 (0,436)	0,07667 (0,11)**	-0,13599 (0,00)***	-0,00588 (0,642)	0,01322 (0,349)	0,07848 (0,026)**	-0,18441 (0,00)***		
Employment		-0,08987 (0,00)***	-0,04317 (0,001)***	-0,11137 (0,00)***	-0,02602 (0,434)	-0,06037 (0,00)***	-0,04380 (0,002)***	-0,07043 (0,063)*	0,00192 (0,962)		
Country and time fixed effects		No	Yes	No	Yes	No	Yes	No	Yes		
Pseudo R squared		0,246	0,1052	0,600	0,1275	0,0233	0,1014	0,691	0,1279		
Observations		208033	208033	36550	36550	171483	171483	26869	26869		

Table 4.6(b): weighted logit regressions with the dependant variable: Nbr of terrorist attacks (binary variable)

Notes: significance levels - (1%)***, (5%)**, (10%)*

We still have the bias in the regressions, because we did not include the fixed effects but at least we find a higher Pseudo-R-squared value than the one for the full sample in the general regression. Which means that a higher part of the dependent variable is explained by the control variables. Against the result for the full sample, we do not observe an increase but a decrease for the Pseudo-R-squared value when we run the weighted logistic regression compared to the normal one.

Regarding the individual control variables, we observe some differences between the developed country and the full sample analysis. The income per capita in international dollars' variable, the gender binary variable and the medium education binary variable have the opposite sign for the developed countries than for the full sample.

When we look at the weighted logistic regression, the differences from before between the signs of the coefficients persist and no more are added.

Now after adding the fixed effects to the analysis, we would expect to find again the positive sign aligned with the coefficient of the binary variable that captures the terrorist attacks, but this is not the case, the sign becomes negative again. Nevertheless, the explanation for this can be very simple, by looking at the number of terrorist attacks in the developed countries, there are not so many per year. So, by creating a binary variable of the terrorist attacks, the modifications for the variable are not huge, in this case, the variable would still be similar to the normal one which captures the number of terrorist attacks per year. Due to this result, we also expect to find the same change of the sign for the subsample where we look at the EU15 countries because those even know fewer attacks per year than do the developed countries. Nevertheless, we still find an increase for the Pseudo-R-squared value which is an expected result so that the bias is removed and some heterogeneity of the error term is eliminated. Like for the other tests before, the Pseudo-R-squared value is decreasing when we move from the normal to the weighted logistic regression. This means that the statistical weight of an individual, reduces how much of the dependent variable is explained by the control variables.

After adding the fixed effects, we see that the income per capita variable changes its sign for the full sample so that this difference between the two samples disappears, but the other two differences remain.

The weighted logistic regression gives us similar results, like before, the only differences that persist are those for the gender binary variable and the medium education binary variable.

In addition, the different significance levels for the individual control variables regarding both types of regression are shown in the *Appendix A.4.6.2.1.* and in the *Appendix A.4.6.2.2.*

4.6.3. *Developing country analysis*

Like for the two analyses before, without fixed effects, we find the same results for the developing countries than for the full sample and the developed countries, a strong positive coefficient for the binary variable that expresses the terrorist attacks. The value of the coefficient is comparable to the one we found for the full sample.

The same results are observed for both types of regressions but one difference needs to be mentioned regarding the Pseudo-R-squared value. This value here is much smaller than the one we found for the developed country analysis. Nevertheless, here again, like we already observed for the full sample, the Pseudo-R-squared value is increased for the weighted logistic regression compared to the normal one.

No differences between the coefficient's signs of the individual control variables are observed when we compare the developing country to the full sample analysis regarding the normal logistic regressions.

When we run the weighted logistic regression, we need to point out one difference between both samples which was not present before and it concerns the large city binary variable, it changes its sign for the developing countries.

Like we expected, by introducing the fixed effects, we find a positive coefficient for the terrorist attack binary variable, similar to the full sample analysis the value of the coefficient is strongly reduced but it remains positive. We find the same result for the normal and the weighted logistic regression, and the result makes sense, because, like we mentioned for the developed countries before where the countries do not know many attacks, for the developing countries it is the exact opposite, there we find countries with much more terrorist attacks on average. Hence, by reducing that number of attacks to 1 we reduce the influence of the quantity of the attacks and just the fact that an attack has happened remains.

Furthermore, we can mention that by adding the country and time fixed effects, the Pseudo-R-squared value is increasing a lot so that a large part of the heterogeneity in the error term is eliminated. In addition to this result which coincides with those of several tests before, we also find a reduction of the Pseudo-R-squared value regarding the weighted logistic regression compared to the normal one. Again the statistical weight of an individual reduces the effect the control variables have on the dependent variable.

For the rest of the control variables, after adding the fixed effects, we observe that one difference appears and it concerns the large city binary variable, because the sign is changing for the full sample but not for the developing countries.

Regarding the weighted logistic regression, the only difference in the coefficients signs present is the one we observed in the normal logistic regression, it concerns the large city binary variable.

Furthermore, the significance levels of the different control variables for the normal and the weighted logistic regression are shown in the *Appendix A.4.6.3.1.* and in the *Appendix A.4.6.3.2,* respectively.

4.6.4. EU15 country analysis

Now we are moving to the last subsample, the EU15 countries, of the analysis without fixed effects where the terrorist attack variable is defined as a binary variable. Here once again we find a strong positive coefficient for the terrorist attacks variable, which also remains for the weighted logistic regression, but the fixed effects are not introduced yet and we expect that the sign will become negative.

The Pseudo-R-squared value, for the EU15 countries, is clearly bigger than the one we found for the full sample and the developing country analysis. Nevertheless, like already for the developed countries, but not for the other two, this value is decreased when we compare both regression so that it is smaller for the weighted logistic regression.

For the rest of the control variables, we observe fewer differences with the full sample than for other tests before. In this case, only the income per capita in international dollars' variable, the gender binary variable, and the medium education binary variable have opposite signs compared to the full sample.

When we look at the weighted logistic regression, we observe the exact same differences in the coefficient signs than for the normal logistic regression.

By adding the fixed effects to the regressions we find the result we expected so that the sign of the coefficient of the binary variable that represents the terrorist attacks becomes negative. This reinforces the intuition we mentioned before with the developed countries that those countries do not know so many terrorist attacks so that the modification of the terrorist attack variable does not change the influence it has on people's opinion towards migration. Furthermore, another important difference needs to be mentioned between the normal and the weighted logistic regression, the terrorist attack variable is statistically insignificant for the weighted regression with a p-value of 12,5%.

In addition, we observe a large increase of the Pseudo-R-squared value by adding the fixed effects, but also a decrease of its value when we look at the weighted logistic regression.

After adding the fixed effects, only the differences related to the gender binary variable and the medium education binary variable persist.

When we look at the weighted logistic regression, we observe that only the difference related to the income per capita variable is eliminated. Furthermore, another one is appearing and is related to the employment situation binary variable, because the sign changed for the EU15 countries.

The significance levels for the individual control variables regarding the EU15 countries and both regression types are shown in the *Appendix A.4.6.4.1.* and in the *Appendix A.4.6.4.2.*

Like for the section before, we can mention that when we define the terrorist attack variable as a binary one, we find the results we expected in the beginning. So that the variable has a positive influence on people's opinion towards migration so that they are more anti-immigration afterwards. Nevertheless, this conclusion does not account for all the subsamples, but only for the full sample and the developing countries.

5. Conclusion

We tested the hypothesis that after a terrorist attack has happened in a country people of this country are more anti-immigration than they were before the attacks or not. In general, the result we get from the most basic test without fixed effects is that this seems to be the case because the coefficient of the number of terrorist attack variable is positive. Besides we can mention that this result seems to be a common trend, but there is no causality, because the result is biased due to the exclusion of the fixed effects from the regressions. After adding the country and time fixed effects to the regressions, the coefficient of the terrorist attack variable becomes negative, so that this would mean, that people would be less anti-immigration after the terrorist attacks than before. We would expect the exact opposite so that people would be more anti-immigration after the terrorist attacks than they were before. Besides, we cannot forget that we wanted to test if the terrorist attacks are a major driver of people's opinion towards migration, not that they are the only reason. Because we know that there are a lot of different factors that influence how people think about migration and it seems that terrorism is not one of them¹⁸. In addition, terrorist attacks are very often linked to Muslim people¹⁹, which on their site, are linked to the increase of immigration, so we would really expect to find somehow a positive coefficient for the terrorist attack variable. Furthermore, we can mention that for the general case, the result did not change when we run the weighted compared to the normal logistic regression.

After the general logistic regressions, we do different robustness checks to give the unexpected result more weight, or to find a different result. Even when we separate the sample and take a look at the developed and developing countries separately, we do not get a different result than the one mentioned above. Even, here we find that people are less anti-immigration after the terrorist attacks than before after adding the fixed effects to the regression, and it makes no difference if we run the normal or the weighted logistic regression.

Furthermore, by looking at the EU15 countries the results do not change. For this case again, we get the expected result if we do not include the fixed effects but the coefficient becomes negative when we add the fixed effects to the regressions when we remove the bias. Besides,

¹⁸ Migration Data Portal. (2018, March 13). "Public opinion on migration". <https://migrationdataportal.org/themes/public-opinion-migration>

¹⁹ See Boyle T., Schmidt J., Cohen R., Vedantam S., Penman M., Klahr R. (2017, June 19). [When Is It "Terrorism"? How The Media Cover Attacks By Muslim Perpetrators](#). Retrieved 4 June, 2018

we can mention that the results of the weighted logistic regression regarding the terrorist attack variable, needs to be analysed with caution because the variable is statistically insignificant.

Now when we replace the number of terrorist attacks by the sum of the last three years' terrorist attacks, we wanted to test if the terrorist attacks from 2006 or 2007, for example, have an effect on people's opinion towards migration in 2008. Once again this is not the case either for the full sample or the developed or the developing countries. Only when we look at the EU15 countries separately, we observe that the sum of the last three years' terrorist attacks variable remains with a positive coefficient when we add the fixed effects to both regressions. Nevertheless, the variable is statistically insignificant for the weighted logistic regression, so we cannot base a conclusion on this positive sign of the variable.

The next step is that we only regress on those observations where we observe fewer than 5, 10, or 500 terrorist attacks per year. This gives us the possibility to focus on the countries where the terrorist attacks are really rare or where we eliminate the biggest outliers. The results are not very astonishing and it does not make any difference if we exclude the outliers or focus on the countries where the attacks are really rare. When we focus on the countries where the attacks were rare, most of the results, regarding the terrorist attack variable, were insignificant and afterwards, after being significant they had the wrong sign again. Furthermore, we need to say that, at the end, when we look at the regressions with fewer than 500 attacks per year, we nearly do the same regression as for the whole sample, because we only eliminate around 3% of the observations.

Last but not least, by replacing the terrorist attack variable by different variables that express consequences of the terrorist attacks like the injuries or fatalities, or a precise target of the attack, the results change but not entirely. The results related to the private citizens and property regressions, do not give us a different result than those we got before. The sign for the private citizens and property variable is negative and also significant for the different samples, only for the developed countries, the sign becomes positive when including the fixed effects but the variable is statistically insignificant.

Furthermore, we observe different results for the other two variables, which means that for those, we get a positive coefficient for the variable describing the consequences of the terrorist attacks when we include the fixed effects and remove some heterogeneity from the error term. For the fatalities regressions, we get this positive coefficient for the developed and developing country analysis but also for the full sample. Besides, for the EU15 countries, the result remains with the negative coefficient and the variable is statistically insignificant. In addition, for the other three samples mentioned before, we can say that people are more anti-immigration when the terrorist attacks have as consequence deaths.

Last we will talk about the injuries regressions, where we observe a similar result than we did for the fatalities regressions, but we need to mention that the results only account for the developing countries and the full sample. For those samples, we observe a positive coefficient

for the injuries binary variable after introducing the fixed effects to the regressions. Furthermore, for the developed countries we also have this positive coefficient for this variable but it is not significant, besides, for the EU15 countries the variable is significant but it has a negative sign.

The last test that needs to be highlighted is the one where we also find the relation we expected at the beginning, but once again not for all the subsamples. This is the case where the terrorist attacks are defined as a binary variable so that it takes the value 1 if one or more attacks occurred during a year and 0 if none. In this case, we find that if during the year there was at least one terrorist attack, people are more anti-immigration, than for the years without any attacks. In addition, we need to mention that this intuition only accounts for the developing countries and the full sample. Besides, for the developed countries, when we add the fixed effects, the binary variable is highly significant but has a negative sign. A similar result is observed when we reduce the sample to the EU15 countries, but in this case, the variable becomes insignificant when we run the weighted logistic regression. The results we get there are not too unexpected, because, for the developed and the EU15 countries, terrorist attacks are in general rare so they remain with a small number. So when we create the binary variable, the number of terrorist attacks variable is not modified too much, compared to the developing countries, so this could explain why the results do not change for those subsamples. The exact opposite could be said about the developing countries because here we have some observations where we observe hundreds of attacks per year. So when reducing this number to 1, the modifications will be huge.

Furthermore, it is not the number of attacks during a year that makes people change their opinion about migration. Because, for countries where there are hundreds of attacks per year, people perceive the severity of a supplementary attack differently than those living in a country where there are just a few incidents per year. For the latest ones, a supplementary attack is perceived much more severely than for the others. This is especially the case for the developed and the EU15 countries where there are just a few attacks over the whole period or even none. For those countries, the residents perceive a supplementary terrorist attack much more severely than for example those countries which knew, on average, hundreds of attacks per year.

We included different control variables in the regressions, and for some of them, we can mention that they have a certain influence on people's opinion towards migration, at least the results are more convincing than for the terrorist attack variables. First, the two indexes, Law and Order and National Institution index, both have in all the regressions we have done a negative impact on the dependent variable. So that people tend to be less anti-immigration when they feel safe in the country or have trust in the national institutions ruling the country. Second, we can mention the variables related to the age of the respondents, because in each regression the age variable has a positive coefficient and the age squared variable has a negative coefficient. Which means that younger people tend to be more anti-immigration than older people. The third and last variable we can mention is the high education binary variable, those

results are not as convincing as those for the variables before. Nevertheless, besides some exceptions regarding the developing countries, this variable has a negative influence on the dependent variables. This means that people with a high level of education are less anti-immigration, so that they are more tolerant than people with a lower level of education.

To conclude, we could say that we do not find clear evidence that the terrorist attacks have as consequence that people are more anti-immigration afterwards. Besides, we find some results which prove that there is some trueness in the idea, but those cases, in general, concern the developing countries, so that we still do not know what drives the people living in developed or the EU15 countries to be more anti-immigration. Nevertheless, we know that people have become more anti-immigration in the last years, but the variable defined as terrorist attacks is not the major driver for changing the opinion of people towards migration. For this reason, further studies are required focusing on different channels to find out what exactly is an important factor which influences people so much that they become less tolerant towards immigrants. Another possibility would be, even that we tried to change the expression of the terrorist attacks variable a few times, to find other possibilities on how to express terrorist attacks or their consequences. Maybe there are other factors regarding those attacks that have a bigger influence on people's opinion towards migration than those we looked at.

6. Bibliography

Carolina Population Centre. "Choosing the Correct Weight Syntax". Retrieved from: http://www.cpc.unc.edu/research/tools/data_analysis/statatutorial/sample_surveys/weight_syntax

Cox, N. (2017, March 10). "Determining the turning point on a twoway qfit graph". Retrieved from: <https://www.statalist.org/forums/forum/general-stata-discussion/general/1377780-determining-the-turning-point-on-a-twoway-qfit-graph>

Columbia University. (2010, July 7). "Descriptive statistics". Retrieved from: <http://www.stat.columbia.edu/~regina/W1111S09/tutorial2.pdf>

CIA. "The World Factbook". Retrieved from: <https://www.cia.gov/library/publications/the-world-factbook/appendix/appendix-b.html>

Dustmann, C. and Preston, I. (2001). "Attitudes to ethnic minorities, ethnic context and location decisions". *Economic Journal*. vol. 111, pp. 353-373.

Dustmann, C. and Preston, I. (2007) "Racial and Economic Factors in Attitudes to Immigration" *The B.E. Journal of Economic Analysis & Policy*: Vol. 7: Iss. 1 (Advances). Article 62.

Facchini, G. and Mayda, A-M (2008). "From individual attitudes towards migrants to migration policy outcomes: theory and evidence." *Economic Policy* 23:651– 713.

Facchini, G. and Mayda, A-M (2009). "Does the welfare state affect individual attitudes towards immigrants? Evidence across countries." *Review of Economics and Statistics* 91 (2): 295–314.

Goldin I.A. and Reinert K. (2006). "*Globalization for Development*". Palgrave MacMillan and World Bank

Institute for Digital Research and Education. "DESCRIPTIVE INFORMATION AND STATISTICS | STATA LEARNING MODULES". Retrieved from: <https://stats.idre.ucla.edu/stata/modules/descriptive-information-and-statistics/>

Krueger, A. and Pischke, J. S. (1997) "A statistical analysis of crime against foreigners in unified Germany". *Journal of Human Resources*. vol. 32, pp. 182±209.

Mayda A-M. (2006). “Who Is Against Immigration? A Cross-Country Investigation of Individual Attitudes toward Immigrants”. *Review of Economics and Statistics* 88(3). 510-530

Migration Data Portal. (2018, March 13). “Public opinion on migration”. Retrieved 12 May, 2018. from: <https://migrationdataportal.org/themes/public-opinion-migration>

OECD. (2007, July 24). “GLOSSARY OF STATISTICAL TERMS”. Retrieved 9 May, 2018 from: <https://stats.oecd.org/glossary/detail.asp?ID=6805>,

Roser, M. Nagdy, M. and Ritchie, H. (2018). – “Terrorism”. *Published online at OurWorldInData.org*. Retrieved from: 'https://ourworldindata.org/terrorism' [Online Resource]

Sribney W. “Comparison of standard errors for robust, cluster, and standard estimators”. Retrieved from: <https://www.stata.com/support/faqs/statistics/standard-errors-and-vce-cluster-option/>

Scheve K. F. and Slaughter M. J. (2001) “Labour Market Competition and Individual Preferences over Immigration Policy”. *Review of Economics and Statistics*. 83(1): 133-145

StataCorp LLC. “Cluster generate – Generate summary or grouping variables from a cluster analysis”. <https://www.stata.com/manuals13/mvclustergenerate.pdf>

Torres-Reyna O. “DESCRIPTIVE STATISTICS USING EXCEL AND STATA (EXCEL 2013 AND STATA 10.0+)”. Retrieved from: <https://www.princeton.edu/~otorres/Excel/excelstata.htm>

University of Maryland. (2017, June). “CODEBOOK: INCLUSION CRITERIA AND VARIABLES”. Retrieved 9 May 2018 from: <http://www.start.umd.edu/gtd/downloads/Codebook.pdf>

University of Maryland. (2017, June). “Overview of the GTD”. Retrieved 26 Mars, 2018. from: <https://www.start.umd.edu/gtd/about/>

University i Oslo. (2005, October 28). “Regression with Panel Data”. Retrieved 24 May, 2018 from: http://www.uio.no/studier/emner/sv/oekonomi/ECON4135/h11/undervisningsmateriale/SW3e_ch10_slides%20GE.pdf

Wai S. (2017, July 6). “Fixed Effects in Stata”. Retrieved 19 April, 2018 from: <https://www.youtube.com/watch?v=H95BHswbT3w>

[What makes Islam so different?](#). Retrieved 9 May, 2018