Delaporte, Isaure

Working Paper

The Effect of 9/11 on Immigrants' Ethnic Identity and Employment: Evidence from Germany

GLO Discussion Paper, No. 353

Provided in Cooperation with:
Global Labor Organization (GLO)

This Version is available at:
http://hdl.handle.net/10419/196998

The Effect of 9/11 on Immigrants' Ethnic Identity and Employment: Evidence from Germany[*]

Isaure Delaporte[†]

June, 2019

Abstract

A growing concern in Western countries is the fact that immigrants might adopt oppositional identities. Although identity is expected to affect the economic outcomes of immigrants, little is known about the factors that influence the identity choice of the migrants and thus, their employment outcomes. This study investigates the effect of the 9/11 terrorist attacks on the process of identity formation and the employment outcomes of Turkish immigrants in Germany. Using longitudinal data from the German Socio-Economic Panel, this study relies on a difference-in-differences strategy to compare the outcomes of Turks with non-Turks before and after the attacks. The results show that Turks have adopted more extreme identities after 9/11 compared to non-Turks: they are more likely to feel completely German; they are less likely to feel in some respects Turkish whereas they are more likely to feel mostly Turkish. There is no significant impact of the 9/11 terrorist attacks on the Turks' employment outcomes relative to non-Turks.

---

1 Introduction

A growing concern in Western countries is the fact that immigrants might adopt oppositional identities. An oppositional identity is expressed by the rejection of the accepted norms of the majority group (Ainsworth-Darnell and Downey 1998). Oppositional identities often produce significant economic and social conflicts (Bisin, Patacchini, Verdier and Zenou 2011a). Besides, identity is expected to affect the economic outcomes of immigrants. Indeed, immigrants who hold oppositional identities perform worse at school and in the host labour market (Austen-Smith and Fryer 2005; Fryer and Torelli 2010; Battu, Mwale and Zenou 2007; Battu and Zenou 2010; Bisin, Patacchini, Verdier and Zenou 2011b). To facilitate the integration of immigrants, more research needs to be carried out to identify the factors that influence the identity choice of the migrants and thus, their employment outcomes.

This study takes a step in this direction by investigating the effect of the 9/11 terrorist attacks on the process of identity formation and the employment outcomes of immigrants. The study focuses more specifically on Muslim immigrants who are likely to be the most severely affected by islamist terrorism. The effect of the 9/11 islamist terrorist attacks on the ethnic identity of Muslim immigrants is unclear. On the one hand, the islamist terrorist attacks induced a backlash against the Muslim community as a whole, raising their costs of assimilation in the host country (Gould and Klor 2015; Schüller 2016; Adida, Laitin and Valfort 2014). This would explain that Muslim immigrants increase their minority identity, i.e. their identification with the country of origin. On the other hand, Muslim immigrants may engage in counter-stereotypic behaviour and thus reinforce their identification with the majority group in an effort to appear as different from their stigmatized group (Kunst et al 2012; Steele, Spencer and Aronson 2002).

The effect of the terrorist attacks on the employment outcomes of Muslim immigrants is as well unclear. On the one hand, the 9/11 terrorist attacks lead to an increase in labour market discrimination toward Muslims, affecting negatively their performance in the host labour market (Davila and Mora 2005; Kaushal, Kaestner and Reimers 2007). On the other hand, by widening social distance between natives and the Muslim community, the 9/11 attacks might have pushed Muslim immigrants to rely more on co-ethnics. In this case, stronger ethnic ties may improve Muslims' labour market outcomes (Patacchini and Zenou 2012). Lastly, a change in the migrant's ethnic identity might explained the effect of the attacks on the employment outcomes. Indeed, holding a strong minority identity induces an employment penalty (Battu and Zenou 2010) while being close to the majority group improves the individual's labour market outcomes.

The 9/11 terrorist attacks had important consequences not only in the United States but also in other countries. This paper focuses on Germany which constitutes a pertinent case study for a number of reasons. First, the terrorist cell prominent in the planning and execution of the 9/11 attacks was based in Hamburg. As a result, concerns of islamic fundamentalism came to the fore in Germany after 9/11. Evidence shows a rise in German's anti-immigrant attitudes following the attacks (Schüller 2016). The Muslim community has become a particularly salient target group of negative attitudes and stigmatization. The composition of the German immigrant population makes it a relevant case study in this context. Indeed, Islam is the second largest religion in Germany. Besides, the majority of the Muslim immigrants in Germany are of Turkish origin (Berkley Center 2013). Therefore, this study examines the effect of the 9/11 terror attacks on the process of identity formation and the employment outcomes of Turkish immigrants in Germany.

To shed light on these questions, the paper uses longitudinal data from the German Socio-Economic Panel and relies on a difference-in-differences strategy to compare the outcomes of Turkish immigrants with non-Turkish immigrants before and after September 11, 2001. The changes are examined between the year 1999 and the year 2003. A number of outcomes are examined subsequently including the German identity, i.e. the migrant's degree of identification with Germany; the minority identity, i.e. the migrant's degree of identification with the country of origin and a number of employment outcomes including the employment probability and the type of employment (the probability of being in full-time employment versus the probability of being in part-time employment).

One concern of the difference-in-differences strategy (DiD) is the lack of an appropriate comparison group. Indeed, the simple DiD estimator relies on the following assumption: the average outcomes for the treated and the control groups must follow parallel paths over time. If it is not the case, any differences in identity or employment between the treatment and the control group may merely reflect disparities in their characteristics. To relax this strong assumption, the study relies on two additional strategies: i) a regression-adjusted difference-in-differences matching strategy (MDiD) and ii) a semiparametric difference-in-differences strategy (SDiD). The difference-in-differences matching method proceeds in two steps. In the first stage, a propensity score is estimated to match treated units with similar control units and in the second stage, the treatment effect is computed by comparing individuals which are similar based on the propensity score. The semiparametric difference-in-differences estimation is a reweighting technique that addresses the imbalance of characteristics between the treated and the control units. Hence, it allows for non-parallel outcome dynamics between treated and controls (Abadie 2005).

The results of the difference-in-differences strategy show that Turks have adopted more extreme identities following the 9/11 terror attacks compared to non-Turks: they are more likely to feel completely German; they are less likely to feel in some respects Turkish whereas they are more likely to feel mostly Turkish. With respect to employment, there is no significant impact of the 9/11 terrorist attacks on the Turks' employment outcomes relative to non-Turks. Furthermore, the results are robust to all specifications suggesting that the effect is not driven by non-parallel time trends between Turkish and non-Turkish immigrants.

This paper investigates how the average effect of the treatment varies with changes in observed characteristics. The results provide interesting insights about the differences that exist between immigrants who reacted to the terrorist attacks by increasing their minority identity and immigrants who reacted by increasing their German identity. The analysis shows that Turkish immigrants who are more educated and who have lived longer in Germany are the most likely to adopt a stronger minority identity following the 9/11 terror attacks. With respect to employment, the 9/11 terrorist attacks have impacted more severely the younger Turkish immigrants who have a higher probability of being employed in part-time employment. The results have important policy implications and contribute to inform policymakers about the population the most at risk of adopting oppositional identities.

The paper contributes to a number of strands of literature. It relates to the identity formation literature (Akerlof and Kranton 2000, 2011; Darity, Mason and Stewart 2006; Austen-Smith and Fryer 2005; Bisin, Patacchini, Verdier and Zenou 2011a). Although the existing literature provides several explanations to why immigrants may adopt oppositional identities, more research needs to be carried out to identify the factors that facilitate or hinder social integration. This study contributes to the literature by investigating the effect of a potential identity shock: the 9/11 terror attacks. Furthermore, this study shows that immigrants facing the same identity shock can react by adopting different identities. This helps to understand the process of individual identity formation and to prevent immigrants from adopting oppositional identities.

The study is also closely related to the literature examining the impacts of terrorism on individual outcomes (Gould and Klor 2015; Schüller 2016; Åslund and Rooth 2005; Hanes and Machin 2014; Goel 2010; Elsayed and De Grip 2018). The paper contributes to this literature in several ways. First, this study provides evidence that terrorism impacts the social integration of immigrants in different ways: either it reinforces their belonging to the majority group or it weakens it. Understanding how immigrants who react in opposite ways differ has important policy implications. Second, this study provides new evidence of the impacts of terrorism

on the employment outcomes of Muslim immigrants.

Lastly, this study is more broadly related to the literature on the assimilation of immigrants - Muslims in particular - to the host country (Constant et al 2006; Adida, Laitin and Valfort 2014; Battu and Zenou 2010; Bisin, Patacchini, Verdier and Zenou 2008; Georgiadis and Manning 2011, 2013; Manning and Roy 2010; Algan, Bisin, Manning and Verdier 2012).

The paper proceeds as follows. The next section reviews the related literature. Section 3 describes the data while section 4 presents the empirical analysis. Section 5 reports the main findings and discusses the robustness of the results. Lastly, section 6 summarizes the results and concludes.

2 Related Literature

2.1 Identity Formation

Identity is defined as an individual's self-image: it is a more or less conscious choice of which group the individual feels he belongs to (Akerlof and Kranton 2000, 2011). Ethnic identity is, more specifically, the migrant's degree of identification with the host country and the origin country (Zimmermann 2007; Epstein and Heizler 2015). The identity choice of a migrant changes over time in the host country. Usually, the longer the migrant resides in the host country, the higher the degree of commitment to the host country culture whereas the degree of identification with the origin country decreases (Manning and Roy 2010). However, other trajectories can been observed: an immigrant can, for instance, develop an oppositional identity by rejecting the host country norms and by strongly identifying himself with his ethnic group (Austen-Smith and Fryer 2005). In this case, several identity shocks can be identified to influence the identity choice of the migrants (García-Alonso and Wahhaj 2018).

To understand this phenomenon, a number of theoretical studies investigate the process of ethnic identity formation (Darity, Mason and Stewart 2006; Austen-Smith and Fryer 2005). Akerlof and Kranton (2000, 2011) provide a model to explain why some immigrants may reject the majority norms. They show that people belong to certain groups and wish to adopt the corresponding social identity by behaving in the same way as the group. Bisin, Patacchini, Verdier and Zenou (2011a) develop a model of formation and persistence of oppositional identities to explain why some individuals may reject the norms of the majority group. The authors argue that the identity choice is based on the cultural transmission and socialization within the

family, peer effects and social interations. They show that the oppositional culture can be sustained if there is enough cultural segmentation and/or the size of the minority group is large enough. Besides, the higher the level of harassment and the higher the number of racist individuals in the society, the more likely an oppositional minority culture will emerge and persist over time.

Several factors have been identified to influence ethnic identity. For instance, the desire to socially interact in one's own language matters for identity (Clots-Figueras and Masella 2013). Having children that have the host country citizenship increases the extent to which the parents identify with the host country (Avitabile, Clots-Figueras and Masella 2013). Discrimination and expectations of unfavorable treatment and rejection by natives matter for the immigrants' identity as well (Battu and Zenou 2010; Alesina and La Ferrara 2002; Bisin, Patacchini, Verdier and Zenou 2008). The outcomes of sport events significantly impact the individual's feeling of belonging to one group over another (de Leon and Kim 2016). The ethnic density in the neighbourhood where the migrant lives influences identity (Georgiadis and Manning 2013) as well as other factors such as the quality of housing, family background and peer pressure, the level of human capital, a lack of economic opportunity and the desire to share one's own culture (Battu and Zenou 2010; Georgiadis and Manning 2013).

2.2 Impacts of Terrorism

The study is also closely related to the literature examining the impacts of terrorism on individual outcomes. A number of studies look at the impact of terrorism on the attitudes of natives towards migration. Evidence shows that the 9/11 terrorist attacks had for consequence to increase discrimination towards immigrants and especially Muslims (Gould and Klor 2015; Schüller 2016; Åslund and Rooth 2005; Hanes and Machin 2014; Goel 2010). Some studies also show that the terrorist attacks lead to a decrease in immigrants' integration. For instance, Gould and Klor (2015) show that Muslim immigrants living in states with the sharpest increase in hate crimes also exhibit: greater chances of marrying within their own ethnic group, higher fertility, lower female labour force participation and lower English proficiency in the US. Similarly, Elsayed and De Grip (2018) show that, after the attacks, Muslim immigrants became more geographically segregated and unemployed in the Netherlands. They also reported a higher intention to permanently re-migrate to the country of origin.

The impact of terrorism on the labour market outcomes of immigrants is also examined. The evidence is mixed. Some studies find that terrorism has had a

negative effect on the labour market position of Muslims. For instance, Davila and Mora (2005) show that, in the US, Middle Eastern Arab men and Afghan, Iranian, and Pakistani men experienced a significant earnings decline relative to non-Hispanic whites between 2000 and 2002. Similarly, Kaushal, Kaestner and Reimers (2007) find that September 11th was associated with a 9-11 percent decline in the real wage and weekly earnings of Arab and Muslim men in the US. However, the authors find no evidence of a significant effect of 9/11 on the employment and hours of work of Arab and Muslim men. Other studies find little or no effect (Åslund and Rooth 2005; Braakmann 2010; Shannon 2012). This can be explained by the fact that immigrants participate in networks of the same ethnic minority. Lastly, other studies argue that the effect depends on the population examined. For instance, Cornelissen and Jirjahn (2012) find a significant negative effect on earnings only for low-skilled Muslims employed in small- and medium-sized firms in Germany.

3 Data

The data used for this analysis stem from the German Socio-Economic Panel, a nationally representative, household-based, panel survey, which is administered annually since 1984 until 2016. The data set provides extensive information on sociodemographic characteristics as well as economic characteristics of immigrants in Germany. For the purpose of this study, the sample is restriced to individuals with a direct migration background and whose age is between 16 and 65. Furthermore, the sample period is restricted to 1999-2003 to focus on the years before and after September 11, 2001. Therefore, the data set is balanced and the final sample includes 1,047 immigrants (662 non-Turks and 385 Turks) observed over two years.

Table 1 provides the descriptive statistics separately for Turkish immigrants and non-Turkish immigrants. Half of the sample are men for both Turks and non-Turks. The average Turk is slightly younger than the average non-Turk (38 versus 44 years old respectively). Turks arrived later in Germany on average. As a result, they spent less time in Germany compared to non-Turks. A larger proportion of Turks are married (87%) compared to non-Turks (76%). They have on average a lower level of education and they have less working experience in full-time as well as in part-time employment compared to non-Turks.

A number of integration indicators are examined such as the German identity, the minority identity and the employment outcomes including the probability of being employed and the probability of being employed in full-time versus part-time employment. To construct the measures of German and minority identity, the

analysis uses the answers to two questions: "How much do you feel German?" and "How much do you feel connected with your country of origin?". Both answers range from 1 "Not at all" to 5 "Completely". The descriptive statistics show that, before 9/11, the Turks, on average, feel slightly less German compared to non-Turks. They are also less close to their country of origin. A lower proportion of Turks are in employment (56%) compared to non-Turks (77%). After the 9/11 terrorist attacks, Turks still feel less German compared to non-Turks. However, they report on average a stronger minority identity compared to non-Turks. After 9/11, still a lower proportion of Turks are in employment (58%) compared to non-Turks (73%).

[Insert Table 1 here]

Table 2 provides the descriptive statistics by gender separately for Turks and non-Turks. Panel A reports the descriptive statistics for men while Panel B reports the descriptive statistics for women. In terms of sociodemographic characteristics, there is no significant differences between men and women for both Turks and non-Turks. Interestingly, Turkish women have significantly less working experience compared to non-Turkish women. They also have less unemployment experience which suggests that Turkish women participate less in the host labour market than non-Turkish women.

Before 9/11, Turkish women feel less German compared to Turkish men while it is the opposite for non-Turks: the women feel more German compared to their male counterparts. With respect to the minority identity, Turkish women are closer to their country of origin compared to the men. However, for non-Turks, men identify more with their country of origin relative to women. Similar patterns are observed after the 9/11 attacks. Turkish women still feel less German compared to the men. They are also more close to the culture of their country of origin compared to the men. For non-Turks, it is the opposite: the men feel less German and report a stronger minority identity compared to the women.

In terms of employment outcomes, before 9/11, 32% of Turkish women are in employment while the employment rate for the men is 79%. For non-Turks, 69% of women are employed while 85% of non-Turkish men are employed. However, after 9/11, the employment rate has increased for Turkish women (39%) while it has slightly decreased for the men (76%). For non-Turks, the employment rate has decreased for both the women (65%) and the men (80%) compared to the pre-intervention period. When looking at the type of employment, similar trends are observed between the pre-intervention and the post-intervention periods for the men. However for women, after the 9/11 attacks, a higher proportion of Turkish women are working in part-time employment.

4   Empirical Methodology

4.1   Baseline Model Specification

To identify the effect of the 9/11 terrorist attacks on the ethnic identity and the employment outcomes of Turkish immigrants, the study relies on a difference-in-differences strategy. More specifically, the analysis consists in comparing the outcomes of the treated observations, i.e. the Turks, with control observations, i.e. the non-Turks and then, looking at how their outcomes were impacted by the 9/11 terror attacks. Formally, let's *Post* be the treatment status indicator taking the value of 1 if the observation was recorded after the 9/11 attacks and 0 otherwise. The continuous variables Y_0 and Y_1 denote the potential outcomes on the basis of the individual's treatment status. The treated group indicator T takes the value of 1 if the individual receives the treatment, i.e. the individual is Turk and 0 otherwise. The causal effect of interest, i.e. the average treatment effect on the treated (ATT) is then given by:

$$E(Y_1|T = 1) - E(Y_0|T = 1) \tag{1}$$

which is the difference between the expected outcomes for the treated before and after the 9/11 terrorist attacks. However, the fundamental identification problem is that only one of the potential outcomes, i.e. $E(Y_1|T = 1)$ is observed whereas the counterfactual expected outcome for the treated individual $E(Y_0|T = 1)$ is unobservable. Under a set of assumptions, the effect of the treatment on the treated is reexpressed as:

$$\big[E(Y_1|T = 1) - E(Y_1|T = 0)\big] - \big[E(Y_0|T = 1) - E(Y_0|T = 0)\big] \tag{2}$$

Therefore, to identify the causal effect of 9/11 on the ethnic identity and the employment outcomes of Turkish immigrants, the following equation is estimated:

$$Y_{it} = \alpha + \beta_1 T_{it} + \beta_2 Post_t + \beta_3 [T_{it} * Post_t] + \beta_4 X_{it} + u_i + \epsilon_{it} \tag{3}$$

where Y_{it} denotes the outcome of immigrant i at time t. A number of outcome variables are examined including: i) the German identity, ii) the minority identity and iii) the employment outcome. T is a dummy variable equal to 1 if the respondent is Turk and zero otherwise. *Post* is a dummy variable equal to 1 if the observation is

after september 2001 and zero otherwise. Since the changes are examined between the year 1999 and the year 2003, the dummy *Post* is equal to one if the year of interview is 2003 and 0 if it is 1999. The parameter β_3 for the interaction between T and *Post* is the measure of change in Turks' outcomes compared to that of non-Turks. X_{it} is a set of controls which vary over time such as age-squared and being married. u_i is an individual fixed effect and ϵ_{it} is a time-varying error term. To allow for differences at the state level, state fixed effects are also included.

4.2 Alternative Specifications

One concern of the difference-in-differences strategy is the lack of an appropriate comparison group. Indeed, the simple DiD estimator relies on the following assumption: the average outcomes for the treated and the control groups must follow parallel paths over time. If it is not the case, any differences in identity or employment between the treatment and the control group may merely reflect disparities in their characteristics.

To address this concern, the study relies on two additional strategies: i) a regression-adjusted difference-in-differences matching strategy and ii) a semiparametric difference-in-differences strategy. The first method allows to match treated units with similar control units while the second method has the advantage that it allows for non-parallel outcome dynamics between treated and controls (Abadie 2005). More precisely, let's W be a set of pre-treatment characteristics. Conditional on this set of covariates W, one can assume that the treated observations would have followed a growth path parallel to that of the control observations in absence of the treatment. Therefore, the effect of the treatment on the treated conditional on W can be expressed as follows:

$$\big[E(Y_1|W, T=1) - E(Y_1|W, T=0)\big] - \big[E(Y_0|W, T=1) - E(Y_0|W, T=0)\big] \quad (4)$$

The difference-in-differences matching strategy is performed in two steps. First, a propensity score is estimated to provide a measure of similarity between treated and control units. In the second step, based on this propensity score, the units which are similar can be matched. The effect of the treatment is then computed by comparing the changes between units which have been matched together. The semiparametric difference-in-differences estimator differs as it is a weighted average of the difference of trend across treatment groups. It proceeds by reweighting the trend for the untreated participants based on their propensity score. Lastly, the propensity score is estimated using a logit estimator (SLE) to constrain the estimates

of the propensity score to vary between 0 and 1.

5   Results and Discussion

5.1   Main Results

Table 3 reports the results of the impact of the 9/11 terror attacks on the ethnic iden-
tity of Turks relative to non-Turks. For each identity, the two first columns (Columns
1-2 and 6-7) report the estimates of the simple difference-in-differences estimation.
The two subsequent columns (Columns 3-4 and 8-9) report the estimates of the
difference-in-differences matching strategy and finally, the last column (Columns 5
and 10) reports the estimates of the semiparametric difference-in-differences estima-
tion. The results show no significant impact of the 9/11 terror attacks on the Turks'
German identity. The results are similar across the three methodologies. On the
other hand, Turkish immigrants hold a stronger minority identity after the attacks
compared to non-Turks. The results are robust to all methodologies. The point
estimates range between 0.229 and 0.278.

[Insert Table 3 here]

The impact of the 9/11 terror attacks is also examined separely on each category
of the German identity and the minority identity. The results for the German
identity are reported in Panel A of Table 4 and show that, after the attacks, Turks are
more likely to feel completely German compared to non-Turks. The point estimates
range between 0.028 and 0.052. With respect to the minority identity (Table 4,
Panel B), the results show that Turks are significantly less likely to feel in some
respects close to their country of origin relative to non-Turks. Conversely, they are
significantly more likely to feel mostly Turkish, even if the coefficient is no longer
significant when using a semiparametric difference-in-differences strategy. The point
estimates range between 0.058 and 0.075.

[Insert Table 4 here]

Lastly, the results for the effect of the 9/11 terror attacks on the employment
outcomes of Turks compared to non-Turks are reported in Table 5. When relying
on a difference-in-differences strategy, the results show that, after the attacks, Turks
have a higher probability of being employed compared to non-Turks. This increase
in the probability of being employed is driven by an increase in their probability of

being in part-time employment. However, when using the semiparametric difference-in-differences estimation, the significant effect disappears. There is no significant impact of the 9/11 attacks on the Turks' probability of being employed nor on their probability of being in full-time employment or in part-time employment.

[Insert Table 5 here]

5.2 Heterogenous Effect

Different types of individuals might have been more or less responsive to the identity shock. The results reported in Table 6 provide interesting insights about the characteristics of the immigrants who react by increasing their minority identity and those who react by increasing their German identity. First, Turkish men are more likely to increase both their German identity and their minority identity while Turkish women are more likely to increase exclusively their minority identity after the attacks. Older Turkish immigrants as well as more educated Turkish immigrants are also more likely to react by increasing exclusively their minority identity after 9/11. A larger increase in the minority identity is also observed for Turks who are employed and who have lived for a longer time period in Germany.

[Insert Table 6 here]

The results are in line with previous studies such as Cornelissen and Jirjahn (2012) who show that discrimination is more likely to be perceived by highly educated immigrants because of their high expectations of integration in the host country. Banerjee (2008) as well argues that long-term immigrants and highly educated immigrants perceive discrimination more strongly than new immigrants and low-educated immigrants, respectively, because of their expectations of equitable treatment. The same could be argued for immigrants who are employed as they probably revise their expectations once they work and contribute to the host country' economic performance.

The effect also differ by German states. This can be explained by the fact that the level of discrimination has not increased uniformly across Germany. As a result, Turkish immigrants living in North Rhine-Westphalia have adopted a stronger minority identity following the attacks. In Baden-Wuerttemberg, Turkish immigrant have reacted by both increasing their degree of identification with Germany and Turkey. Lastly, in Bavaria, Turks have significantly decreased their commitment to the German culture and increased their minority identity. The Turkish immigrants who are not concerned at all about hostility to foreigners have significantly increased

their minority identity after the attacks. This is consistent with the interpretation that those who are the most likely to identify more with the German community are those who want to avoid stigmatization.

With respect to employment, different types of individuals might have been more severely affected by the 9/11 terrorist attacks. Indeed, Turkish women seem to experience an increase in their probability of being employed following the attacks. Besides, younger Turkish immigrants seem to be more likely to be employed in part-time employment following the 9/11 terror attacks.

[Insert Table 7 here]

6   Conclusion

This study investigates the effect of the 9/11 terrorist attacks on the process of identity formation and the employment outcomes of Turkish immigrants in Germany. More specifically, the analysis uses longitudinal data from the German Socio-Economic Panel and relies on a difference-in-differences strategy to compare the outcomes of Turkish immigrants with non-Turkish immigrants before and after September 11, 2001. A number of outcomes are examined subsequently including the German identity, i.e. the migrant's degree of identification with Germany; the minority identity, i.e. the migrant's degree of identification with the country of origin and a number of employment outcomes including the employment probability and the type of employment (the probability of being in full-time employment versus the probability of being in part-time employment).

One concern of the difference-in-difference strategy is the lack of an appropriate comparison group. Indeed, it is likely that Turkish immigrants and non-Turkish immigrants follow different time trends in terms of identity and employment outcomes and this might biaised the results. To test the robustness of the results, the study relies on two additional strategies: i) a regression-adjusted difference-in-differences matching strategy and ii) a semiparametric difference-in-differences strategy.

The results of the difference-in-differences strategy show that Turks have adopted more extreme identities following the 9/11 terror attacks compared to non-Turks: they are more likely to feel completely German; they are less likely to feel in some respects Turkish whereas they are more likely to feel mostly Turkish. With respect to employment, there is no significant impact of the 9/11 terrorist attacks on the Turks' employment outcomes relative to non-Turks. Furthermore, the results are robust to all specifications suggesting that the effect is not driven by non-parallel

time trends between Turkish and non-Turkish immigrants.

Lastly, the paper investigates the heterogenous effect of the 9/11 terrorist attacks on different groups. The results provide interesting insights about the differences that exist between immigrants who reacted to the terrorist attacks by increasing their minority identity and immigrants who reacted by increasing their German identity. The results show that Turkish immigrants who are more educated and who have lived longer in Germany are the most likely to adopt a stronger minority identity following the 9/11 attacks. With respect to employment, the 9/11 terrorist attacks have impacted more severely the younger Turkish immigrants who experience a higher probability of being employed in part-time employment. The results have important policy implications and contribute to inform policymakers about the population the most at risk of adopting oppositional identities.

References

Abadie, Alberto. 2005. "Semiparametric difference-in-differences estimators." *The Review of Economic Studies* 72 (1): 1-19.

Adida, Claire L., David D. Laitin, and Marie-Anne Valfort. 2014. "Muslims in France: identifying a discriminatory equilibrium." *Journal of Population Economics* 27 (4): 1039-1086.

Ainsworth-Darnell, James W., and Douglas B. Downey. 1998. "Assessing the oppositional culture explanation for racial/ethnic differences in school performance." *American sociological review* 536-553.

Akerlof, George A. and Rachel E. Kranton. 2000. "Economics and identity". *Quarterly Journal of Economics* 115 (3): 715753

Akerlof, George A. and Rachel E. Kranton. 2011."Identity economics: how our identities shape our work, wages, and well-Being". *Economics Books*.

Alesina, Alberto and Eliana La Ferrara. 2002. "Who trusts others?". *Journal of public economics* 85 (2): 207-234.

Algan, Yann, Alberto Bisin, Alan Manning and Thierry Verdier. 2012. *Cultural integration of immigrants in Europe*. Oxford University Press.

Åslund, Olof and Don-Olof Rooth. 2005. "Shifts in attitudes and labor market discrimination: Swedish experiences after 9-11". *Journal of Population Economics* 18 (4): 603-29.

Austen-Smith, David and Roland G. Fryer Jr. 2005. "An economic analysis of 'acting white'." *The Quarterly Journal of Economics* 120 (2): 551583.

Avitabile, Ciro, Irma Clots-Figueras, and Paolo Masella. 2013. "The effect of birthright citizenship on parental integration outcomes." *The Journal of Law and Economics* 56 (3): 777-810.

Banerjee, Rupa. 2008. "An examination of factors affecting perception of workplace discrimination." *Journal of Labor Research* 29 (4): 380.

Battu, Harminder, McDonald Mwale, and Yves Zenou. 2007. "Oppositional identities and the labor market." *Journal of Population Economics* 20 (3): 643-667.

Battu, Harminder and Yves Zenou. 2010. "Oppositional identities and employment for ethnic minorities: Evidence from England". *The Economic Journal*, 120 (542): F52-F71.

Berkley Center for Religion, Peace, and World Affairs. 2013. "Germany". Archived from the original on 12 October 2013. Retrieved 29 December 2011.

Bisin, Alberto, Eleonora Patacchini, Thierry Verdier, and Yves Zenou. 2011a. "Formation and persistence of oppositional identities." *European Economic Review* 55 (8): 1046-1071.

Bisin, Alberto, Eleonora Patacchini, Thierry Verdier, and Yves Zenou. 2011b. "Ethnic identity and labour market outcomes of immigrants in Europe." *Economic Policy* 26 (65): 57-92.

Bisin, Alberto, Eleonora Patacchini, Thierry Verdier, and Yves Zenou. 2008. "Are Muslim immigrants different in terms of cultural integration?." *Journal of the European Economic Association* 6 (23): 445-456.

Braakmann, Nils. 2010. "Islamistic terror and the labour market prospects of Arab men in England: does a country's direct involvement matter?." *Scottish Journal of Political Economy* 57 (4): 430-454.

Clots-Figueras, Irma and Paolo Masella. 2013. "Education, language and identity." *The Economic Journal* 123 (570): F332-F357.

Constant, Amelie F., Liliya Gataullina, Klaus F. Zimmermann, and Laura Zimmermann. 2006. "Clash of cultures: Muslims and Christians in the ethnosizing process."

Cornelissen, Thomas and Uwe Jirjahn. 2012. "September 11th and the earnings of Muslims in Germany - The moderating role of education and firm size." *Journal of Economic Behavior & Organization* 81 (2): 490-504.

Darity Jr, William A., Patrick L. Mason, and James B. Stewart. 2006. "The economics of identity: the origin and persistence of racial identity norms." *Journal of Economic Behavior & Organization* 60 (3): 283-305.

Davila, Alberto and Marie T. Mora. 2005. "Changes in the earnings of Arab men in the US between 2000 and 2002." *Journal of Population Economics* 18 (4): 587-601.

LL de Leon, Fernanda, and Sang-Hyun Kim. 2016. "In-Group and Out-Group Biases in the Marketplace: A Field Experiment during the World Cup."

Elsayed, Ahmed, and Andries De Grip. 2018. "Terrorism and the integration of Muslim immigrants." *Journal of Population Economics* 31 (1): 45-67.

Epstein, Gil S. and Odelia Heizler. 2015. "Ethnic identity: a theoretical framework." *IZA Journal of Migration* 4 (1): 9.

Fryer Jr., Roland G. and Paul Torelli. 2010. "An empirical analysis of 'acting white'." *Journal of Public Economics* 94 (5-6): 380396.

García-Alonso, María DC and Zaki Wahhaj. 2018. "Social diversity and bridging identity". No. 1802. School of Economics Discussion Papers.

Georgiadis, Andreas and Alan Manning. 2011. "Change and continuity among minority communities in Britain." *Journal of Population Economics* 24 (2): 541-568.

Georgiadis, Andreas and Alan Manning. 2013 "One nation under a groove? Understanding national identity." *Journal of economic behavior & organization* 93, 166-185.

Goel, Deepti. 2010. "Perceptions of Immigrants in Australia after 9/11." *Economic Record* 86 (275): 596-608.

Gould, Eric D. and Esteban F. Klor. 2015. "The Longrun Effect of 9/11: Terrorism, Backlash, and the Assimilation of Muslim Immigrants in the West." *The Economic Journal* 126 (567): 2064-2114.

Hanes, Emma and Stephen Machin. 2014. "Hate crime in the wake of terror attacks: Evidence from 7/7 and 9/11." *Journal of Contemporary Criminal Justice* 30 (3): 247-267.

Kaushal, Neeraj, Robert Kaestner, and Cordelia Reimers. 2007. "Labor market effects of September 11th on Arab and Muslim residents of the United States." *Journal of Human Resources* 42 (2): 275-308.

Kunst, Jonas R., et al. 2012. "Coping with Islamophobia: The effects of religious stigma on Muslim minorities' identity formation." *International Journal of Intercultural Relations* 36 (4): 518-532.

Manning, Alan and Sanchari Roy. 2010. "Culture clash or culture club? National identity in Britain." *The Economic Journal* 120 (542): F72-F100.

Patacchini, Eleonora and Yves Zenou. 2012. "Ethnic networks and employment outcomes." *Regional Science and Urban Economics* 42 (6): 938-949.

Schüller, Simone. 2016. "The effects of 9/11 on attitudes toward immigration and the moderating role of education." *Kyklos* 69 (4): 604-632.

Shannon, Michael. 2012. "Did the September 11th attacks affect the Canadian labour market?" *Economics Letters* 115 (1): 91-93.

Steele, Claude M., Steven J. Spencer, and Joshua Aronson. 2002. "Contending with group image: The psychology of stereotype and social identity threat." *Advances in experimental social psychology.* Vol. 34. Academic Press. 379-440.

Zimmermann, Klaus F. 2007. "Migrant ethnic identity: concept and policy implications."

Table 1.

Characteristics of Immigrants Across Treatment Groups

	All		Turks		Non-Turks		
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*	*Diff.*
Demographic characteristics							
Male	0.51	0.50	0.52	0.50	0.50	0.50	0.02
Age	41.8	11.4	38.2	11.2	44	11	-5.8***
Year of arrival	1976.1	9.2	1978.3	8.2	1974.7	0.4	3.6***
Years in Germany	22.9	9.2	20.7	8.2	24.3	9.6	-3.6***
Married	0.80	0.40	0.87	0.34	0.76	0.43	0.11***
Number of person in hh	3.5	1.5	4	1.5	3.2	1.4	0.75***
Number of children in hh	1.0	1.2	1.4	1.2	0.8	1.1	0.64***
Education (yrs)	10	2.3	9.6	2.1	10.3	2.4	-0.67***
Full-time employment (yrs)	15.2	12.3	10.6	10.7	17.9	12.4	-7.3***
Part-time employment (yrs)	1.6	3.7	0.8	2	2.1	4.3	-1.2***
Unemployment experience (yrs)	1.1	2.1	1.3	2.4	1.0	2	0.23
Pre-treatment outcomes							
German identity in 1999	2.54	1.15	2.26	1.04	2.72	1.18	-0.08***
Minority identity in 1999	3.78	0.99	3.75	0.91	3.81	1.03	-0.06
In employment in 1999	0.69	0.46	0.56	0.50	0.77	0.42	-0.69***
Full-time in 1999	0.45	0.50	0.39	0.49	0.48	0.50	-0.09**
Part-time in 1999	0.24	0.43	0.17	0.38	0.29	0.45	-0.12***
Post-treatment outcomes							
German identity in 2003	2.82	1.16	2.56	1.08	3.00	1.18	-0.44***
Minority identity in 2003	3.67	0.95	3.76	0.90	3.61	0.98	0.15
In employment in 2003	0.67	0.47	0.58	0.49	0.73	0.45	-0.14***
Full-time in 2003	0.42	0.49	0.38	0.49	0.45	0.50	-0.07*
Part-time in 2003	0.25	0.43	0.21	0.40	0.28	0.45	-0.08**
Individuals	1,047		385		662		

Source: German Socio-Economic Panel, own calculations.

Notes: This sample is restricted to the first-generation immigrants who are aged between 16 and 65 years old. The final sample is a balanced sample from 1999 to 2003. The demographic characteristics are reported for the pre-intervention period.

Diff = mean(Turks) - mean(Non-Turks). * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 2.

Characteristics of Immigrants Across Treatment Groups By Gender

	All		Turks		Non-Turks	
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*
Panel A: Men						
Demographic characteristics						
Age	42.4	11.5	38.6	11.2	44.7	11.1
Year of arrival	1975.5	11.5	1977.3	8	1974.4	9.7
Years in Germany	23.5	9.1	21.7	8	24.6	9.7
Married	0.79	0.41	0.84	0.37	0.75	0.43
Number of person in hh	3.5	1.5	3.9	1.6	3.3	1.4
Education (yrs)	10.3	2.3	10	2.1	10.4	2.4
Full-time employment (yrs)	20.4	11.9	16.3	10.8	22.9	11.9
Part-time employment (yrs)	0.5	1.7	0.4	1.4	0.6	1.8
Unemployment experience (yrs)	1.3	2.4	1.7	2.9	1.1	2
Pre-treatment outcomes						
German identity in 1999	2.57	1.1	2.39	1	2.69	1.17
Minority identity in 1999	3.78	1	3.70	0.9	3.84	1.04
In employment in 1999	0.83	0.38	0.79	0.41	0.85	0.36
Full-time in 1999	0.64	0.48	0.63	0.48	0.65	0.48
Part-time in 1999	0.18	0.39	0.16	0.36	0.20	0.40
Post-treatment outcomes						
German identity in 2003	2.82	1.14	2.76	1.10	2.87	1.16
Minority identity in 2003	3.69	0.94	3.71	0.90	3.68	0.96
In employment in 2003	0.78	0.41	0.76	0.43	0.80	0.40
Full-time in 2003	0.61	0.49	0.60	0.49	0.61	0.49
Part-time in 2003	0.18	0.38	0.16	0.36	0.19	0.39
Individuals	532		200		331	
Panel B: Women						
Demographic characteristics						
Age	41.3	11.2	37.7	11.3	43.2	10.7
Year of arrival	1976.7	9.2	1979.4	8.2	1975	9.4
Years in Germany	22.3	9.2	19.6	8.2	24	9.4
Married	0.81	0.4	0.90	0.30	0.76	0.43
Number of person in hh	3.5	1.4	4	1.5	3.2	1.3
Education (yrs)	9.8	2.4	9.1	2	10.1	2.5
Full-time employment (yrs)	9.8	10.2	4.5	6.3	12.8	10.8
Part-time employment (yrs)	2.7	4.7	1.3	2.5	3.5	5.5
Unemployment experience (yrs)	0.9	1.9	0.8	1.6	1	2
Pre-treatment outcomes						
German identity in 1999	2.50	1.17	2.12	1	2.75	1.18
Minority identity in 1999	3.78	0.99	3.80	0.9	3.77	1.03
In employment in 1999	0.55	0.50	0.32	0.47	0.69	0.46
Full-time in 1999	0.25	0.43	0.13	0.34	0.31	0.46
Part-time in 1999	0.31	0.46	0.19	0.39	0.37	0.48
Post-treatment outcomes						
German identity in 2003	2.82	1.19	2.34	1.02	3.13	1.19
Minority identity in 2003	3.65	0.97	3.82	0.90	3.55	1
In employment in 2003	0.56	0.50	0.39	0.49	0.65	0.48
Full-time in 2003	0.23	0.42	0.14	0.34	0.28	0.45
Part-time in 2003	0.33	0.47	0.26	0.44	0.37	0.48
Individuals	516		185		331	

Source: German Socio-Economic Panel, own calculations.

Notes: This sample is restricted to the first-generation immigrants who are aged between 16 and 65 years old. The final sample is a balanced sample from 1999 to 2003. The demographic characteristics are reported for the pre-intervention period.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

19

Table 3.

Ethnic Identity and the 9/11 Attacks

	German Identity[a]					Minority Identity[b]				
	DiD[c]		MDiD[d]		SDiD[e]	DiD[c]		MDiD[d]		SDiD[e]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Turks	-	-	-	-		-	-	-	-	
Post-9/11	0.198***	-0.007	0.212***	-0.039		-0.190***	-0.598***	-0.198***	-0.600***	
	(4.16)	(-0.04)	(4.27)	(-0.23)		(-4.36)	(-3.84)	(-4.29)	(-3.72)	
Turks x Post-9/11	0.046	0.073	0.045	0.086	0.085	0.238***	0.278***	0.240***	0.276***	0.229***
	(0.61)	(0.91)	(0.58)	(1.06)	(1.02)	(3.46)	(3.77)	(3.32)	(3.66)	(2.76)
Constant	2.57***	4.90***	2.52***	4.69***		3.77***	0.34	3.81***	0.328	
	(98.89)	(2.82)	(91.79)	(2.66)		(157.89)	(0.21)	(149.33)	(0.20)	
Controls	No	Yes	No	Yes	No	No	Yes	No	Yes	No
Individual × Year FE	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
Observations	1,813	1,713	1,621	1,621		1,818	1,718	1,623	1,623	
Individuals	980	925	862	862	786	980	925	862	862	791

Source: German Socio-Economic Panel, own calculations.

Notes: Results for Abadie's SDiD are derived using user written Stata command absdid with a logistic specification of the propensity score. t statistics in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

[a] "German identity" is a continuous variable ranging from 1 "Not at all" to 5 "Completely".

[b] "Minority identity" is a continuous variable ranging from 1 "Not at all" to 5 "Completely".

[c] DiD refers to the simple difference-in-differences estimation.

[d] MDiD refers to the regression-adjusted difference-in-differences matching strategy.

[e] SDiD refers to the semiparametric difference-in-differences estimation.

Table 4.
German/Minority Identity and the 9/11 Attacks

	Not at all			Barely			In some respects			Mostly			Completely		
	DiD^a	$MDiD^b$	$SDiD^c$	DiD^a	$MDiD^b$	$SDiD^c$	DiD^a	$MDiD^b$	$SDiD^c$	DiD^a	$MDiD^b$	$SDiD^c$	DiD^a	$MDiD^b$	$SDiD^c$
Panel A: German identity															
Turks	-	-		-	-		-	-		-	-		-	-	
Post-9/11	-0.048**	-0.056***		-0.032	-0.033		0.016	0.027		0.060***	0.058***		0.004	0.004	
	(-2.44)	(-2.68)		(-1.32)	(-1.30)		(0.60)	(0.96)		(3.26)	(2.97)		(0.42)	(0.45)	
Turks x Post-9/11	-0.050	-0.044	-0.049	0.068*	0.062	0.069	-0.004	-0.011	-0.024	-0.043	-0.036	-0.048	0.029*	0.028*	0.052***
	(-1.59)	(-1.35)	(-1.48)	(1.76)	(1.55)	(1.47)	(-0.10)	(-0.25)	(-0.47)	(-1.46)	(-1.16)	(-1.36)	(1.88)	(1.78)	(2.94)
Constant	0.229***	0.240***		0.229***	0.234***		0.349***	0.348***		0.125***	0.124***		0.067***	0.054***	
	(21.08)	(20.85)		(17.12)	(16.43)		(23.70)	(22.54)		(12.31)	(11.52)		(12.74)	(9.81)	
Controls	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Individual × Year FE	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Observations	1,813	1,621		1,813	1,621		1,813	1,621		1,813	1,621		1,813	1,621	
Individuals	980	862	786	980	862	786	980	862	786	980	862	786	980	862	786
Panel B: Minority identity															
Turks	-	-		-	-		-	-		-	-		-	-	
Post-9/11	0.002	0		0.022*	0.027*		0.056**	0.060**		0.004	-0.002		-0.084***	-0.085***	
	(0.41)	(0.00)		(1.68)	(1.93)		(2.19)	(2.21)		(0.14)	(-0.07)		(-3.73)	(-3.57)	
Turks x Post-9/11	0.001	0.003	-0.003	-0.037*	-0.040*	-0.023	-0.100**	-0.095**	-0.113**	0.070	0.057	0.081	0.066*	0.075**	0.058
	(0.12)	(0.40)	(-0.36)	(-1.79)	(-1.82)	(-0.92)	(-2.49)	(-2.25)	(-2.36)	(1.50)	(1.17)	(1.46)	(1.87)	(2.02)	(1.37)
Constant	0.023***	0.013***		0.065***	0.062***		0.287***	0.287***		0.365***	0.375***		0.260***	0.262***	
	(8.56)	(4.75)		(9.04)	(8.10)		(20.41)	(19.15)		(22.52)	(21.88)		(21.04)	(19.99)	
Controls	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Individual × Year FE	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Observations	1,818	1,623		1,818	1,623		1,818	1,623		1,818	1,623		1,818	1,623	
Individuals	980	862	791	980	862	791	980	862	791	980	862	791	980	862	791

Source: German Socio-Economic Panel, own calculations.

Notes: Results for Abadie's SDiD are derived using user written Stata command absdid with a logistic specification of the propensity score. t statistics in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

[a] DiD refers to the simple difference-in-differences estimation.
[b] MDiD refers to the regression-adjusted difference-in-differences matching strategy.
[c] SDiD refers to the semiparametric difference-in-differences estimation.

Table 5.
Employment Outcomes and the 9/11 Attacks

	Being employed					Full-time employment					Part-time employment				
	DiD[a]		MDiD[b]		SDiD[c]	DiD[a]		MDiD[b]		SDiD[c]	DiD[a]		MDiD[b]		SDiD[c]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Turks	-	-	-	-		-	-	-	-		-	-	-	-	
Post-9/11	-0.041**	0.025	-0.041**	-0.005		-0.035*	0.195**	-0.031	0.223**		-0.006	-0.170*	-0.010	-0.229**	
	(-2.45)	(0.34)	(-2.19)	(-0.07)		(-1.86)	(2.33)	(-1.47)	(2.57)		(-0.30)	(-1.86)	(-0.43)	(-2.43)	
Turks x Post-9/11	0.062**	0.091***	0.058**	0.094***	0.006	0.022	0.004	0.014	0.001	-0.052	0.040	0.086**	0.044	0.093**	0.058
	(2.24)	(3.00)	(1.98)	(2.97)	(0.18)	(0.71)	(0.13)	(0.42)	(0.03)	(-1.24)	(1.19)	(2.24)	(1.24)	(2.37)	(1.22)
Constant	0.691***	1.429**	0.690***	0.794*		0.447***	2.84***	0.456***	1.771***		0.245***	-1.413*	0.234***	-0.977	
	(73.87)	(2.35)	(67.72)	(1.65)		(42.58)	(4.03)	(39.51)	(3.22)		(21.44)	(-1.83)	(18.96)	(-1.64)	
Controls	No	Yes	No	Yes	No	No	Yes	No	Yes	No	No	Yes	No	Yes	No
Individual × Year FE	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
Observations	2,094	1,829	1,724	1,664		2,094	1,829	1,724	1,664		2,094	1,829	1,724	1,664	
Individuals	1,047	959	862	862	930	1,047	959	862	862	930	1,047	959	862	862	930

Source: German Socio-Economic Panel, own calculations.

Notes: Results for Abadie's SDiD are derived using user written Stata command absdid with a logistic specification of the propensity score. t statistics in parentheses. * $p < 0.1$,** $p < 0.05$,*** $p < 0.01$.

[a] DiD refers to the simple difference-in-differences estimation.
[b] MDiD refers to the regression-adjusted difference-in-differences matching strategy.
[c] SDiD refers to the semiparametric difference-in-differences estimation.

Table 6.

Heterogenous Treatment Effects of 9/11 Attacks on Ethnic Identity

	German Identity		Minority Identity	
	(1)	(2)	(3)	(4)
All sample				
Turks x Post-9/11	0.046	0.073	0.238***	0.278***
	(0.61)	(0.91)	(3.46)	(3.77)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	1,813	1,713	1,818	1,718
Individuals	980	925	980	925
Men				
Turks x Post-9/11	0.156	0.212*	0.206**	0.242**
	(1.51)	(1.87)	(2.10)	(2.31)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	924	876	925	877
Individuals	494	468	495	469
Women				
Turks x Post-9/11	-0.072	-0.069	0.271***	0.312***
	(-0.67)	(-0.61)	(2.82)	(2.99)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	889	837	893	841
Individuals	486	457	485	456
Age < mean = 44				
Turks x Post-9/11	0.052	0.052	0.257**	0.285***
	(0.48)	(0.46)	(2.48)	(2.67)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	918	860	918	860
Individuals	527	495	526	494
Age > mean = 44				
Turks x Post-9/11	0.098	0.083	0.378***	0.441***
	(0.74)	(0.60)	(3.37)	(3.73)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	863	823	868	828
Individuals	505	481	506	482
Education < mean = 10				
Turks x Post-9/11	0.033	0.055	0.168	0.181
	(0.28)	(0.44)	(1.62)	(1.65)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	931	904	936	909
Individuals	597	580	600	583
Education > mean = 10				
Turks x Post-9/11	-0.055	-0.043	0.183	0.376**
	(-0.40)	(-0.28)	(1.40)	(2.58)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	809	740	809	740
Individuals	560	517	559	516

Table 6.

Heterogenous Treatment Effects of 9/11 Attacks on Ethnic Identity - Continued

	German Identity		Minority Identity	
	(1)	(2)	(3)	(4)
Employed				
Turks x Post-9/11	-0.074	0.015	0.273***	0.286***
	(-0.74)	(0.13)	(2.88)	(2.76)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	1,223	1,154	1,223	1,154
Individuals	743	701	743	701
Unemployed				
Turks x Post-9/11	0.099	0.050	0.246*	0.355**
	(0.64)	(0.30)	(1.76)	(2.42)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	590	559	595	564
Individuals	396	373	398	375
Time in Germany < mean = 25				
Turks x Post-9/11	-0.046	-0.009	0.125	0.157
	(-0.40)	(-0.08)	(1.12)	(1.40)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	687	687	688	688
Individuals	416	416	416	416
Time in Germany > mean = 25				
Turks x Post-9/11	0.029	0.049	0.330***	0.342***
	(0.24)	(0.39)	(3.15)	(3.01)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	1,066	966	1,069	969
Individuals	619	564	620	565
State of residence: North-Rhine-Westfalia				
Turks x Post-9/11	0.037	0.074	0.267*	0.253*
	(0.23)	(0.45)	(1.83)	(1.66)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	455	438	457	440
Individuals	254	244	254	244
State of residence: Baden-Wuerttemberg				
Turks x Post-9/11	0.301**	0.327**	0.185	0.286**
	(2.32)	(2.41)	(1.50)	(2.19)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	564	527	564	527
Individuals	294	274	294	274

Table 6.

Heterogenous Treatment Effects of 9/11 Attacks on Ethnic Identity - Continued

	German Identity		Minority Identity	
	(1)	(2)	(3)	(4)
State of residence: Bavaria				
Turks x Post-9/11	-0.324**	-0.355**	0.343*	0.643***
	(-2.13)	(-2.01)	(1.90)	(3.24)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	275	259	276	260
Individuals	149	140	149	140
Worried hostility to foreigners: very concerned				
Turks x Post-9/11	0.164	0.103	-0.020	0.056
	(0.79)	(0.47)	(-0.11)	(0.31)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	533	506	534	507
Individuals	420	399	420	399
Worried hostility to foreigners: somewhat concerned				
Turks x Post-9/11	0.198	0.199	0.055	0.146
	(1.33)	(1.25)	(0.40)	(0.98)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	892	839	892	839
Individuals	672	631	672	631
Worried hostility to foreigners: not concerned at all				
Turks x Post-9/11	-0.018	-0.056	0.491**	0.558**
	(-0.06)	(-0.20)	(2.10)	(2.26)
Controls	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes
Observations	378	358	381	361
Individuals	306	291	309	294

Source: German Socio-Economic Panel, own calculations.
Notes: The controls include gender, age, age-squared, year of arrival, being married and region of residence. t statistics in parentheses. * $p < 0.1$,** $p < 0.05$,*** $p < 0.01$

Table 7.

Heterogenous Treatment Effects of 9/11 Attacks on Employment

	Being employed		Full-time employment		Part-time employment	
	(1)	(2)	(3)	(4)	(5)	(6)
All sample						
Turks x Post-9/11	0.062**	0.091***	0.022	0.004	0.040	0.086**
	(2.24)	(3.00)	(0.71)	(0.13)	(1.19)	(2.24)
Controls	No	Yes	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,094	1,829	2,094	1,829	2,094	1,829
Individuals	1,047	959	1,047	959	1,047	959
Men						
Turks x Post-9/11	0.018	0.043	0.006	-0.049	0.012	0.092*
	(0.55)	(1.26)	(0.13)	(-0.94)	(0.26)	(1.78)
Controls	No	Yes	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,062	938	1,062	938	1,062	938
Individuals	531	487	531	487	531	487
Women						
Turks x Post-9/11	0.109**	0.155***	0.039	0.080*	0.070	0.076
	(2.48)	(2.97)	(0.98)	(1.68)	(1.44)	(1.29)
Controls	No	Yes	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,032	891	1,032	891	1,032	891
Individuals	516	472	516	472	516	472
Age < mean = 44						
Turks x Post-9/11	0.084**	0.119***	0.008	0.005	0.076	0.114**
	(2.02)	(2.64)	(0.18)	(0.10)	(1.52)	(2.11)
Controls	No	Yes	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,039	900	1,039	900	1,039	900
Individuals	561	508	561	508	561	508
Age > mean = 44						
Turks x Post-9/11	-0.064	0.036	-0.045	0.005	-0.019	0.031
	(-1.38)	(0.72)	(-0.88)	(0.09)	(-0.34)	(0.48)
Controls	No	Yes	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,016	895	1,016	895	1,016	895
Individuals	550	506	550	506	550	506
Education < mean = 10						
Turks x Post-9/11	0.100**	0.099**	0.055	0.025	0.046	0.073
	(2.21)	(2.07)	(1.14)	(0.48)	(0.86)	(1.27)
Controls	No	Yes	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	994	959	994	959	994	959
Individuals	626	603	626	603	626	603
Education > mean = 10						
Turks x Post-9/11	0.037	0.049	0.058	-0.059	-0.020	0.108
	(0.80)	(0.91)	(1.03)	(-0.91)	(-0.34)	(1.50)
Controls	No	Yes	No	Yes	No	Yes
Individual × Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,018	793	1,018	793	1,018	793
Individuals	636	504	636	504	636	504

Source: German Socio-Economic Panel, own calculations.
Notes: The controls include gender, age, age-squared, year of arrival, being married and region of residence. t statistics in parentheses. * $p < 0.1$,** $p < 0.05$,*** $p < 0.01$