

Terrorism and Integration of Muslim Immigrants

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This draft: April 10, 2013

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Abstract:

Is there a relationship between terrorism committed by Muslim individuals or groups and the integration of Muslim immigrants in Western countries? In this paper we study the change in the attitudes of Muslim vs. non-Muslim immigrants towards integration in the Netherlands before and shortly after a series of fundamentalist-Islamic terrorist events that hit Western Europe and drew media attention and triggered international outrage: Madrid bombings in March 2004, the assassination of Theo van Gogh in Amsterdam in November 2004, and London bombings in July 2005. Using two waves from a Dutch panel survey that oversamples immigrants, we show that after the events Muslim immigrants' perceived acceptance in the Netherlands, appreciation of living in the Netherlands, as well as their feeling at ease with the company of Dutch natives decreased significantly relative to that of non-Muslim immigrants. These findings are robust to the inclusion of a large set of control variables, as well as to controlling for selection bias. Exploiting the timing of interviews, we show no evidence for the existence of a negative trend in the integration of Muslim immigrants before the events. Further analysis shows that the decline in Muslims' reported integration is mainly driven by men, immigrants living in geographic areas with high concentration of their own ethnic group, highly educated, and employed immigrants. Moreover, the decline of integration is significantly more pronounced among less religious Muslims. These findings indicate that the decline in integration is on cultural rather than economic backgrounds.

Key words: Terrorism, integration, Muslim immigrants

JEL Classification: F22, J15, Z13

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I. Introduction:

Over the last few decades there has been an ongoing debate about the perceived costs and benefits of immigration and cultural diversity in Western societies (Bisin et al. 2008). Muslim immigrants have been in the heart of this debate as the economic and cultural integration of Muslims in Western countries is perceived to go much slower than that of the other immigrant groups (Bisin et al. 2008; Georgiadis and Manning 2009). Over the recent years, the interest in Muslim immigrants' pattern of integration has become more intense due to a wave of fundamentalist-Islamic terrorism that hit several Western countries: the New York September 11 attacks, the terrorist attacks in Madrid in March 2004, the London bombings in July 2005, and the Stockholm explosions in December 2010. These events have casted serious doubts and raised severe worries about the integration potential of Muslim minorities into Western societies (Bisin et al. 2008).

Although economic literature started to give special attention to the pattern of Muslim immigrants' integration (e.g. Bisin et al. (2008), (2010), Georgiadis and Manning (2009); Constant et al. (2009), Battu and Zenou (2010), Manning and Roy (2010)), there is little evidence on the relationship between terrorist attacks attached to Muslim individuals or groups and the integration of Muslims in Western societies. The literature shows increasing discrimination against Muslim minorities as a result of terrorism (Gautier, Siegmann et al. 2009; Goel 2010; Hanes and Machin 2012) as well as negative impacts of this discrimination on Muslim immigrants' health (Johnston and Lordan 2011) and labor market outcomes (Kaushal, Kaestner et al. 2007). However, the impact of discrimination on how Muslims integrate (or potentially could integrate) in their host countries has not been sufficiently addressed in the economic literature.

This paper estimates the relationship between terrorism and the integration potential of Muslim immigrants. For this purpose, we exploit a unique panel dataset that oversamples immigrants in the Netherlands and collects detailed information on their attitudes and feelings towards their host country. The dataset consists of two waves, the first wave was collected over the period October 2002 and January 2004, whereas the second wave was collected over the period September 2005 to October 2007. Between the two waves, Western Europe witnessed the first and most violent wave of Islamist terrorism after September 11, 2001 (Bakker 2006). This started with Madrid bombings in March 11 2004 that have been shown to be directed by an Al Qaeda-affiliated group and left 192 people killed and 1,600 injured (Brynjar and Hegghammer 2004). The wave ended with London July bombings in July 7th 2005 committed by four UK-grown Islamist suicide-bombers and left 52 people as well as the four bombers killed, and over 700 more injured.¹

The Netherlands was also affected by this wave of radical Islam terrorism when Theo van Gogh, a famous Dutch film director, TV interviewer, and writer was murdered in November 2, 2004 by a young man of Moroccan origin who was recently converted to radical Islam. The attack received a large media attention and triggered a nation-wide outrage (Gautier et al. 2009). In the weeks following the murder, there were several attacks on mosques and other Islamic institutions in the Netherlands² (Gautier et al. 2009).

¹ BBC in depth coverage over London attacks (2008).

http://news.bbc.co.uk/2/hi/in_depth/uk/2005/london_explosions/default.stm

² With the exception of some terrorist conspiracies and threats, over the period September 11, 2001 to March 10, 2004, there was no high-profile terrorist attacks that hit European territories (Nesser 2008) . According to the Global terrorism database (2012), the three events listed above marked the most important Islamic terrorism events. *“Madrid bombings came more or less as a surprise and had a deep impact on threat perceptions of the general public. Although jihadi terrorism was in fact not new at all, the general public felt that this kind of terrorism had ‘reached’ Europe and that many European countries could now be targeted”* states Bakker (2006).

We analyze changes in Muslim immigrants' perceived acceptance in the Netherlands, appreciation of living in the Netherlands, and feeling at ease with Dutch natives³, compared to that of non-Muslims before and after the attacks. We find that Muslim immigrants' perceived acceptance in the Dutch society declined much more than that of non-Muslims. Moreover, Muslims report a declining appreciation of living in the Netherlands, and social acceptance of the Dutch people, whereas other immigrants do not report a decline in these indicators of integration. This pattern is robust to the inclusion of a large set of controls such as socio-demographics, employment status, share of the respondent's ethnic group in the municipality, length of stay in the Netherlands, etc. The pattern is also robust after controlling for selection bias. Because our data consists of only two waves, and because of the relatively long period of time between the two waves, it is difficult to attribute the decline in the integration pattern of Muslims solely to terrorism (or the discrimination associated with it). There could be some other endogenous factors that affect the speed by which different immigrant groups integrate. To check this, we exploit the relatively long time over which data was collected and use the timing of interviews in the first wave of the study to estimate whether there has been a different trend in the integration pattern of Muslims, relative to non-Muslims, prior to the terrorism wave. The analysis shows no evidence for a trend before the terrorism wave, which gives support for the impact of terrorism on the integration pattern of Muslims.

The rest of the paper is organized as follows: the next section discusses the relevant literature. Section 3 describes the data and relevant variables. Section 4 explains the empirical

³ The traditional measures of integration (e.g. language use, importance of religion, attitudes towards intra-marriage) are not available in the two waves of the data. However, given that the social integration process of foreign minorities may take generations, assessing changes in immigrants' integration over a short period of time would be difficult using the traditional measures of integration. Our measures, though not perfect measures of integration, represent a starting point in the integration process and therefore could capture the integration potential. Georgiadis and Manning (2013) showed that immigrants who are treated with respect and who feel tolerated by natives are more likely to identify with the host country.

strategy and shows the results of the data analysis. Section 5 shows robustness checks. Section 6 estimates the heterogeneity across different immigrant groups, and finally Section 7 concludes.

II. Related studies

There is a growing economic literature on the social and cultural aspects of immigration (e.g. Battu and Zenou (2010); Bisin et al. (2010); Georgiadis and Manning (2013)). The issues of identity and integration of the Muslim immigrants in Western societies has received a special interest in this new strand of literature (e.g. Bisin et al. 2008; Manning and Roy 2010). However, the literature has been inconclusive about the pattern of Muslims' integration in Western societies. While some authors showed no evidence of a cultural clash connected to Muslims in the UK (e.g. Manning and Roy 2010), other studies signaled that Muslims in Britain integrate slower than non-Muslims (e.g. Bisin et al. 2008). Bisin et al. (2008) measured integration by the immigrants' attitudes towards marriage with locals, the importance of religion, and the relevance of ethnicity in choosing schools families want for their children. However, the Muslims' slow integration pattern in the study by Bisin et al. (2008) turned out to be driven by an over-estimated number of observations (Arai et al. 2011; Bisin et al. 2011). Replications of the study by Arai et al. (2011) and Bisin et al. (2011) showed that the pattern, although still there, is less clear-cut.

Most of these studies are cross-sectional while only few investigate changes over time. For example, Georgiadis and Manning (2011) compared the integration pattern of Pakistani and Bangladeshi communities in the UK (measured by the gender gap in education, age at marriage, marriage from the source country, and female employment) with that of the other foreigner communities. Using repeated cross-sections from the Labour Force Survey (LFS) over the period 1979-2006, they showed that the Muslims' score is lower on all the aspects.⁴ However, they

⁴ The vast majority of Pakistanis and Bangladeshis in the UK are Muslims (Georgiadis and Manning 2011).

found a convergence in these aspects not only because those born in Britain differ significantly in behaviors from those born in the country of origin, but also because there is a change within both the Britain- and foreign-born immigrants.

Due to lack of data sources, there are no studies that used panel structure to estimate changes in the integration of Muslim immigrants over time controlling for unobserved heterogeneity. Another problem is that even if a panel data source on the integration of immigrants exists, integration usually takes long time to change which makes short-time panel data sources infeasible in estimating the change. However, Islamic-terrorist attacks have been shown to increase discrimination against Muslims (e.g. Gautier et al. 2009; Hanes and Machin 2012), and therefore could provide an exogenous shock that would enable to study changes in the attitudes of Muslim immigrants in the west.

Many papers exploited the exogenous variation associated with terrorist attacks to study their impact on the labor market outcomes of Muslim immigrants. For example, Kaushal et al. (2007) studied the impact of September 11 on the wages of Muslims in the US and showed that September 11 did not significantly affect employment and hours of work of Arab and Muslim men, but it was associated with a temporary 9-11 percent decline in their earnings. Other studies estimated the labor market impact of September 11 on Muslim immigrants in different countries and showed a negative effect of the attacks on the labor market outcomes (e.g. Cornelissen and Jirjahn 2012; Shannon 2012)

The impact of terrorism on health outcomes of Muslim immigrants has been also studied. Johnston and Lordan (2012) found evidence for increased blood pressure, cholesterol level, BMI, and self-assessed general health for Muslims, compared to non-Muslims, as a result of September 11. The underlying mechanism in all these studies is the increased discrimination against Muslims due to the anger caused by terrorism. Gautier et al. (2009) showed a strong

evidence for this discrimination assessed by a decline in prices of the houses in the neighborhoods with a large share of Turks and Moroccans in Amsterdam after the assassination of Theo van Gogh. Furthermore, hate crimes were shown to increase permanently against Asians and Arabs in England immediately after September 11 and July 7 attacks (Hanes and Machin 2012). The impact of large-scale fundamentalist-Islamic terrorist events on discrimination is not geographically limited to the country where the events take place in. For example, Schuller (2012) showed that September 11 attacks resulted in a significant increase in the negative attitudes towards immigration and decreased concerns over xenophobic hostility among the native German population.

Only one study by Goel (2010) estimated the changes in perceptions of discrimination among Muslims after terrorism. Goel (2010) exploited the date of interviews to estimate how Muslim-looking immigrants to Australia perceive intolerance before and after September 11 attacks relative to other immigrants. She found that Muslim-looking immigrants reported higher intolerance and discrimination than other immigrants.⁵

III. Data

The Netherlands Kinship Panel Study (NKPS) consists of two datasets. The first dataset covers the Dutch native population while the second oversamples immigrants from the four largest immigrant groups in the Netherlands (the Turks, Moroccans, Surinamese, and Dutch Antilleans). The data is collected in 13 Dutch cities in which half of the immigrant population lives (Dykstra et al. 2012). We use the data from the immigrants' sample. The data has a panel structure with two waves. The first wave was collected between October 2002 and January 2004, whereas the second wave was collected between September 2005 to October 2007. The dataset contains

⁵ Goel's (2010) results were based on a cross-section of recently-arrived immigrants (the second wave of the longitudinal survey of immigrants to Australia) which makes it difficult to account for the unobserved immigrants' heterogeneity. In addition, the measures used in her study were limited to the binary perceptions of intolerance and discrimination in Australia. Our study is different from Goel's (2010) study in that it goes one step further beyond perceptions of fair/unfair treatments and assess the changes in immigrants' attitudes towards living in the host country and dealing with the natives.

information about the religion of the immigrant, age, ethnic group, employment status, marital status, year of immigration, whether or not born in the Netherlands, etc. It also contains information about immigrants' experiences in the Netherlands and their attitudes towards living in the Netherlands and towards the Dutch people. We also get information about the share of the person's own ethnic group in the municipality from the CBS Statline.⁶

We measured immigrants' integration in the Dutch society using three items: The first is the *Perceived acceptance by the host country* (cf. Huijnk, Verkuyten et al. 2012). The respondents are asked eight questions on the extent to which they agree to each of the following: (1) 'In the Netherlands foreigners have excellent opportunities', (2) 'The Dutch are hostile to foreigners' (3) 'In the Netherlands your rights as a foreigner are respected', (4) 'The Dutch are hospitable to foreigners', (5) 'In the Netherlands people are indifferent to foreigners', (6) 'Foreigners are treated fairly in the Netherlands', (7) 'Foreigners face many restrictions in the Netherlands', and (8) 'The Dutch are open to foreign cultures'. The answers are given on a five point scale that ranges from 1 'strongly disagree' to 5 'strongly agree'. The scale in the items (2), (5), and (7) is reversed. We created a measure of perceived acceptance that consists of the average of these eight items. Cronbach's alpha for this scale was 0.76.⁷

The second measure captures the *appreciation of living in the host country* and is measured by the single question: 'How do you like living in the Netherlands?'. The answers ranged from 1 'very fine' to 5 'very annoying'. We reversed the scale to assess the positive aspect. The third measure captures *social life* and is measured by the single question 'Do you feel at ease in the company of Dutch people?'. The answer is on a four-point scale: 1 'no, not at all', 2 'no, not really', 3 'yes, a little', and 4 'yes, very much so'. To facilitate reading and comparing the results, we standardized the three variables.

⁶ CBS Netherlands: <http://statline.cbs.nl/StatWeb/>

⁷ Running a factor analysis suggests dropping item (5): 'In the Netherlands people are indifferent to foreigners'. This increases the Cronbach's alpha of the scale to 0.79. However, removing it does not quantitatively affect the results.

Our sample consists of 1,357 observations for whom we have full information on integration variables, demographics, and religion: 619 observations for Muslim immigrants (302 in the first wave and 317 in the second wave), and 738 observations for non-Muslim immigrants (402 in the first wave and 336 in the second wave). For 325 individuals (134 Muslims and 191 non-Muslims) there is data in both waves of the panel.

Table 1 provides an overview for the variables used in our study. The table shows that there are significant differences in the integration indicators between Muslim and non-Muslim immigrants. Non-Muslim immigrants' perceived acceptance in the Netherlands, appreciation of living in the Netherlands, and feeling at ease with the Dutch natives are significantly higher than that of Muslim immigrants. The individual items of perceived acceptance are significantly higher for non-Muslims than Muslims with the exception of the beliefs that 'rights of foreigners are respected in the Netherlands' and that 'the Netherlands is open for foreign culture' which are significantly higher for Muslims. The table also shows that the share of respondents of the second generation (i.e. those who were born in the Netherlands) is small (7% of the Muslims and 11% of the non-Muslims). This is due to the fact that the survey includes those who are 18 years or older. The majority of Muslims belong to the Turkish and Moroccan ethnic minorities (93% of Muslims are Turkish and Moroccan) while the majority of non-Muslims belong to Surinamese and Dutch Antillean ethnic minorities (97% of Non-Muslims are Surinamese and Dutch Antillean). Non-Muslims are on average more educated than Muslims. In addition, they are more likely to have received education abroad and in the Netherlands than Muslims. Non-Muslims are more employed than Muslims (65% of the Non-Muslims in the sample are employed whereas only 47% of the Muslims are employed). While 78% of Muslims are married, only 30% of non-Muslims are married. This could be connected to the larger number of children for Muslims than for non-Muslims in our sample. Finally, 55% of non-Muslims and 44% of Muslims are females.

To show the change in the integration pattern before and after the terrorist events, Figure 1 shows the change over time for the Muslim and non-Muslim immigrants. The figure shows that integration decreased for the two groups. However, this decrease is much more pronounced for Muslims than for non-Muslims.

IV. Empirical model and analysis

To identify the effect of the terrorist events in Western Europe on the integration of Muslim immigrants, we estimate the following simple equation:

$$Y_{it} = \alpha + \beta_1 Muslim_{it} + \beta_2 Second\ wave_t + \beta_3 [Muslim_{it} * Second\ wave_t] + \beta_4 X_{it} + u_i + \varepsilon_{it}$$

Where Y_{it} is the integration level of immigrant i at time t . *Muslim* is a dummy variable for being a Muslim, *Second wave* is a dummy variable that takes the value 1 if the observation is from the wave 2005-2007 (after the terrorist attacks), the interaction term between *Muslim* and *Second wave* is our measure of change in Muslims' integration compared to that of non-Muslims. X_{it} is a set of controls, whereas u_i is an individual fixed effects which we assume to be uncorrelated with the timings of the terrorist events, and ε_{it} is the time-varying error term.

In our analysis we estimate generalized least squares model with random effects (RE).⁸ Table 2 shows the RE model coefficients. Columns 1, 3, and 5 show the estimated coefficients for perceived acceptance in the Netherlands, appreciation of living in the Netherlands, and feeling at ease with Dutch natives, respectively without controls. Columns 2, 4, 6, show the coefficients after controlling for a large set of control variables: ethnic group, gender, dummies for marital status, dummies for employment status, whether born in the Netherlands, length of period stayed in the Netherlands, length of period stayed in the Netherlands squared, education level, whether or not received education abroad, whether or not received education in the

⁸ The time invariant nature of religion suggests to estimate generalized least squares with random effects model (RE) over Fixed Effects model (FE).

Netherlands, municipality where the immigrant lives, share of the respondent's ethnic minority in the municipality, and number of children.⁹

The table shows that after the terrorist attacks the attitudes of Muslim immigrants towards integration in the Netherlands decreased significantly in comparison with that of Non-Muslim immigrants. This can be shown by the interaction coefficients between “*Muslim*” and “*Second wave*” which are negative and statistically significant in all columns. Before the events, the perceived acceptance in the Netherlands of Muslim immigrants was significantly higher than that of non-Muslims. However, Muslims had significantly, but non-robust, lower feeling at ease with the Dutch natives. Perceived acceptance in the Netherlands decreases significantly for the two groups with a more significant decline for Muslims. Appreciation of living in the Netherlands and feeling at ease with locals decreased significantly for Muslims but not for other immigrant groups.

The table further shows that longer stay in the Netherlands is associated with better integration. The table also shows that Turks score lower than the other groups in perceived acceptance in the Netherlands, and feeling at ease with Natives. This result is in line with the recent literature that showed that Turkish immigrants in the Netherlands are less happy than the other immigrant groups (Gokdemir and Dumuldag 2012). Moroccans score higher than the other ethnic groups in appreciation of living in the Netherlands. An OLS regression with clustering on personal identification gives very similar results (Table A1).

⁹ In addition to the set of controls used, we also estimated a model controlling for the birth place of the partner, family income (available only in the first wave), fluency in Dutch, and using Dutch in communicating with children (available only in the second wave). Although the number of observations declines sharply when we include these variables, the results are still robust. In the analysis we show in this paper, respondent's age is removed because of potential collinearity with length of stay in the Netherlands. However, adding the variable gives similar results.

V. Robustness checks

V1. Possible trend

Because our analysis starts after September 11, 2001, the found effect could be biased. As indicated above, literature shows that September 11 increased labor market discrimination against certain minority groups and changed the immigration attitudes in general, not only in the US, but also in other Western countries (e.g. Goel, 2010; Cornelissen and Jirjahn, 2012; Shannon 2012; Schuller 2012). This means that since Islamist terrorism affects the integration of Muslim immigrants, then it is likely that Muslim immigrants are already affected by September 11 attacks before our analysis started. However, the analysis above does not show a strong evidence for differences in integration between Muslims and non-Muslims before the attacks (Muslims perceive to be accepted in the Netherlands more than non-Muslims, and although their feeling at ease with the locals is lower, it is not robust for the inclusion of control variables). Furthermore, even if Muslims are less integrated, this would make our point stronger as this underestimates our coefficients of integration change. In other words, given that Muslims start by lower integration than their actual level of integration, the indicated change in their integration should have been larger.

However, if there is already a pattern of change in the Muslim immigrants' integration before the wave of terrorism of interest, this would imply that the change in Muslim immigrants is not a result of the terrorist events, but it could rather be due to some endogenous factors that make the speed of integration different between Muslim and non-Muslim immigrants. A perfect scenario to deal with this would be to have a third wave of the dataset to judge whether the trend has existed before. However, the dataset consists of only two waves. To account for the possibility that there could be an already negative trend in the integration pattern of Muslim immigrants before terrorist attacks took place, we exploit the timing of interviews in the first wave of the dataset to identify whether Muslims interviewed later in time are less integrated than those who

were interviewed earlier. If such a pattern exists, it will be difficult to attribute the decline shown in the integration of Muslim immigrants to the terrorist attack. Given that the span of time over which the first wave of data is collected is quite long (from October 2002 till January 2004), this makes it feasible.

Table A4 shows the coefficients for the regression of the integration items on the time of the interview in the first wave. Although the table shows a negative trend for all immigrants alike, the interaction term between being a Muslim and the date of interview shows that the change in the integration pattern of Muslim immigrants seem not to be much different from that of other immigrants. If anything, the negative trend is lower for Muslims than non-Muslims especially in their feeling at ease with the Dutch natives. This means that before the terrorist attack, Muslim immigrants used to do slightly better than non-Muslim immigrants in integration. Therefore, the drop in the integration of Muslim immigrants after the attack is not due to a trend that already existed before. Although this does not completely eliminate the possibility that there could be other factors that took place between the two waves (in addition to the terrorist attacks) that could also have negatively affected the integration of Muslim immigrants, the analysis assures that the pattern of the decline in Muslims' integration started to develop over the period of terrorism wave.

V.2. Selection bias

We acknowledge that there could be a selection bias due to the panel attrition in the dataset (out of the 704 observations who answered the integration questions in the first wave, only 325 continued to appear in the second wave). It is more reasonable to assume that immigrants who dropped from the sample in the second wave would have reported lower integration than those who remained. Muslims are, on average, less likely to appear in the two waves of the survey (Table A3).

According to our line of argument, Muslims' integration is affected by the terrorist events, therefore Muslims are more likely to drop out of the study (or even leave the country in an extreme case). However, this would under-estimate the reported decline in the integration of Muslim immigrants and make the actual decrease in the integration pattern of Muslims more pronounced.

To account for the potential selection bias, we replicate the analysis using a balanced sample including the respondents for whom we have complete information on integration in the two waves. However, there could be contemporaneous shocks that affected the participation in the second wave of the study. For example, as we said before, people who are most affected by the terrorist event could have rejected to participate in the second wave of the survey (or even have totally left the country). For this reason, even a balanced panel estimate may not truly reflect the actual change in Muslims' integration. To correct for this, we computed a Mills ratio using a selection variable that equals 1 if the individual is observed in the two waves of the study, and 0 otherwise as our dependent variable in the selection equation. The estimates from the selection equation are shown in Table A3 as a function of all independent variables in addition to the number of missing items the respondents gave in their answering to all questions in the first wave questionnaire¹⁰. This variable is used to satisfy the exclusion restriction, which is possible as dropping from the sample in the second wave should be correlated with the number of questions the respondent did not answer in the first wave of the questionnaire (i.e. immigrants who answered fewer questions in the first wave are likely to drop out in the second wave), but the number of missing items should not be correlated with the timings of the terrorist attacks. Table 3 shows The RE model estimates from the balanced sample. The table shows similar results for perceived acceptance in the Netherlands and appreciation of living in the Netherlands. However, for feeling at ease with locals, the interaction between "Muslim" and "Second wave"

¹⁰ This includes all questions in the questionnaire except the ones included in the integration equation above.

is no longer significant, though it has the same negative sign as before. The coefficients of the inverse mills ratio are not significant. This shows that the selection bias is not that severe.

VI. Heterogeneous effects

Having shown a significant decline in the integration pattern of Muslim immigrants relative to other immigrants after the wave of terrorism on Western Europe, we now investigate whether different types of immigrants have been more or less responsive to the attacks.

We examine effect heterogeneity with respect to gender, education, geographic concentration of migrants with the same ethnic background, and labor market status. Table 4 recalculate the random effects estimations from Table 2 for split samples by gender (Panel A), education level (high vs. low education) (Panel B), geographic concentration of migrants from the same ethnic group (high vs. low concentration) (Panel C), and labor market status (being in the labor market vs. not in the labor market) (Panel D).

The table shows that the decrease in the perceived acceptance in the Netherlands is more pronounced for males than for females. The decrease in appreciation of living in the Netherlands and feeling at ease with the Dutch locals was limited to males. The integration of the low-educated immigrants (both Muslim and non-Muslim) decreased significantly. There is no significant difference in the pattern of decline between the Muslim and non-Muslim low-educated except perceived acceptance in the Netherlands which decreased more for Muslims. However, highly-educated Muslims show a significant decrease in the perceived acceptance in the Netherlands compared to highly-educated non-Muslims. This implies that the decline in the integration of Muslim immigrants is not driven by an economic background.

The table also shows that the decline in integration is driven totally by Muslim immigrants living in municipalities with high concentration of the same ethnic group. In other words, Muslim immigrants who live in geographical areas with high concentration of their ethnic group are more likely to show reduction in their integration attitudes. This could be because

natives tend to develop unfavorable immigration attitudes in higher regional foreigner concentration (Fertig and Schmidt 2001), and therefore immigrants in these geographical areas are more prone to feel discriminated against. However, Schuller (2012) recently showed that in response to 9/11, natives do not seem to update their attitudes toward immigration differently according to whether they live in a region with a low- or high share of foreigners. The table also shows that the effect comes mainly from immigrants who are in the labor market. This could be because they are the ones more prone to deal with the natives, and therefore they are more likely to be discriminated against. This shows again that the pattern is not driven by economic reasons.

In addition to the heterogeneity checks above, we also did a heterogeneity analysis to check what type of Muslims are more affected. The degree of religiosity of the Muslim immigrant as well as the ethnic group to which he/she belongs are the basis for this heterogeneity check. To this end, we restrict our sample to Muslim immigrants.

We assess religiosity by the frequency of going to mosque. We created a dummy variable for being religious that take the value 0 if the person never goes to the mosque, and 1 if he/she ever goes to the mosques on a frequent basis. Table 5 shows the level of integration for religious vs. non-religious people and how integration changes for the two groups. The table shows that religious Muslims are generally less integrated than the non-religious and that the integration of the two groups decreased significantly over time. However, the decrease in the integration of religious Muslims is significantly less pronounced than that of non-religious Muslims. This could be explained by the already low integration level of religious people which makes the decline in the integration of the less-religious more pronounced¹¹.

Finally, we classified Muslims according to the ethnic group they belong to. Table 6 shows that the decrease in integration comes mainly from the Turkish Muslims. Compared to Moroccans and other Muslims, Turks are the least integrated and they show a significant pattern

¹¹ Because women (even the most religious) are less likely to go to mosque than men, we replicated the analysis limiting our sample to men. The results do not change much.

of decline in their integration.

VII. Conclusion and summary

In this paper we studied the integration pattern of Muslim vs. non-Muslim immigrants in the Netherlands before and shortly after the most violent wave of Islamist terrorism that hit Western Europe after September 11 attacks. The wave started by Madrid Bombings in March 2004, and continued to hit other European countries (e.g. London bombings in July 2005). The assassination of Theo van Gogh in Amsterdam by an Islamic fanatic from a Moroccan origin was in the middle of this wave and has been perceived as an Islamic terrorist attack. The assassination triggered a nation-wide outrage and increased discrimination against Muslims in the Netherlands (Gautier et al. 2009).

We used data from the Netherlands Kinship Panel Survey (NKPS) which oversamples the largest four ethnic minorities in the country (Turks, Moroccans, Surinamese, and Dutch Antilleans), and consists of two waves; one collected in 2002-2003 before the terrorist events and the second collected after the events in 2005-2007. Our analysis showed that Muslim immigrants' perceived acceptance in the Netherlands declined after the terrorist events much more than that of non-Muslim immigrants. Moreover, Muslim immigrants reported a declining appreciation of living in the Netherlands, and social acceptance of the Dutch people, whereas other immigrants did not report a decline in these indicators of integration. This pattern holds even after including a large set of controls such as socio-demographics, employment status, share of the respondent's ethnic group in the municipality, length of stay in the Netherlands, etc. The pattern is also robust to accounting for selection bias, and is not due to an already existing trend in the integration of Muslim immigrants.

Further analysis showed that the difference between Muslims and non-Muslims in the change of integration pattern comes from men, highly educated, immigrants living in geographical areas with high concentration of the same ethnic group, and immigrants who are in

the labor market. This shows that the pattern of change is not attributed to economic reasons, but rather to cultural reasons. We also found that among Muslims, the religious are less integrated than the non-religious. However, the decline in the integration of the non-religious is significantly much more pronounced than that of the religious. Turkish Muslims show a decline in their integration much more than any other ethnic group.

Because our data consists of only two waves, we could not in this paper track the pattern of Muslim immigrants integration over time. However, this paper is the first, on a panel structure, to show a strong evidence for a relationship between terrorism attached to Muslim individuals or groups and the integration of Muslims in Western countries.

References:

- Arai, M., J. Karlsson, and M. Lundholm. (2011). "On Fragile Grounds: A Replication Of "Are Muslim Immigrants Different in Terms of Cultural Integration?". *Journal of the European Economic Association* 9(5): 1002-1011.
- Bakker, E. (2006). "Jihadi Terrorists in Europe". Den Haag: Netherlands Institute for International Relations Clingendael.
- Battu, H. and Y. Zenou (2010). "Oppositional Identities and Employment for Ethnic Minorities: Evidence from England". *The Economic Journal* 120(542): F52-F71.
- Bisin, A.; E. Patacchini; T. Verdier and Y. Zenou. (2008). "Are Muslim Immigrants Different in Terms of Cultural Integration?" *Journal of the European Economic Association* 6(2-3): 445-456.
- Bisin, A.; E. Patacchini; T. Verdier and Y. Zenou. (2010). "Bend it like Beckham: Ethnic Identity and Integration", *National Bureau of Economic Research*.
- Bisin, A.; E. Patacchini; T. Verdier and Y. Zenou. (2011). "Errata Corrige: "Are Muslim Immigrants Different in Terms Of Cultural Integration?". *Journal of the European Economic Association* 9(5): 1012-1019.
- Brynjar L. and T. Hegghammer (2004): Jihadi Strategic Studies: The Alleged Al Qaida Policy Study Preceding the Madrid Bombings, *Studies in Conflict & Terrorism*, 27:5,355-375
- Cornelissen, T. and U. Jirjahn (2012). September 11th and the Earnings of Muslims in Germany: The Moderating Role of Education and Firm Size. *Journal of Economic Behavior and Organization* 81(2), 490-504.
- Dykstra, P.A., M. Kalmijn, T.C.M. Knijn, A. E. Komter, A.C. Liefbroer and C.H. Mulder (2012), Codebook of the Netherlands Kinship Panel Study. A Multi-Actor, Multi-Method Panel Study on Solidarity in Family Relationships, Wave 2. *NKPS Working Paper No. 8*. The Hague: Netherlands Interdisciplinary Demographic Institute.
- Fertig, M. and C. M. Schmidt (2001). First-and Second-Generation Migrants in Germany: What Do We Know and What Do People Think? In R. Rotte and P. Stein (Eds.), *Migration Policy and the Economy: International Experiences*, Number 286, pp. 179-218. Neuried: Ars et unitas.
- Gautier, P.A.; A. Siegmann and A. Van Vuuren. (2009). "Terrorism and Attitudes Towards Minorities: The Effect of The Theo Van Gogh Murder on House Prices in Amsterdam." *Journal of Urban Economics* 65(2): 113-126.
- Georgiadis, A. and A. Manning (2011). "Change And Continuity Among Minority Communities In Britain." *Journal of Population Economics* 24(2): 541-568.
- Georgiadis, A. and A. Manning (2013), 'One Nation Under a Groove? Understanding National Identity', *Journal of Economic Behavior & Organization*, forthcoming.
- Goel, D. (2010). 'Perceptions of Immigrants in Australia after 9/11'. *Economic Record*. 86 (275), 596-608.
- Gokdemir, O. and D. Dumludag (2012). "Life Satisfaction Among Turkish and Moroccan Immigrants in The Netherlands: The Role of Absolute and Relative Income". *Social indicators research: 1-11*.

Hanes, E. and S. Machin. (2012). "Hate Crime in the Wake of Terror Attacks: Evidence from 7/7 and 9/11".

<http://www.eale.nl/conference2012/program/Papers%20invited%20F/machin%20abstract%20eale.pdf>

Huijnk, W.; M. Verkuyten and M. Coenders. (2012). "Family Life and Acculturation Attitudes: A Study among Four Immigrant Groups in the Netherlands." *Journal of Ethnic and Migration Studies* 38(4): 555-575.

Johnston, D. and G. Lordan (2012). "Discrimination Makes Me Sick! An Examination of The Discrimination-Health Relationship." *Journal of Health Economics*. 31(1): 99-111.

Kaushal, N.; R. Kaestner and C. 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.

Manning, A. and S. Roy (2010). "Culture Clash or Culture Club? National Identity in Britain" *The Economic Journal* 120(542): F72-F100.

National Consortium for the Study of Terrorism and Responses to Terrorism (START). Global Terrorism Database. (2012). Retrieved from <http://www.start.umd.edu/gtd>

Nesser, P. (2008). 'Chronology of Jihadism in Western Europe 1994–2007: Planned, Prepared, and Executed Terrorist Attacks'. *Studies in Conflict & Terrorism* 31: 924–46.

Ottaviano, G. I. P. and G. Peri (2005). "Rethinking The Gains From Immigration: Theory and Evidence from the US". *National Bureau of Economic Research*.

Shannon, M. (2012). Did the September 11th Attacks Affect the Canadian Labour Market? *Economics Letters* 115(1), 91-93.

Schuller S. (2012). The Effects of 9/11 on Attitudes Toward Immigration and the Moderating Role of Education. *IZA working paper No. 7052*

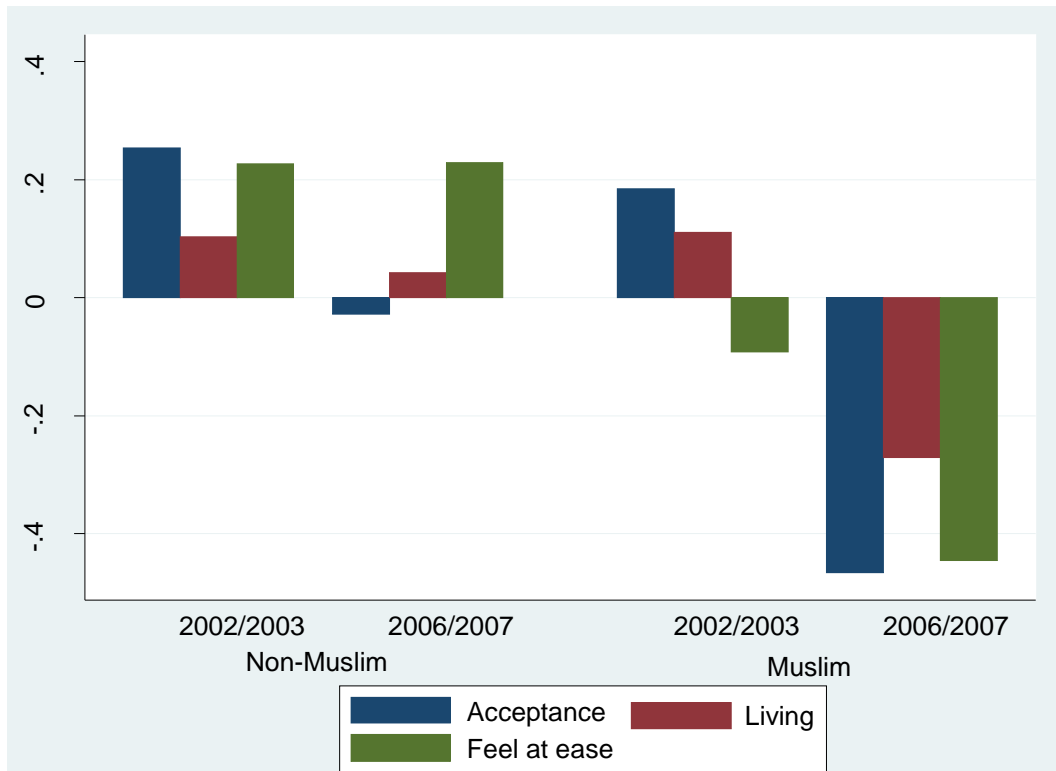


Figure 1: the level of perceived acceptance in the Netherlands, living appreciation in the Netherlands, and feeling at ease with the Dutch natives for Muslim and non-Muslim immigrants before (2002/2003) and after (2006/2007) the terrorist event.

Table 1: Description of the data

Variable	Explanation	Muslim N=619		Non-Muslim N=738	
		Mean	SD	Mean	SD
<u>Integration variables:</u>					
Excellent opportunities for foreigners	‘To what extent do you agree: In the Netherlands foreigners have excellent opportunities’. 5 point scale ranges from 1 “strongly disagree” to 5”strongly agree”.	3.17	1.23	3.52	0.62
No hostility against foreigners	‘To what extent do you agree: The Dutch are hostile to foreigners’ 5 point scale ranges from 1”strongly agree” to 5 “strongly disagree”.	3.30	0.96	3.91	0.75
Rights of foreigners are respected**	‘To what extent do you agree: In the Netherlands your rights as a foreigner are respected’. 5 point scale ranges from 1 “strongly disagree” to 5”strongly agree”.	3.32	1.03	3.15	1.12
Netherlands is hospitable to foreigners***	‘To what extent do you agree: The Dutch are hospitable to foreigners’. 5 point scale ranges from 1 “strongly disagree” to 5”strongly agree”.	3.17	1.08	3.46	0.89
People in the Netherlands are not indifferent to migrants**	‘To what extent do you agree: In the Netherlands people are indifferent to foreigners’. 5 point scale ranges from 1 “strongly agree” to 5”strongly disagree”.	2.88	0.97	3.38	0.92
In the Netherlands fair treatment to foreigners*	‘To what extent do you agree: Foreigners are treated fairly in the Netherlands’. 5 point scale ranges from 1 “strongly disagree” to 5”strongly agree”.	3.21	1.00	3.46	0.98

Continue Table 1: Description of the data

Variable	Explanation	Muslim N=619		Non-Muslim N=738	
		Mean	SD	Mean	SD
In the Netherlands foreigners are not restricted***	‘To what extent do you agree: Foreigners face many restrictions in the Netherlands’. 5 point scale ranges from 1 “strongly agree” to 5”strongly disagree”.	2.67	1.07	3.04	0.91
Netherlands is open to the foreign cultures*	‘To what extent do you agree: The Dutch are open to foreign cultures’. 5 point scale ranges from 1 “strongly disagree” to 5”strongly agree”.	3.57	0.97	3.29	0.89
Perceived acceptance***	The average of the above eight items	3.16	0.62	3.23	0.98
Feel at ease with the Dutch***	‘Do you feel at ease in the company of Dutch people?’. The answer is on a four-point scale: 1 ‘no, not at all’, 2 ‘no, not really’, 3 ‘yes, a little’, and 4 ‘yes, very much so’.	3.16	0.78	3.52	0.62
Living in the Netherlands**	‘How do you like living in the Netherlands?’ 5 point scale, ranges from 1 ‘very annoying’ to 5 ‘very fine’.	3.77	0.88	3.91	0.75
<u>Control variables:</u>					
Born in Netherlands*	Dummy variable that takes value 1 if the respondent is born in the Netherlands	0.07	0.26	0.11	0.31
Stay in the Netherlands*	The length of time stayed in the Netherlands. In case the respondent is born in the Netherlands, we replace it with the age	21.96	8.63	23.15	11.50

Continue Table 1: Description of the data

Variable	Explanation	Muslim N=619		Non-Muslim N=738	
		Mean	SD	Mean	SD
Education level***	3 point scale. 1 for the low-educated “no education or elementary” 2 for the medium-educated “lower vocational, lower secondary, or intermediate vocational” and 3 for the highly educated “upper general school, higher vocational, or university”.	1.49	0.65	1.89	0.77
Education abroad***	A dummy variable if the respondent received some education abroad.	0.58	0.49	0.75	0.43
Education Netherlands***	A dummy variable if the respondent received education in the Netherlands.	0.36	0.48	0.73	0.45
Municipality density of own ethnicity***	Percentage of the respondents ‘ethnic group in the municipality	0.05	0.02	0.04	0.03
Employment status***	Dummy variable for employment status:				
	Employed	0.65	0.29	0.47	0.32
	Unemployed	0.07	0.26	0.10	0.30
	Housewife	0.08	0.27	0.21	0.41
	Disabled	0.09	0.27	0.14	0.35
	Student	0.04	0.19	0.03	0.15
	Retired	0.07	0.25	0.05	0.24

Continue Table 1: Description of the data

Variable	Explanation	Muslim N=619		Non-Muslim N=738	
		Mean	SD	Mean	SD
Marital status***	Dummy variable for marital status:				
	Never married	0.43	0.40	0.09	0.38
	Married	0.30	0.45	0.78	0.42
	Divorced	0.24	0.42	0.10	0.30
	Widowed	0.03	0.18	0.03	0.18
Female***	Dummy variable that takes the value 1 if the respondent is female, and 0 if male	0.44	0.50	0.55	0.50
Age	Age of the respondent	41.5	12.59	42.17	12.68
Number of children***	Number of children a respondents has	2.64	1.95	1.95	1.83

T tests for differences in means between the two groups are provided. ***significant at $p < 0.01$, ** significant at $p < 0.05$, * significant at $p < 0.1$

Table 2 : Generalized least squares random effects (RE) model for the integration pattern of Muslim immigrants

VARIABLES	(1) Perceived acceptance in NL	(2)	(3) Appreciation of living in NL	(4)	(5) Feel at ease with Dutch natives	(6)
Muslim	-0.068 (0.073)	0.345** (0.156)	-0.012 (0.074)	0.042 (0.159)	-0.342*** (0.073)	0.048 (0.156)
wave 2006/2007	-0.288*** (0.067)	-0.277*** (0.077)	-0.085 (0.066)	-0.125* (0.074)	-0.009 (0.066)	-0.098 (0.077)
Muslim*wave 2006/2007	-0.348*** (0.099)	-0.385*** (0.117)	-0.296*** (0.097)	-0.293*** (0.112)	-0.329*** (0.097)	-0.272** (0.116)
Employed		Reference		Reference		Reference
Unemployed		-0.003 (0.105)		-0.138 (0.105)		-0.042 (0.105)
Housewife		-0.006 (0.106)		0.070 (0.107)		-0.286*** (0.106)
Disabled		-0.250** (0.110)		-0.183 (0.111)		-0.067 (0.110)
Student		0.295* (0.179)		-0.302* (0.181)		0.150 (0.179)
Retired		-0.011 (0.173)		0.029 (0.173)		-0.084 (0.173)
Female		0.014 (0.071)		0.017 (0.073)		0.087 (0.071)
Born in Netherlands		-0.111 (0.150)		0.145 (0.154)		0.086 (0.150)
Never married		Reference		Reference		Reference
Married		0.071 (0.095)		-0.129 (0.098)		-0.033 (0.095)
Divorced		0.203* (0.104)		-0.178* (0.107)		-0.036 (0.104)

Continue Table 2 : Generalized least squares random effects (RE) model for the integration pattern of Muslim immigrants

VARIABLES	(1) Perceived acceptance in NL	(2)	(3) Appreciation of living in NL	(4)	(5) Feel at ease with Dutch natives	(6)
Widowed		0.213 (0.197)		-0.019 (0.202)		0.035 (0.196)
Number of children		0.008 (0.021)		-0.008 (0.022)		-0.010 (0.021)
Length of stay in NL		0.036*** (0.010)		0.041*** (0.011)		0.027*** (0.010)
Length of stay in NL squared (divided by 100)		-0.064*** (0.021)		-0.059*** (0.021)		-0.024 (0.021)
Educational level		-0.057 (0.055)		0.039 (0.056)		0.059 (0.055)
Education in NL		0.027 (0.086)		0.036 (0.088)		0.063 (0.086)
Education abroad		-0.066 (0.094)		-0.118 (0.096)		-0.112 (0.094)
Dutch Antilles		Reference		Reference		Reference
Turkish		-0.569*** (0.176)		-0.248 (0.179)		-0.438** (0.176)
Moroccan		0.111 (0.192)		0.429** (0.196)		0.056 (0.192)
Surinamese		0.121 (0.126)		0.111 (0.129)		-0.022 (0.126)
Share of ethnic minority in municipality		-2.478 (1.851)		-0.663 (1.894)		-2.749 (1.846)
Regional dummies		Yes		Yes		Yes
Number of observations	1,357	1,091	1,357	1,091	1,357	1,092
Number of groups	1,032	874	1,031	874	1,033	875

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table 3: Generalized least squares random effects model (RE) for the integration pattern of Muslim immigrants using a balanced sample of observations:

VARIABLES	(1) Perceived acceptance in NL	(2)	(3) Appreciation of living in NL	(4)	(5) Feel at ease with Dutch natives	(6)
Muslim	-0.099 (0.115)	-0.123 (0.176)	0.075 (0.112)	0.209 (0.164)	-0.323*** (0.103)	-0.307** (0.152)
wave 2006/2007	-0.302*** (0.087)	-0.333*** (0.107)	-0.180** (0.082)	-0.140 (0.097)	-0.128 (0.084)	-0.298*** (0.105)
Muslim*wave 2006/2007	-0.351** (0.139)	-0.543*** (0.175)	-0.237* (0.131)	-0.335** (0.160)	-0.198 (0.134)	-0.212 (0.173)
Employed		Reference		Reference		Reference
Unemployed		0.041 (0.218)		-0.292 (0.201)		0.050 (0.195)
Housewife		-0.018 (0.193)		0.146 (0.179)		-0.193 (0.165)
Disabled		-0.258 (0.198)		-0.518*** (0.184)		-0.363** (0.169)
Student		0.060 (0.411)		-0.608 (0.381)		0.060 (0.356)
Retired		-0.127 (0.269)		-0.188 (0.249)		-0.128 (0.232)
female		0.025 (0.149)		-0.128 (0.139)		0.007 (0.120)
Never married		Reference		Reference		Reference
Married		0.167 (0.184)		-0.357** (0.171)		-0.092 (0.151)
Divorced		0.250 (0.195)		-0.311* (0.182)		-0.106 (0.157)
Widowed		0.356		0.089		0.189

Continue Table 3: Generalized least squares random effects model (RE) for the integration pattern of Muslim immigrants using a balanced sample of observations:

VARIABLES	(1) Perceived acceptance in NL	(2)	(3) Appreciation of living in NL	(4)	(5) Feel at ease with Dutch natives	(6)
		(0.373)		(0.349)		(0.304)
Number of children		-0.030		0.004		0.003
		(0.045)		(0.042)		(0.037)
Length of stay in NL		0.031		0.039		0.034
		(0.030)		(0.028)		(0.024)
Length of stay in NL squared (divided by 100)		-0.049		-0.030		-0.054
		(0.071)		(0.067)		(0.057)
Educational level		-0.260		0.034		0.123
		(0.184)		(0.171)		(0.157)
Share of ethnic minority in municipality		-2.548		-0.357		-3.537
		(2.937)		(2.736)		(2.339)
Regional dummies	No	Yes	No	Yes	No	Yes
Inverse Mills ratio	0.213 (0.255)	-0.027 (0.277)	0.077 (0.247)	-0.154 (0.259)	0.025 (0.216)	-0.089 (0.220)
Number of observations	650	414	652	414	648	414
Number of groups	325	207	326	207	324	207

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 4: Heterogeneity by gender, education, share of immigrants from the same ethnic group, and labor market status

VARIABLES	(1) Perceived acceptance in NL	(2)	(3) Appreciation of living in NL	(4)	(5) Feel at ease with Dutch natives	(6)
Panel A: Gender	Male	Female	Male	Female	Male	Female
Muslim	0.028 (0.141)	-0.019 (0.148)	0.074 (0.141)	0.050 (0.147)	-0.234* (0.136)	-0.039 (0.151)
wave 2006/2007	-0.273** (0.118)	-0.267*** (0.095)	0.015 (0.108)	-0.216** (0.093)	-0.121 (0.109)	-0.175* (0.098)
Muslim*wave 2006/2007	-0.478*** (0.168)	-0.361** (0.161)	-0.483*** (0.157)	-0.048 (0.158)	-0.278* (0.157)	-0.265 (0.166)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	538	564	537	565	538	565
Number of groups	431	455	430	456	431	456
Panel B: Education	Low education	High education	Low education	High education	Low education	High education
Muslim	-0.019 (0.122)	-0.031 (0.194)	0.055 (0.127)	0.016 (0.177)	-0.190 (0.125)	-0.192 (0.174)
wave 2006/2007	-0.368*** (0.108)	-0.167 (0.117)	-0.271*** (0.104)	0.123 (0.099)	-0.296*** (0.109)	0.057 (0.102)
Muslim*wave 2006/2007	-0.280* (0.149)	-0.575*** (0.222)	-0.151 (0.146)	-0.277 (0.193)	-0.141 (0.151)	-0.312 (0.195)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	686	416	686	416	686	417
Number of groups	582	364	582	364	582	365

Continue Table 4: Heterogeneity by gender, education, share of immigrants from the same ethnic group, and labor market status

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Perceived acceptance in NL		Appreciation of living in NL		Feel at ease with Dutch natives	
Panel C: Concentration of migrants with the same ethnic background	Low	High	Low	High	Low	High
Muslim	-0.144 (0.114)	0.063 (0.143)	-0.070 (0.114)	0.184 (0.147)	-0.315*** (0.110)	0.034 (0.144)
wave 2006/2007	-0.344*** (0.077)	-0.282** (0.142)	-0.137* (0.073)	-0.006 (0.136)	-0.081 (0.073)	0.034 (0.134)
Muslim*wave 2006/2007	-0.227 (0.144)	-0.398** (0.175)	0.032 (0.137)	-0.489*** (0.170)	-0.178 (0.137)	-0.383** (0.167)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	704	582	705	582	704	582
Number of groups	523	465	524	464	523	466
Panel D: Labor market status	(1) Work	(2) Do not work	(3) Work	(4) Do not work	(5) Work	(6) Do not work
Muslim	-0.067 (0.113)	0.090 (0.130)	-0.023 (0.113)	0.150 (0.135)	-0.124 (0.108)	-0.293** (0.136)
wave 2006/2007	-0.294*** (0.082)	-0.303** (0.123)	-0.088 (0.079)	-0.086 (0.126)	-0.033 (0.078)	-0.111 (0.124)
Muslim*wave 2006/2007	-0.556*** (0.138)	-0.186 (0.161)	-0.384*** (0.133)	-0.181 (0.166)	-0.446*** (0.131)	-0.110 (0.163)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	726	563	726	564	727	562
Number of groups	563	464	563	464	564	463

Table 5: religiosity and change in the integration of Muslim immigrants

VARIABLES	(1) Perceived acceptance in NL	(2)	(3) Appreciation of living in NL	(4)	(5) Feel at ease with Dutch natives	(6)
1 if religious	-0.249** (0.126)	-0.241 (0.175)	-0.229* (0.138)	-0.398** (0.193)	-0.310** (0.141)	-0.116 (0.195)
wave 2006/2007	-0.994*** (0.139)	-1.064*** (0.176)	-0.646*** (0.147)	-0.784*** (0.189)	-0.785*** (0.151)	-0.758*** (0.191)
Religious# wave 2006/2007	0.457*** (0.170)	0.449** (0.208)	0.357** (0.182)	0.488** (0.225)	0.627*** (0.186)	0.511** (0.228)
Controls	No	Yes	No	Yes	No	Yes
Observations	582	437	581	436	581	437
Number of groups	469	373	467	372	469	373

p<0.01, ** p<0.05, * p<0.1

Table 6: Ethnicity of Muslim immigrants and change in integration

VARIABLES	(1) Perceived acceptance in NL	(2) Perceived acceptance in NL	(3) Appreciation of living in NL	(4) Appreciation of living in NL	(5) Feel at ease with Dutch natives	(6) Feel at ease with Dutch natives
Surinamese and Dutch antillean	Reference	Reference	Reference	Reference	Reference	Reference
Turkish	-0.366** (0.180)	-0.287 (0.224)	0.167 (0.201)	0.171 (0.249)	-0.268 (0.204)	-0.148 (0.253)
Moroccan	0.104 (0.182)	0.125 (0.242)	0.055 (0.204)	0.232 (0.268)	-0.369* (0.206)	-0.198 (0.272)
2007.wave	-0.631** (0.283)	-0.770** (0.316)	0.028 (0.290)	0.007 (0.321)	-0.086 (0.299)	-0.290 (0.321)
Turkish #2007.wave	-0.125 (0.300)	-0.060 (0.335)	-0.886*** (0.308)	-0.763** (0.342)	-0.616* (0.317)	-0.430 (0.342)
Moroccan #2007.wave	0.283 (0.306)	0.337 (0.352)	0.231 (0.313)	0.140 (0.359)	0.292 (0.322)	0.498 (0.360)
Controls	No	Yes	No	Yes	No	Yes
Observations	620	471	619	470	619	471
Number of groups	496	400	494	399	496	400

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Appendix A:

Table A1: OLS regression for the integration pattern of Muslim immigrants

VARIABLES	(1) Perceived acceptance in NL	(2)	(3) Appreciation of living in NL	(4)	(5) Feel at ease with Dutch natives	(6)
Muslim	-0.069 (0.073)	0.305** (0.152)	0.007 (0.075)	0.074 (0.153)	-0.326*** (0.073)	0.038 (0.150)
Wave 2006/2007	-0.286*** (0.072)	-0.273*** (0.083)	-0.060 (0.073)	-0.117 (0.083)	0.013 (0.072)	-0.057 (0.082)
Muslim*wave 2006/2007	-0.351*** (0.105)	-0.358*** (0.124)	-0.315*** (0.108)	-0.285** (0.125)	-0.354*** (0.105)	-0.299** (0.122)
Employed		Reference		Reference		Reference
Unemployed		0.028 (0.106)		-0.105 (0.106)		-0.041 (0.104)
Housewife		0.023 (0.105)		0.066 (0.105)		-0.286*** (0.103)
Disabled		-0.229** (0.109)		-0.190* (0.109)		-0.055 (0.107)
Student		0.310* (0.179)		-0.236 (0.180)		0.198 (0.177)
Retired		-0.003 (0.174)		0.101 (0.174)		-0.090 (0.172)
Female		0.011 (0.070)		0.019 (0.070)		0.083 (0.069)
Born in Netherlands		-0.124 (0.148)		0.147 (0.149)		0.079 (0.146)
Never married		Reference		Reference		Reference
Married		0.099 (0.093)		-0.109 (0.093)		-0.020 (0.092)
Divorced		0.221** (0.100)		-0.175* (0.101)		-0.036 (0.099)

Continue Table A1: OLS regression for the integration pattern of Muslim immigrants

VARIABLES	(1) Perceived acceptance in NL	(2)	(3) Appreciation of living in NL	(4)	(5) Feel at ease with Dutch natives	(6)
Widowed		0.215 (0.190)		-0.006 (0.191)		0.046 (0.188)
Number of children		0.002 (0.021)		-0.004 (0.021)		-0.009 (0.020)
Length of stay in NL		0.037*** (0.010)		0.043*** (0.010)		0.027*** (0.010)
Length of stay in NL squared (divided by 100)		-0.064*** (0.021)		-0.061*** (0.021)		-0.025 (0.020)
Education		-0.049 (0.055)		0.044 (0.055)		0.062 (0.054)
Education in NL		0.032 (0.083)		0.027 (0.083)		0.063 (0.082)
Education abroad		-0.055 (0.093)		-0.103 (0.094)		-0.091 (0.092)
Dutch Antilles		Reference		Reference		Reference
Turkish		-0.555*** (0.173)		-0.237 (0.173)		-0.413** (0.171)
Moroccan		0.132 (0.188)		0.430** (0.189)		0.083 (0.186)
Surinamese		0.129 (0.123)		0.108 (0.123)		-0.035 (0.121)
Share of ethnic minority in municipality		-2.653 (1.811)		-0.488 (1.816)		-2.598 (1.786)
Regional dummies		Yes		Yes		Yes
Number of observations	1,357	1,091	1,357	1,091	1,357	1,092
R-squared	0.077	0.192	0.024	0.158	0.076	0.200

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table A2: The trend in the integration of Muslim vs. non-Muslim immigrants over the first wave of the study (October 2002-January 2004):

VARIABLES	(1) perceived acceptance	(2)	(3) Appreciation of living in NL	(4)	(5) Feel at ease with Dutch natives	(6)
1 if Muslim	-0.524* (0.271)	-0.534 (0.429)	-0.240 (0.292)	0.056 (0.466)	-1.236*** (0.280)	-1.186*** (0.449)
Time of interview	-0.051*** (0.017)	-0.039* (0.023)	-0.010 (0.018)	-0.004 (0.025)	-0.029* (0.017)	-0.013 (0.024)
1if Muslim*time of interview	0.047* (0.025)	0.058 (0.036)	0.026 (0.027)	0.000 (0.039)	0.084*** (0.026)	0.106*** (0.037)
Controls	No	Yes	No	Yes	No	Yes
Observations	667	456	668	456	667	457
R-squared	0.016	0.154	0.002	0.100	0.048	0.132

Table A3: Probit estimations for the selection equation. The dependent variable is a dummy that takes the value 1 if the respondent participated in the two waves of the study, and 0 otherwise.

VARIABLES	(1) Participates in the two waves	(2) Participates in the two waves
Number of missings	-0.105*** (0.007)	-0.135*** (0.009)
1 if Muslim	-0.151** (0.078)	0.077 (0.231)
Unemployed		-0.442** (0.173)
Housewife		-0.185 (0.176)
Disabled		-0.160 (0.177)
Student		-0.641** (0.282)
Retired		-0.201 (0.243)
Married		-0.321** (0.148)
Divorced		0.025 (0.156)
Widowed		0.554* (0.325)
1 if female		-0.058 (0.112)
Number of children		0.115*** (0.034)
Length of stay in NL		0.026 (0.017)
Length of stay in NL squared		-0.000 (0.000)
Educational level		0.183** (0.073)
Education in NL		-0.178 (0.126)
Education abroad		-0.681*** (0.170)
Turkish		-0.133 (0.278)
Moroccan		0.043 (0.298)
Surinamese		-0.073 (0.207)
Share of ethnic minority in municipality		1.315 (3.184)
Number of observations	1,356	1,070

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1