



Immigrants' social identity, racial hate crimes, and public backlash: Evidence from the "San Gennaro massacre"[☆]

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ABSTRACT

We study how racial hate crimes influence immigrants' social identity and sense of belonging to the host country. We focus on the 2008 "San Gennaro massacre", an attack by a Camorra clan against African immigrants in Southern Italy. Using a difference-in-differences (DiD) approach, we show that the event increased the sense of belonging to Italy among Africans living in the affected area, driven by both a "fear effect" and a "solidarity effect". We further document that this shift in social identification spread to other African immigrant communities, particularly those residing in municipalities characterized by a strong presence of organized crime and by a strong local public reaction of solidarity. Finally, we find that this increase in identification with Italy is persistent over time and is not associated with a weakening of ethnic identity.

1. Introduction

A substantial body of research in economics and social sciences emphasizes that the socio-economic integration of immigrants is crucial for maintaining social cohesion, preventing ethnic conflict, and fostering economic prosperity (Alesina and La Ferrara, 2002; Montalvo and Reynal-Querol, 2005; Sequeira et al., 2020). Successful integration requires immigrants to develop a sense of belonging to the host country and a non-oppositional social identity, a sense of self not separate from the values and beliefs of the new community of settlement (Battu and Zenou, 2010; Carillo et al., 2023).

Among the factors influencing identity formation, host-society attitudes toward immigration play a central role. In this respect, theoretical models suggest that, all else equal, discrimination, social hostility, and racism by the majority native group are key factors that reinforce ethnic identity in opposition to the host society, whereas social proximity and positive interactions with natives and institutions foster immigrants' willingness to integrate into the society of settlement (Ager and Strang, 2008; Bisin

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et al., 2011, 2016). However, as research in social psychology highlights (Turner et al., 1994), the formation of social identity is a cognitive process continuously shaped by immigrants' lived experiences, which make specific attributes of their environments salient. From this perspective, episodes of intolerance and xenophobia alter the (incomplete) information available to immigrants, thereby reshaping their perception of the host environment and of the costs and benefits associated with being and feeling part of the host community (Shayo, 2009, 2020; Bernard et al., 2016). Experiencing racism may reinforce immigrants' need to avoid isolation in ethnic enclaves, whereas supportive institutional responses and public expressions of solidarity can reduce social distance from natives and strengthen immigrants' sense of belonging (Fouka, 2019; Jaschke et al., 2022; Saavedra, 2021).

This paper contributes to the debate on social identity and racism by examining whether and how immigrants' sense of belonging to the host society responds to episodes of racially motivated violence targeting their community and ethnic group, and the mechanisms that underlie their reaction to the heightened threat to their personal safety. In addition, we investigate whether the impact of episodes of racism on immigrants' social identity is confined to the immediate aftermath of the event or persists over time, and whether it spreads beyond the directly affected community.

To address these issues, we examine the impact of what has come to be known as the San Gennaro massacre, a brutal racist attack perpetrated by Camorra clans against the large African community of Castel Volturno, a small coastal town north of Naples, on the social identity of African immigrants living in the surrounding area.¹ The massacre occurred on the evening of 18 September 2008, the day before the feast of San Gennaro, the patron saint of Naples. Six young African men, uninvolved in any criminal activity, were murdered by members of the "Casalesi clan", the local camorra organization, as part of an attempt to assert territorial control and to intimidate and expel the African community for overtly racial reasons. The killings provoked violent protests by African residents demanding government intervention and received extensive national media coverage. In the following weeks, widespread demonstrations of solidarity with immigrants took place in Naples and other Italian cities, with strong participation from civic associations and ordinary citizens. Law enforcement authorities also reacted swiftly: one perpetrator was arrested within four days, and a major police operation against the Casalesi clan led to over a hundred arrests within a month.

We draw on data from two waves of the *Integrometro* survey (2008–2009 and 2015) conducted by the ISMU Foundation (Initiatives and Studies on Multi-ethnicity), a leading research institute on migration and ethnic diversity in Italy. Exploiting the timing of interviews in the first wave, we identify the short-run effect of the massacre on African immigrants' sense of attachment to Italy. To control for time trends and unobserved heterogeneity, we estimate a difference-in-differences (DiD) model comparing changes in social identity between African immigrants (the treatment group) and other immigrant groups (the control group). We find that the massacre resulted in an increase in the percentage of Africans in the Naples metropolitan area around the municipality of Castel Volturno who reported feeling attached to Italy compared with different ethnic groups of immigrants living there. We corroborate this result with a number of robustness checks for the outcome variable and for potential selection effects and attenuation bias.

A second question we address concerns the mechanisms through which the brutal crime triggered a change in the self-perceived identity of African immigrants in the affected area. We find evidence of two main channels: (i) a fear channel, through which African immigrants became aware of the risks of remaining isolated from local civil society in an area dominated by organized crime; and (ii) a solidarity channel, through which they perceived empathy and support from the local Italian population.

Finally, we extend the baseline model to address three additional issues. First, we explore whether this effect spilled over to African communities in other parts of Italy. Consistent with the fear and solidarity mechanisms documented for Africans residing in the Naples metropolitan area, we find that the positive effect on attachment to Italy extended to African communities in other municipalities where mafia-type organizations are powerful and where anti-racist demonstrations highlighted Italian citizens' empathy toward immigrants. By contrast, in municipalities without solidarity rallies and with limited organized crime presence, an animosity effect emerges, whereby African immigrants' identification with Italy weakens.

Then, we investigate whether the surge in attachment to Italian society following the San Gennaro massacre has produced a deeper and more persistent transformation in the cultural attitudes of African immigrants. In the spirit of recent literature on cultural change (Giavazzi et al., 2019; Giuliano and Nunn, 2021), the idea is that unexpected shocks to the external environment that immigrants experience, even if transient, can trigger lasting cultural change. Using data from the second wave of the ISMU *Integrometro* survey, we find that the heightened sense of belonging to Italy among African immigrants in the Naples metropolitan area persisted even seven years after the event. This suggests that short-term identity shocks that strengthen immigrants' attachment to the host country may, at least in part, translate into greater long-term cultural integration.

Third, we examine whether this stronger attachment to Italy was accompanied by a weakening of ethnic identity, potentially leading to a cultural clash. To the extent that the identity response following the massacre was driven by fear of isolation rather than by a perception of genuine inclusion, this forced identification with the host society could entail a sense of betrayal toward the community of origin, thereby reducing immigrants' self-esteem and well-being (Phinney et al., 1997; Dahl et al., 2022). Following

¹ Although establishing the external validity of a case study such as ours is inherently challenging, one indisputable fact is that racist and xenophobic hate crimes targeting immigrants and minority groups constitute a global phenomenon. The sharp rise in international migratory flows in recent decades, encompassing both regular and irregular movements, has been accompanied by a pronounced escalation in such offenses (Müller and Schwarz, 2021; Cikar et al., 2022; McAuliffe and Triandafyllidou, 2022; Knight and Tribin, 2023). In the United States, racially motivated hate crimes reported by the Department of Justice rose by approximately 60% between 2017 and 2021 (from 4832 to 7736 incidents). Comparable patterns are observable in other Western countries: Germany and the United Kingdom registered increases exceeding 30%, while Canada and France experienced surges exceeding 200% over the same period. Italy also recorded a substantial rise, with police-reported hate crimes growing by about 40% (from 828 to 1160). All figures are drawn from the OSCE-ODIHR Hate Crime Reporting database.

the acculturation framework of [Berry \(1997\)](#), we estimate a bivariate probit model for self-identification with both host and home societies. We find that the identity orientation of African immigrants underwent an abrupt shift following the massacre, from predominantly “separated” to predominantly “integrated”, without any reduction in ethnic identity, whereas the identity orientation of immigrants from other ethnic groups remained largely stable.

Related literature. Our paper contributes to several strands of research. First, it relates to the empirical literature examining the determinants of immigrants’ self-perceived or chosen social identity. Several studies indicate the importance of individual characteristics, including country of origin, age, years since arrival, gender, religion, education, and employment status ([Constant et al., 2009](#); [Casey and Dustmann, 2010](#); [Nekby and Rodin, 2010](#); [Bisin et al., 2011](#)). Contextual features of the receiving society and the characteristics of the neighborhoods in which immigrants settle have also been shown to matter. For instance, [Georgiadis and Manning \(2013\)](#) find that immigrants’ sense of belonging to the UK is negatively affected by the perceived degree of discrimination in society and public institutions, while it increases with the extent to which immigrants feel they are treated with respect by natives. [Masella \(2013\)](#) shows that the probability that members of minority groups identify with the national community first rather than with their own ethnic group declines as ethnic fractionalization and polarization increase within a country.

From this perspective, our paper speaks to the debate on social identity formation, which is centered on two main competing theoretical views. Some scholars conceptualize the development of the sense of self as a slow-moving process, shaped by the intergenerational transmission of values, beliefs, and behavioral norms embedded in ancestral culture and reinforced through long-term family dynamics ([Bisin and Verdier, 2000, 2001, 2023](#)). By contrast, others view social identity as a continuous cognitive process, capable of shifting rapidly in response to events that render specific features of the social environment salient, thereby drawing individuals closer to, or distancing them from, their origin community or the host society ([Tajfel, 1978](#); [Turner et al., 1987, 1994](#); [Shayo, 2009](#); [Bernard et al., 2016](#)). In particular, our paper is closely related to the recent works on how native xenophobia and anti-immigrant violence affect the attitudes and behavior of immigrants – such as intentions to return to the country of origin, use of language, importance of religion, choice of school, or preference for homogamous marriage – that reveal the degree of attachment to the host country and cultural integration.² [Gould and Klor \(2016\)](#) study the increase of hate crimes against Muslims in the United States after the 9/11 attacks, showing that in the states where these crimes increased the most, the local Muslim community experienced a separation effect, increasing their attachment to the group of origin and its culture: the number of marriages between Muslims and non-Muslims, the English language proficiency, and the female labor participation rate of Muslims all declined, while the fertility rate of Muslim women increased. [De Coulon et al. \(2016\)](#) analyze the self-reported settlement intentions of a sample of Romanian immigrants in Italy interviewed a few weeks after a violent crime perpetrated by a Romanian migrant against an Italian woman in a Roman suburb in 2007. Consistent with [Gould and Klor \(2016\)](#), they find that Romanians who had been exposed to the increase in anti-immigrant news reports on state TV in the aftermath of the event had significantly less intention to settle permanently in Italy than before. Similarly, [Steinhardt \(2018\)](#) shows that the wave of xenophobic violence against the Turkish community in West Germany in 1992 prompted greater return intentions of immigrants and reduced their proficiency in German, while [Abdelgadir and Fouka \(2020\)](#) show that the French policy of forced assimilation and restrictions on Islamic religious culture, with the headscarf ban passed in 2004, reduced the socio-economic integration of Muslims and strengthened both ethnic and religious identities. Finally, [Ferrara and Fishback \(2024\)](#) analyze the effects of local anti-German sentiment in American counties during World War I, finding that Germans abandoned counties that downgraded their social standing owing to their ethnic identification with the enemy, choosing to move to counties with more moderate anti-German feeling and so avoid the costs of discrimination.

While these studies indicate that immigrants respond to natives’ intolerance by choosing (consciously or unconsciously) a more separate identity that isolates them from the host community, others have found instead that anti-immigrant hostility and violent intimidation by the local population end up bringing immigrants closer to the indigenous community, strengthening the choice of integration. [Fouka \(2019\)](#), for instance, shows that German immigrants increased their effort to integrate (with the Americanization of names, say, and applications for US citizenship) in the US states that registered the highest levels of anti-German violence during World War I. Similarly, [Saavedra \(2021\)](#) documents that Japanese immigrants in the US increased the Americanization of their children’s first names after Pearl Harbor, which had spurred a sharp increase in anti-Japanese sentiment. With reference to present-day experiences, [Jaschke et al. \(2022\)](#) document that refugees assigned to German regions more hostile to immigrants between 2013 and 2016 converged faster with local culture than those in more tolerant regions, suggesting a stronger effort to reduce the risk of discrimination. Our results supplement this literature by analyzing the effects of racial hate crimes on immigrants’ chosen identity and showing that fear and empathy are at work simultaneously, and that which prevails depends on the environment and the local community with which immigrants relate.

This paper is also related to the sociological and political literature on the effects of protests and riots on the formation of participants’ group identity and political orientation ([Kim, 2012](#); [Silber Mohamed, 2013](#); [Branton et al., 2015](#)). According to these studies, participation in riots and protests modifies protesters’ group identity, making them aware of their relationships, common interests, and potential political power when acting as a group. [Kim \(2012\)](#) shows that the riot of Korean Americans following the acts of violence against the Korean community in Los Angeles in 1992 (the so-called “*saigu*” uprising) produced a cultural trauma that altered the collective consciousness of the Korean community and triggered “the emergence of a new Korean/Asian identity..... Through the victimization of Koreans and the riots, there was a slippage between an identity based on nationality into

² Other studies have considered the effects of exposure to discrimination, mistreatment, and violent events on economic and behavioral outcomes ([Alsan and Wanamaker, 2018](#); [Albright et al., 2021](#); [Ameja and Xu, 2022](#)).

one incorporating race” (Kim, 2012, p. 2005). Consistent with our findings, Silber Mohamed (2013) show that after the protests against the Border Protection, Anti-terrorism and Illegal Immigration Control Act of 2005 in the United States, Latinos increased their self-identification as Americans and reduced their sense of racialization, while attachment to the country of origin remained unchanged.

Finally, our paper speaks to a strand of research that analyzes how individuals’ cultural attitudes respond to events that alter the costs and benefits of deviating from socially prescribed behavior patterns or put forward new beliefs. These events can unfold slowly, shifting cultural attitudes gradually over time (Beaman et al., 2009; La Ferrara et al., 2012; Fernandez, 2013), but they can also occur suddenly, owing to an unexpected shock (in our case, the brutal massacre) that triggers a radical change in incentives, beliefs, and attitudes (Fernandez et al., 2025; Giuliano and Nunn, 2021).

The rest of the paper is organized as follows. Section 2 describes the shock and the context, while Section 3 sets out the background theory. Section 4 discusses the data, variables, and descriptive statistics. Section 5 presents the identification strategy, baseline results on the impact of the massacre on the social identity of the African community in the Naples metropolitan area, robustness checks, and an analysis of the mechanisms driving changes in the sense of belonging to Italy. Section 6 extends the analysis to three issues. In Section 6.1, we investigate whether and how the San Gennaro massacre acted on the self-perceived identity of immigrants in the ethnic group victimized and spilled over to the African community in the rest of Italy. In Section 6.2, we analyze whether the effects of the massacre on Africans’ social identity were persistent over time or only short-lived. Finally, in Section 6.3, we extend the analysis to consider the broader identity orientation model of Africans living in the Naples metropolitan area, and how this was affected by the massacre. Section 7 concludes.

2. Context

2.1. The place

Castel Volturno is a small town on the Domitian coast in Campania, less than 20 km (12 miles) from the metropolitan area of Naples, the largest metropolitan area in southern Italy (and the third-largest city in the country). Since 1945, Castel Volturno has been part of the new province of Caserta, but the main reference point around which the population’s economic and social activities revolve remains the metropolitan area and the city of Naples.³ At the time of the massacre, and to this day, Castel Volturno hosts one of the largest African communities in Italy. The majority are irregular immigrants, for the most part natives of Ghana, Nigeria, Senegal, Ivory Coast, Togo, Benin, Cameroon, Ethiopia, Tunisia, Algeria, and Egypt who had left in search of a better life and, in many cases, to escape war.

With an economy traditionally based on agriculture, buffalo breeding, and fishing, Castel Volturno has experienced dramatic urbanization since the 1970s, leading to growth in construction entrepreneurship and massive real estate speculation, largely controlled by local Camorra families. To increase power and profits, the Camorra clans began to recruit illegal immigrants to work at very low cost on construction sites and in underground or illegal activities. The number of Africans in Castel Volturno increased steadily from the early 1980s onward: poorly paid and exploited, they mostly found seasonal employment as farm workers harvesting tomatoes and vegetables, herdsmen on buffalo farms, construction laborers, dishwashers, and porters at hotels and restaurants. Many commute to work outside Castel Volturno, but within the Naples metropolitan area. While official data from the Italian National Institute of Statistics (ISTAT) report 4000 foreigners of African origin residing regularly in Castel Volturno today, out of a total population of about 25,000, unofficial estimates have put the illegal African population as high as 15,000 (the map in Fig. 1 displays the distribution of the African community in the surroundings of Castel Volturno in the metropolitan area of Naples, and in the remaining municipalities of Campania in 2008). Their massive presence in the area and their irregular and precarious living conditions have provoked intolerance among the local population and complicated their social and economic inclusion, leading the African community to live predominantly in an enclave separated from local native society.

2.2. The massacre

The “San Gennaro massacre” is one of the most brutal episodes of racial violence in Italian history. It took place in Ischitella, a small township within the municipality of Castel Volturno, on 18 September 2008, the night before San Gennaro’s Day, honoring the patron saint of Naples. During that night, six Ghanaian citizens under 30 – Christopher Adams, Kwame Antwi Julius Francis, Eric Affun Yeboa, El Hadji Ababa, Alex Geemes and Samuel Kwaku – were murdered by a commando of the Casalesi clan (the local Camorra organization).⁴ The investigations and trial records show that none of the victims were involved in criminal activity or affiliated with the local Camorra clans or the “Nigerian mafia”; almost all had regular residence permits for humanitarian reasons. The reason for the massacre was to assert the Camorra’s dominance in the area, with the aggravating circumstance of racial hatred, as we can read in the final sentence of the Italian Supreme Court of Cassation, handed down on January 30, 2014, which confirmed the appellate court’s sentence of life imprisonment for the boss and three members of the Casalesi clan and 28 years and 6 months for a fifth member of the commando.⁵ Fig. 2 sets out the timeline of the main events of the massacre.

³ Even the symbolic date, the day of the patron saint of Naples, chosen by the local Camorra clan for the brutal assault, is an indication of the centrality and importance of Naples for those who live in the Castel Volturno area.

⁴ There was only one survivor of the massacre, Joseph Ayimbora, who, feigning death, recognized the killers and testified against them at the trial.

⁵ Initially, the lower court had identified the terrorist intent as a special feature of the massacre: the Casalesi clan acted to create panic and instill terror in the community, through a violent, indiscriminate and deliberate action, with the aim of undermining the trust of citizens in the State and thus weakening its structures.

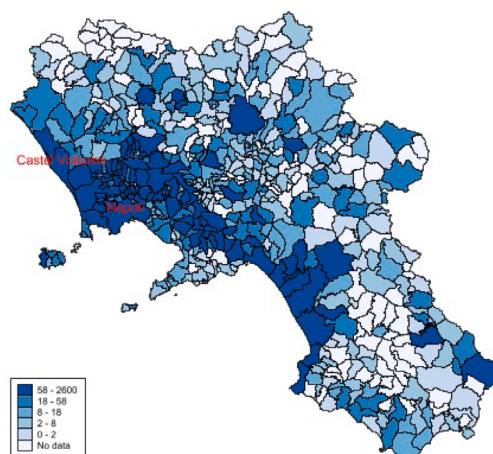


Fig. 1. African community in Campania region.

Notes. The Figure displays the Africans spread in Campania at the municipality level. Official statistics for the African population by municipality are from ISTAT as of January 2008.

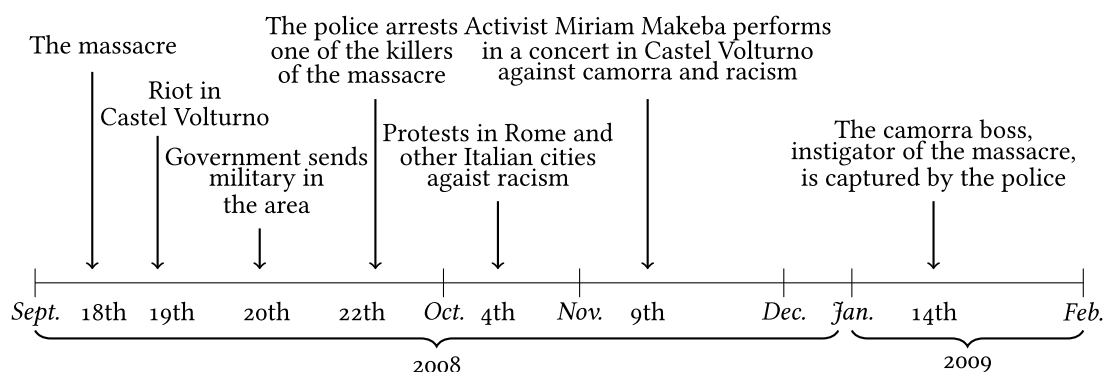


Fig. 2. Timeline of events.

According to the Italian writer Roberto Saviano, author of the best-selling *Gomorra*, the massacre was a message sent by the local Camorra to the African community ahead of the approval of a redevelopment project for a tourist area in Castel Volturno, an operation worth millions of euros. It amounted to an attempt at “ethnic cleansing”, aimed at expelling immigrants whose presence could have jeopardized the project.⁶ “It was a racist massacre” – the National Anti-Mafia Prosecutor Federico Cafiero de Raho would say ten years later – “to let the immigrants know they had to leave [...]”. The clan had important investment projects in the area that, in their view, were impeded by the immigrants’ presence. So they had been told to move away from Castel Volturno: they had not done so, and were hit [...]. The racist component consisted of the intention to drive them out of the territory simply because they were of a different race [...] The Camorra sought to exercise total control over their lives. Seeing them working in those places, such as tailors’ shops or other handicraft activities, without the consent of the clan was contrary to what they had been told”.⁷

2.3. The protest and the Italian response

The day after the massacre, Africans staged a violent riot in Castel Volturno, protesting against not only the local Camorra but also against the local authorities and the national government, demanding recognition of their civil rights and legal protection. The riot attracted the attention of local and national media, which unanimously described the African community’s reaction as “unprecedented in Italy”. Once again, it was Roberto Saviano, writing in *La Repubblica*, one of Italy’s highest-circulation newspapers, who observed: “The riot brings cameras from all over the world, and the images that are broadcast are those of an entire community

⁶ *Il coraggio dimenticato* by Roberto Saviano, published in *La Repubblica*, May 13, 2009. Available at the website <https://ricerca.repubblica.it/repubblica/archivio/repubblica/2009/05/13/il-coraggio-dimenticato.html>.

⁷ Our translation from the press article: *Intervista al procuratore. La strage di Castel Volturno 10 anni dopo* by Antonio Maria Mira, published in *Avvenire*, September 18, 2018. Available at the website <https://www.avvenire.it/attualita/pagine/i-casalesi-e-la-strage-dei-migranti-la-camorra-non-ancora-sconfitta>.

halting everything to demand attention and justice ...Those who shouted ‘basta!’ [‘enough!’] at the mafia bosses, clans, and families were Africans.⁸ The African population has introduced into the daily fabric of southern Italy some essential antibodies to the mafia, antibodies that Italians seem to lack. Antibodies that arise from the elementary desire to live”.

In a matter of days, the news of the massacre had spread throughout the country. This fostered a strong response to the massacre by Italian citizens at the national level. A number of initiatives to support Africans were undertaken. Public demonstrations against racism and xenophobic violence were held in Ancona, Caserta, Parma, Rome, and other Italian cities in October. And politicians, intellectuals, and artists took resolute positions, promoting a series of anti-racist initiatives. For instance, a concert was organized two months later in Castel Volturno itself for the South African singer and civil rights activist Miriam Makeba, in support of the African community and in opposition to the local Camorra and racism. Further, Italian public action was swift and effective: the government deployed troops to Castel Volturno to restore public order, and within weeks the killers and their instigators had been apprehended.

From the description of the episode, it is clear that, although the murder of the six African immigrants in Castel Volturno exposed xenophobic sentiments and segregation touching the entire immigrant population, there is no doubt that the massacre had strong racial overtones directed at the African community, which can thus be identified as the treated group. The victims were African, the main immigrant community in Castel Volturno was African, and those who subsequently mobilized against the Camorra, the racial violence, and the negligence and indifference of the authorities were African. Likewise, the foreign community at the center of media attention and public demonstrations of solidarity organized by Italian associations was the African community.

3. Background theory

In this section, we discuss the possible effects of the brutal episode on the social identity of African immigrants. In principle, it is difficult to say how a horrific crime of racial hatred, such as the Castel Volturno massacre, would affect the social identity of African immigrants, i.e., whether it would bring them closer or drive them away from the host community. In fact, the massacre was a multifaceted story that dramatically revealed the dangers of living in certain parts of Italy, the racism of a part of the Italian population, but that also showed how an important part of Italian society was close and supportive of the needs and demands of the immigrant community. Such different facets may have evoked various feelings among the African immigrants, influencing the perceived value of identification with Italy in different ways.

The social identity theory (SIT) and self-categorization theory (SCT) introduced in social psychology by Henri Tajfel and John Turner (Tajfel, 1978; Turner et al., 1987) and taken up in the economic models of social identity formation (Akerlof and Kranton, 2000; Shayo, 2009; Bernard et al., 2016), offer a theoretical guide to explore the effects of the massacre on the identification with Italy of African immigrants in the metropolitan area of Naples and the driving factors underlying the identity response within the African communities of Naples and Italy. The central tenet of SIT and SCT is that individuals seek to forge a positive sense of self and that the perception of belonging to a social group (i.e., social identity) plays a role in shaping one’s identity. As Tajfel (1978, p. 63) writes, social identity represents the “part of an individual’s self-concept which derives from knowledge of membership in a social group (or groups) together with the value or emotional significance attached to that membership”. Identification with a social group is, more or less consciously, a personal choice. A decision about which social group or groups to identify with is triggered by events or situations which make a social identity salient, strengthening the perception of the psychological significance and value of being part of or separate from a group (Oakes, 1987). The sense of belonging and connectedness to a community is a cognitive state, a context-dependent feeling that can change quickly in response to events that reinforce or challenge the value of self-ascribed social identity and induce behavior associated with a certain group (Turner et al., 1994).⁹

The value of identification with a group, the gain in identity, to use Akerlof and Kranton’s terminology, increases with the perceived “status” and “accessibility” to that group (Shayo, 2009; Bernard et al., 2016; Itoh et al., 2024). The status that people ascribe to a social group, and to feeling part of it, reflects the group’s relative position, in their eyes, with respect to other groups, along one or more dimensions that evoke a sense of personal satisfaction, security, and well-being. On the other hand, the accessibility of a social group reflects the perceived degree of similarity (or social closeness) between individuals’ characteristics and values and the stereotyped image they have of the group’s characteristics and values.

Therefore, the net effect of the massacre on the social identification of African immigrants is ex-ante ambiguous. On the one hand, the brutal manifestation of racial hatred against innocent countrymen may have induced an *animosity effect*, strengthening Africans’ feelings of opposition, contempt, and distrust toward Italian society, diminishing the perceived status of belonging to Italy, and heightening the perception of the social and cultural distance separating them from Italians. The alarm about their own physical safety could have pushed the African community to withdraw further into itself for self-protection, thus concretely and emotionally isolating itself from the settlement community. On the other hand, the xenophobic violence could have generated an *attachment effect*. The latter could derive from two changes in immigrants’ beliefs about the status and accessibility of the host-country group. Firstly, the horror of the assassination of six young Africans extraneous to crime at the hands of Camorra clans highlighted the risks of living in an ethnic enclave separate from the host society in areas dominated by organized crime. This heightened sense of threat

⁸ Our translation from *Il coraggio dimenticato* by Roberto Saviano (cit.).

⁹ Experimental evidence shows that situational cues can make a specific social identity salient and lead people exposed to such activating situations to strengthen their self-identification with the social group made momentarily salient or “primed” by the situation itself. Studies have documented that the preferences of individuals exposed to norms of multiple social-group identities respond to random, experimentally induced, minor manipulations of the salience of those identities (Kramer et al., 1993; Bernhard et al., 2006; Benjamin et al., 2010).

may have increased the relative “social status” of natives in the eyes of African immigrants, the value of being part of the settlement community, and the benefits of greater interaction and identification with Italian civil society (*fear effect*).¹⁰ Secondly, the prompt reaction of the Italian authorities to the African protest and their demand for protection and rights, as well as the spontaneous demonstrations of solidarity involving tens of thousands of Italians, revealed the real possibility of being heard by the institutions and accepted by natives as part of the national community. These collective reactions to the racial attack may have reduced the perceived “social distance” from the host community and increased the sense of belonging to Italy (*solidarity effect*).

Based on these arguments, we explore whether the massacre had an immediate impact on the identification with Italy of the African immigrants in the Naples metropolitan area and whether the sense of opposition or of attachment prevailed. We then examine the potential mechanisms through which the massacre may have influenced the sense of identification with Italy and propagated to other African communities in the country, testing the operation of channels that we can label as “fear” and “solidarity”.

As SIT and SCT theories highlight, social identity can change rapidly in response to exogenous and transitory events that alter the perceived social status of the group or the perceived social distance from it (Turner et al., 1994). This raises the question of whether such changes, once they have occurred, can persist well beyond the events that triggered them, resulting in a cultural change that can be transmitted within a community (Giavazzi et al., 2019; Giuliano and Nunn, 2021). Accordingly, we examine whether the Castel Volturno massacre has affected the social identity of African immigrants even in the medium term, thus constituting a source of deeper change in the cultural attitudes of immigrants.

Finally, stronger identification with the host country and the adoption of its culture and values, especially when forced from outside, can have negative repercussions for the self-esteem and subjective well-being of immigrants or ethnic minorities (Austen-Smith and Fryer, 2005; Fouka, 2020; Dahl et al., 2022). In particular, studies in cross-cultural psychology suggest that when the sense of attachment to the host country and the importance attributed to one’s ethnic identity diverge, consistent with Berry’s (1997) assimilation model, immigrants exhibit lower self-esteem and self-respect (Phinney et al., 1997, 2001; Umaña-Taylor and Shin, 2007). We assess the impact that the massacre had on the feelings of self-esteem and subjective well-being of African immigrants in the Naples metropolitan area by estimating a bivariate acculturation model à la (Berry, 1997) for identification with the host country and the country of origin. In this way, we test whether the possible increase or decrease in the value attached by Africans to identification with Italy following the massacre reflects a process of cultural assimilation/marginalization, accompanied by the weakening of the Africans’ sense of belonging to their own ethnic group, or otherwise captures a process of integration with the host country which does not weaken their ethnic identity.

4. Data, variables, descriptives, and univariate analysis

4.1. ISMU survey

We use the *Integrometro* survey conducted in 2008–2009 and 2015 by the ISMU Foundation, a private Italian research institute that supports studies on multi-ethnicity and on the social and economic inclusion of foreigners in Italy. Alongside a rich set of individual characteristics, the survey provides self-reported information on immigrants’ preferences and on their sense of attachment to both the host country and the country of origin.¹¹ The survey also provides data on immigrants’ nationality and municipality of residence, which allows for control of unobserved time-invariant characteristics related to home-country culture and the socio-economic environment in which immigrants live. The richness of the information contained in the ISMU survey thus makes it a uniquely valuable source for studying the determinants of immigrants’ social identity.¹²

For the 2008–09 wave, the respondents were 12,049 immigrants aged 18 or older, from 127 countries, residing legally or illegally in 233 Italian municipalities across 13 of the 20 regions.¹³ Since the respondents are concentrated in municipalities in some oversampled regions, for empirical analysis, all regressions use sample weights. As reported by Carillo et al. (2023), the shares of immigrants by municipality-ethnicity in the survey are broadly representative of the geographical distribution of ethnic groups in Italy, as reported by ISTAT. Those interviewed in the Campania region numbered 1019, of whom 898 were in the Naples metropolitan area (i.e., the surrounding reference area for Castel Volturno). Africans make up 35% of our sample – 19% of the foreigners in Naples – while 38% are from Eastern Europe, 18% from Asia, and 9% from Central and South America.¹⁴

4.2. Social identity

We measure the social identity of immigrants by their self-reported sense of attachment to Italy and to their country of origin, exploiting two survey questions: “How much do you feel you belong to Italy [to your home country]?”, with four possible responses:

¹⁰ Experimental evidence in social identity literature confirms the existence of an “in-group favoritism” in behavior toward members of groups one identifies with as opposed to out-group members, which influences the status ranking of social groups and the value of self-identifying with them Bernhard et al. (2006) and Charness et al. (2007) and Chen and Li (2009).

¹¹ A detailed description of the data and of the sampling design is available in Cesareo and Blangiardo (2009).

¹² The ISMU survey has been recently used also by Dustmann et al. (2017), Pinotti (2017), Guriev et al. (2018) and Carillo et al. (2023).

¹³ The regions of residence of immigrants interviewed in the survey are: Abruzzo, Emilia Romagna, Lazio, Lombardy, Marche, Molise, Piedmont, Puglia, Sicily, Tuscany, Trentino Alto Adige, and Veneto.

¹⁴ Figures for the 2015 wave, used to test for medium-term effects, are reported in Section 6.2.



Fig. 3. Timeline of interviews.

Notes. Above the line, the total number of interviews for African and non-African immigrant groups before and after September 18th, 2008: the numbers in brackets indicate the number of interviews in the province of Naples and in the rest of Italy, respectively.

(i) “not at all”; (ii) “not much”; (iii) “fairly much”; (iv) “very much”. Our main dependent variable is the indicator *Host* for identification with Italy, which takes the value 1 for responses of “fairly much” or “very much” to the question on attachment to the host country and 0 otherwise. To examine the identity orientation of immigrants, in Section 6.3 we construct an analogous indicator variable, *Home*, that measures their sense of attachment to their country of origin.

For robustness, we consider additional dependent variables that indirectly capture the sense of identification with Italy and its culture. We use respondents’ opinions on gender gaps in labor and education as measures of how much they share Italian culture and values. Specifically, we use the survey question: “To what extent do you agree with the following statements? (a) For the same work, women should be paid less than men; (b) Getting a good degree is more important for a man than for a woman”. Accordingly, we create two dummies with value 1 if the respondent agrees “very much” with (a) or (b), and 0 otherwise. We also consider the respondents’ preferences and opinions regarding their children’s future in Italy as indicators of personal integration plans. Specifically, we use the questions, “Today, thinking about the future of your children (even if you do not have them), what would you prefer for them?” and “How important do you think it is for the children of immigrants to be able to obtain Italian citizenship immediately?” We use this question to construct two dummy variables that take the value 1 if the respondent answers “I would prefer my child to study in Italy” to the former and “very much” to the latter question.

4.3. Interviews’ date

For each respondent, the ISMU data included the exact day of the interview. Our treatment group consists of the African immigrants who participated in the survey after September 18th. There are no interviews with immigrants residing in the municipality of Castel Volturno, but there is extensive coverage of neighboring municipalities in the Naples metropolitan area, all located within 70 km (43.5 miles) of Castel Volturno. The interviews with Africans in the Naples metropolitan area are split nearly evenly between before the massacre (85) and after (83); those with non-Africans numbered 296 and 426, respectively (see Fig. 3). In the rest of Italy, the interviews of both African and non-African immigrants are more concentrated in the months following the massacre (about 80%).

4.4. Descriptive statistics

The restricted sample, which has complete information for all variables used in the regression analysis, includes 655 observations in the Naples metropolitan area and 10,256 observations for all of Italy. Descriptive statistics for the restricted sample are reported in Table A.1 in Appendix A.¹⁵ Almost 56% of immigrants in the restricted sample report feeling fairly or very strongly attached to Italy, with a slightly higher share among the non-Africans (columns 5 and 8). Both groups show a much stronger attachment to their home country; here the highest share is among Africans (92.1% versus 90% for non-Africans). On average, immigrants are 35 years old, and 52% are men, with a higher percentage of men among Africans. Almost 42% of respondents have a high school diploma, and 18% have a bachelor’s degree or higher; non-Africans are better educated. About 53.3% of the sample are married, and 34% report having children in Italy. Not surprisingly, the sharpest differences between Africans and non-Africans concern religion. Christians account for 63% of non-Africans and 22% of Africans; Muslims are in the majority among the latter (74.5% versus 19.2% among non-Africans). The average length of stay in Italy is 7.3 years, and is longer for the Africans (8.3 years). The average Italian proficiency score in Italian is 3.5/5. For immigrants in the Naples metropolitan area, the figures are similar (Table A.1, Panel A). The only exceptions are the share of Muslims among the non-Africans, which drops to 8.5%, and that of undocumented immigrants, which is more than twice that of the rest of Italy among both Africans and non-Africans. In short, these descriptive statistics indicate significant differences between our treatment and control groups, both across Italy and in Naples. This suggests the need to include control variables in the empirical analysis.

¹⁵ Descriptive statistics for the whole ISMU sample are reported in Table A.2 in Appendix A. No relevant differences emerge between the whole and the restricted samples.

In Table A.5 in the Appendix, we report the mean values of social identity measures for immigrants interviewed before and after the San Gennaro massacre and test for univariate differences in means.¹⁶ Consistent with the hypothesis that the event was a significant factor in the formation of social identity, we find that *Host* increased by 40 percentage points among the Africans and by 13 percentage points among the non-Africans in the Naples metropolitan area, both differences statistically significant. When we consider the whole country, *Host* increased by nearly 11 points for both immigrant groups, suggesting that the differential effects on social identity did not extend to all Africans in Italy. Finally, the massacre had no significant impact on the average sense of attachment of African immigrants to their home countries, which remains slightly greater than among non-Africans. For most other variables, there are no statistically significant differences after the massacre, which is reassuring regarding comparability between the samples of immigrants interviewed before and after the massacre. An exception, common on average to African and non-African immigrants throughout Italy, is a lower incidence of irregular immigrants in the post-massacre sample. Otherwise, the before-and-after differences in immigrants' individual characteristics are marginal.

5. The effects of San Gennaro massacre

In this section, we present our empirical strategy and the results of our main analysis on the impact of the San Gennaro massacre on the sense of belonging to Italy among the treated group of African immigrants in the metropolitan area of Naples. We then conduct a series of robustness checks and examine the channels and mechanisms that may explain the main findings.

5.1. Empirical strategy

The identification of the causal impact of the massacre on African immigrants' sense of belonging to Italy relies on the timing of the interviews (that is, whether they were conducted before or after exposure to this unexpected episode of violent racial hatred). This identification strategy, dubbed the "Unexpected Event during Surveys Design" (UESD), has gained popularity in the literature.¹⁷ Using the UESD to estimate the causal effect requires that the event under investigation and its timing be exogenous and unexpected, so that survey participants are essentially interviewed randomly before or after the event. In addition, the UESD is based on the assumption that the date of the event affects the outcome only through exposure (*excludability assumption*) and that the timing of the interviews is unrelated to individual characteristics (observed or unobserved) that are correlated with the outcome variables (*ignorability assumption*).

In our case, although Castel Volturno was an area plagued by mafia violence and racial tensions, the date and the brutality of the massacre were certainly unexpected by the local African community and exogenous to their social identity (all the more so for African immigrants in the surrounding metropolitan area or the rest of Italy). Moreover, no other relevant events occurred in temporal proximity with the massacre. What is harder to exclude is the presence of calendar effects and omitted variables related to interview timing and immigrants' self-reported social identity. For this reason, our preferred identification strategy is a difference-in-differences (DiD) model comparing the changes before and after the San Gennaro massacre (the "treatment") in the identity outcome of the African immigrants (the "treatment group") with those in the identity outcome of non-African immigrants (the "control group"). Precisely, we estimate the following model:

$$Host_{it} = \alpha + \beta_1 African_i + \beta_2 Post_t + \gamma African_i \times Post_t + \theta^T X + \lambda_i + \eta_c + \epsilon_{it} \quad (1)$$

where $Host_{it}$ denotes the immigrant's sense of belonging to Italy at time t proxied by the dummy described above, *African* is a dummy equal to 1 if the immigrant is African and 0 otherwise, and *Post* is a dummy equal to 1 if the immigrant is interviewed after the massacre (after September 18th) and 0 before it. Our parameter of interest is γ , i.e., the differential impact of the massacre on the Africans' sense of belonging to Italy.

Since the interviewees before and after the massacre are different people, we control for numerous socio-demographic and "post-migration" features that could affect the sense of social identity (the vector X). First, we control for individual characteristics: *Age*, *Age squared*, *Years since arrival*, and dummy variables for *Male* (1 if male), *Marital status* (1 if married), *Presence of Children in Italy* (1 if yes). Second, we control for immigrants' education, with four dummies for completed school levels – *No education*, *Compulsory school*, *High school* and *Bachelor or above* – and one for the knowledge of Italian language, *Italian proficiency*, measured as the average value of self-reported scores, from 1 to 5, in reading, writing, listening and speaking skills. Third, to control for immigrants' cultural background and opportunity for social inclusion and access to services, we include seven dummy variables for religion, *Christian*, *Muslim*, *Buddhist*, *Hindu*, *Sikh*, *Other religions*, and *Non-religious*, as well as a dummy variable *Irregular legal status* that takes the value of 1 if the immigrant does not hold a residence permit.¹⁸ Finally, to control for possible omitted variables related to the

¹⁶ Table A.5 in the Appendix reports the statistics for all variables, broken down into the sub-samples of immigrants interviewed before and after the event. The corresponding table for the whole sample is reported in Table A.6.

¹⁷ Muñoz et al. (2020) provides a comprehensive analysis of the UESD methodology. It has been applied increasingly in the political, sociological, and economic literature to study the impact of unexpected events (e.g., political announcements, frauds, terrorist attacks, health pandemics, economic sanctions, riots, and the like) on attitudes toward something or someone (e.g., political institutions and leaders, ethnic and religious groups, economic and political issues). In addition to the studies cited in Muñoz et al. (2020), a selective review of the literature is provided by Nägel and Nivette (2023).

¹⁸ Two additional indicators that could be related to the sense of belonging to Italy are the occupational status (whether the immigrant is engaged in any paid work at the time of the interview) and the composition of their friendship network (whether it includes only foreigners or also natives). However, since both factors could themselves be outcomes of the massacre, we exclude them from the model to avoid potential bias from bad controls. In any case, estimates including these additional controls yield qualitatively identical results.

Table 1
The effect of the San Gennaro massacre in the Naples metropolitan area.

	Dependent variable: <i>Host</i>		DiD estimates			
	Before-After					
	African	Non African				
	(1)	(2)	(3)	(4)	(5)	(6)
African			−0.141*** (0.042)	−0.168** (0.068)	−0.191** (0.074)	−0.208** (0.081)
Post	0.191*** (0.061)	0.052 (0.039)	0.094** (0.042)	0.139*** (0.045)	0.124** (0.048)	0.128* (0.065)
African × Post			0.226*** (0.069)	0.220*** (0.057)	0.233*** (0.056)	0.271*** (0.062)
Controls	no	no	no	yes	yes	yes
Continent of origin FEs	no	no	no	no	yes	yes
Place of interview FEs	no	no	no	no	no	yes
Adjusted <i>R</i> ²	0.030	0.001	0.025	0.151	0.156	0.157
Observations	164	698	655	655	655	655
Mean dependent	0.527	0.614	0.597	0.597	0.597	0.597

Notes. OLS estimates. Columns (1) and (2) report simple before-after estimates; columns (3)–(6) report DiD estimates. Controls include Male, Age, Age squared, Compulsory education, High school, Bachelor or above+ (No education is the excluded category), Marital status, Christian, Buddhist, Hindu, Sikh, Other religion, (Muslim religion is the excluded category), Children in Italy, Years since arrival, Italian proficiency, and Irregular legal status. All regressions use sampling weights. Standard errors in parentheses, clustered at the municipality level; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

socio-economic environment and the emotional context in which immigrants live and are interviewed, we include 11 dummies, λ_i , that indicate the interview location.¹⁹ In the most saturated specification, we also include continent-of-origin fixed effects to control for other possible cultural differences among non-African immigrants.

5.2. Baseline results

Table 1 presents the regression results for the baseline analysis. As a preliminary step, columns (1) and (2) consider a simple before-and-after specification for both the treated and control groups, showing that the probability that Africans self-identify with Italy increased by 19 percentage points in the aftermath of the massacre, whereas for non-Africans the estimated increase is about 5% and not statistically significant.

In columns (3)–(6), we extend the analysis to our preferred difference-in-differences model, estimating four specifications that successively add covariates and fixed effects. The results confirm that Africans' self-identification with Italy is, on average, weaker than that of other immigrant groups. More importantly, the results consistently show that the massacre induced a statistically significant increase in the Africans' sense of belonging to Italy by comparison with other ethnic groups not directly targeted. The impact is also economically meaningful: considering the most saturated specification in column (6), after the massacre, the likelihood of Africans identifying themselves with Italy is 27 percentage points higher (against a mean of the dependent variable equal to 0.6).

For reasons of space, Table 1 does not report the estimated coefficients for the control variables, which are instead presented in Table A.7 in Appendix A. The regression results indicate that, on average, men exhibit a higher sense of attachment to Italy than women, and that identification with Italy follows an inverted-U relationship with age. Moreover, *Host* is significantly and positively correlated with time spent in Italy, Italian language proficiency, and the sharing of the Christian faith, as well as with adherence to Hinduism and Sikhism. By contrast, education, civil status, the presence of children, and irregular migration status do not appear to be significantly correlated with the *Host* indicator.

As is well known, a crucial condition for the DiD estimator to yield an unbiased estimate is the absence of any pre-treatment trend in the identity outcome between the treatment and control groups. To assess whether African and non-African immigrants exhibit parallel trends prior to the event, we split the pre-massacre period into two subperiods. In particular, since the interviews collected in Naples before the massacre are predominantly concentrated in June and July, and African respondents are not interviewed on all days within this time window, we define these subperiods as follows: one up to June 21 and one from June 22 to the day of the massacre, so as to obtain intervals with the same number of interview days for African immigrants.

Applying the same logic, for the post-massacre period, we distinguish between interviews conducted from 19 September to 16 November and those conducted from 17 November to 6 December. As shown in Fig. 4, both African and non-African immigrants exhibit a parallel declining trend in social identity prior to the shock. Following the killing of six African immigrants, we observe a marked increase in the sense of attachment to Italy among African immigrants residing in the Naples area. By contrast, the increase among non-African immigrants is much milder and short-lived, and their reported sense of belonging soon reverts to pre-massacre levels.

¹⁹ Table A.3 in the Appendix reports the full list and description of the variables, while Table A.4 reports the list of the places of interviews.

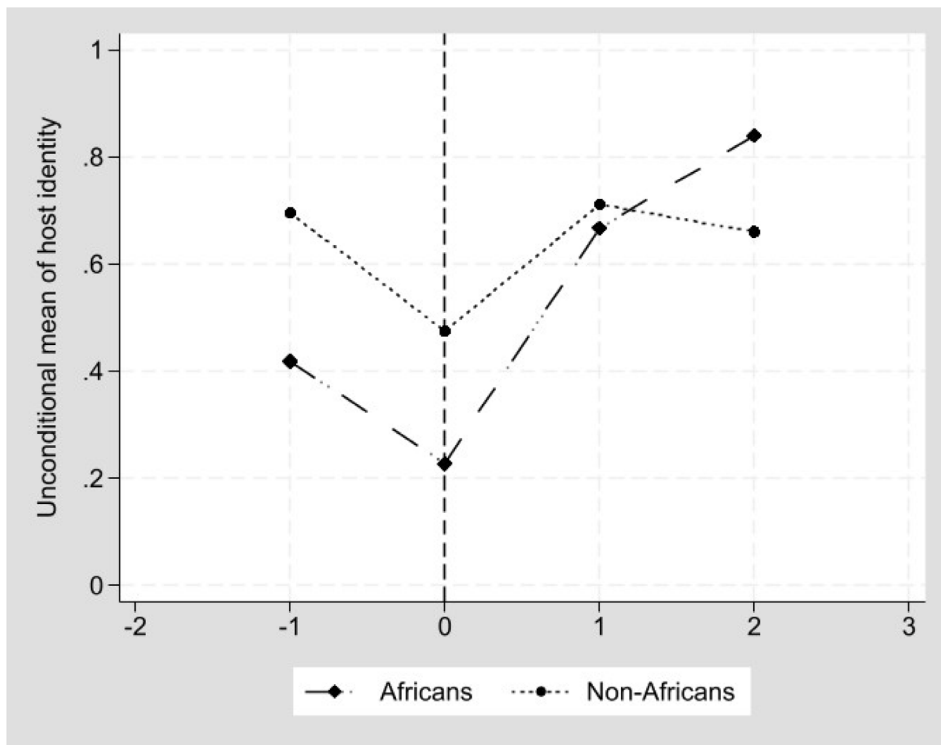


Fig. 4. Parallel trend.

Notes. The figure reports the unconditional mean of the variable *Host* for African and non-African immigrants residing in the Naples metropolitan area, before and after the massacre. The pre-massacre period is divided into two sub-periods: 11 March 2008 to 21 June 2008 and 22 June to 18 September, each with the same number of interview dates for African immigrants. The same grouping criterion is applied to the post-massacre period, distinguishing between interviews conducted from 19 September to 17 November and those conducted thereafter (the last interview date in the Naples metropolitan area was 6 December 2008). The vertical dotted line indicates the date of the San Gennaro massacre.

Second, to corroborate the parallel trend assumption, we also adopt an event-study approach, distinguishing two post-massacre periods: September 19th to November 17th and November 18th onwards. The results are reported in Fig. 5. Once again, they confirm that the DiD coefficient is not statistically different from zero before the massacre but turns positive and significant afterward.

5.3. Robustness

To assess the robustness of our baseline results, we consider several potential concerns: small-sample bias, selection issues among interviewed immigrants, the restriction of treatment assignment to African immigrants, and the use of alternative, indirect measures of social identity based on self-reported preferences about actual behaviors or situations. In the following subsections, we address each issue in turn, presenting checks to assess the sensitivity of our findings to these potential sources of bias.

5.3.1. Small sample bias

The relatively limited number of observations on which our empirical analysis relies, particularly for the treatment group, may raise concerns about the statistical power of the estimates. In particular, although studies using interview dates to evaluate the effects of unexpected events during surveys often rely on small samples of less than or slightly more than 1000 respondents (Dinesen and Jæger, 2013; Jakobsson and Blom, 2014; Ares and Hernández, 2017; Coupe, 2017; Geys and Qari, 2017; Balcells and Torrats-Espinosa, 2018; Solaz et al., 2019), our baseline estimates may be subject to potential small-sample bias, which undermines the reliability of the standard errors. This concern may be particularly relevant given that our measure of social identity is a binary variable and the model is estimated using OLS. To address this concern as far as possible, we perform a set of robustness checks.

In Table 2, we re-estimate the baseline model using estimators and standard errors that are considered more reliable in small-sample settings. First, in column (1), we confirm the significance of the DiD coefficient by computing p-values for the estimated coefficients with wild-cluster bootstrap standard errors. Second, we replicate baseline estimates using probit and logit models. The results, reported in columns (2) and (3), are qualitatively identical to those obtained with the linear specification, and the marginal effects – 0.277 and 0.294 for the probit and logit specifications, respectively – are broadly comparable in magnitude to our baseline results. In column (4), we estimate a Firth-corrected logistic regression model using a penalized maximum likelihood estimator

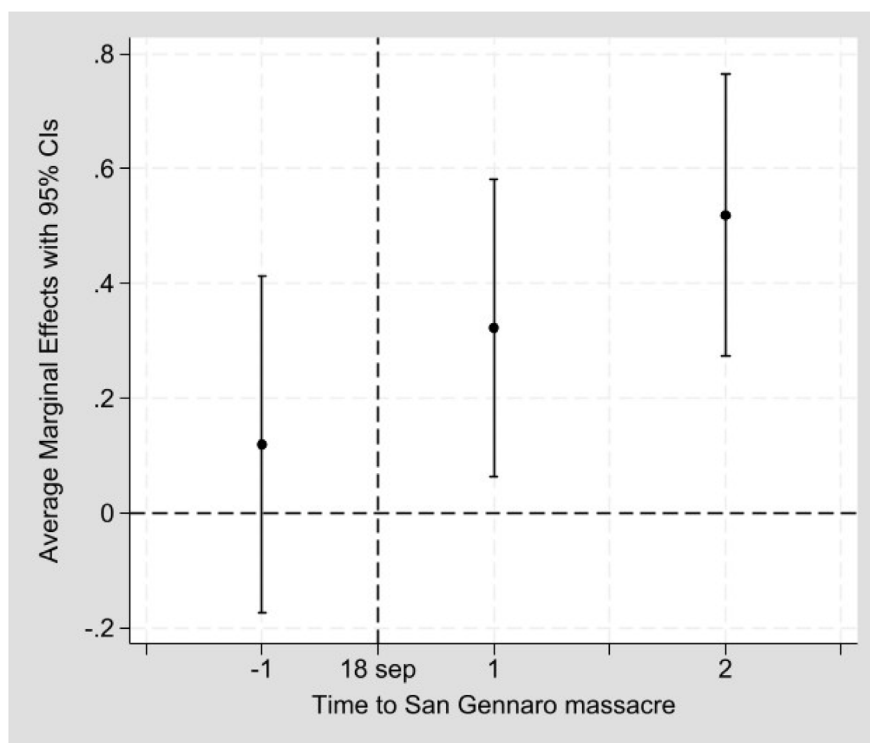


Fig. 5. Dynamic effects of the San Gennaro massacre.

Notes. The figure illustrates the dynamics of the massacre's effect on Africans' sense of belonging to Italy in Naples in 2008. Event-study (DiD) regression coefficients are shown with 95% confidence intervals. The vertical dotted line indicates the date of the San Gennaro massacre. Pre- and post-massacre periods are defined as in the parallel trends analysis.

Table 2

The effect of the San Gennaro massacre: Bootstrap estimates and nonlinear models.

	Dependent variable: <i>Host</i>			
	LPM wild cluster bootstrap (1)	Probit (2)	Logit (3)	Firth logit (4)
African × Post	0.271*** (0.062)	0.868*** (0.206)	1.540*** (0.361)	1.282*** (0.479)
95% CI	[0.111, 0.478]			
p-value	0.0060			
Controls	yes	yes	yes	yes
Continent of origin FEs	yes	yes	yes	yes
Place of interview FEs	yes	yes	yes	yes
Observations	655	655	655	655

Notes. Column (1) reports estimates from an LPM with inference based on wild cluster bootstrap p-values and 95% confidence intervals, using 2000 replications. Columns (2)–(3) report coefficients from probit and logit models. Column (4) reports results from a Firth logistic regression. Controls as in Table 1. Regressions use sampling weights and standard errors are clustered at the municipality level, except in column (4), as Stata's *firthlogit* command does not support these two options. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

to adjust for the small-sample bias of the standard logistic estimate. Once again, the results confirm the increase in the sense of attachment to Italy among African immigrants following the massacre.

Furthermore, we conduct a randomization-inference exercise to assess whether the estimated effects are unlikely to be attributable to random assignment. Specifically, we randomly reassign the treatment 10,000 times to 135 immigrants residing in the metropolitan area of Naples (i.e., the number of African immigrants, corresponding to the treated group in our baseline estimates) and, for each reassignment, we compute the DiD coefficient. In this way, we obtain a distribution of placebo effects under the null hypothesis that there is no effect. The empirical p -value obtained from our randomization inference exercise, computed as the proportion of placebo coefficients that are equal to or larger in absolute value than the DiD coefficient estimated in our baseline

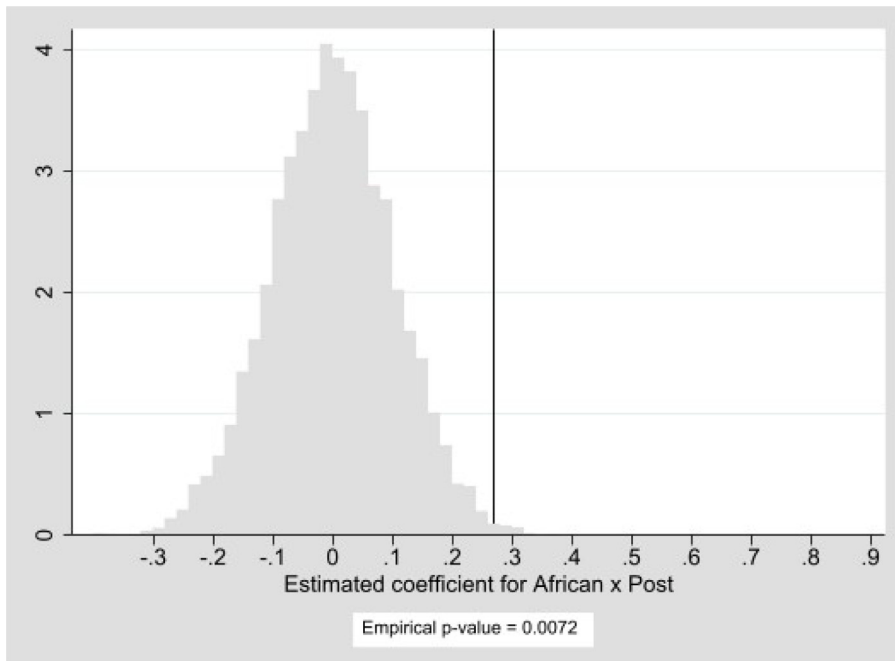


Fig. 6. Randomization inference.

Notes. The figure displays the distribution of coefficients obtained from the randomization inference exercise on the treated group, based on 10,000 replications. The empirical RI p -value is computed as

$$p\text{-value} = \frac{\sum_{s=1}^S \mathbb{1}(|\beta_s| \geq |\beta_{\text{obs}}|)}{S}$$

where β_s and β_{obs} denote, respectively, the simulated DiD coefficient on the s th replication and the DiD coefficient using the observed treated group, S is the total number of replications and $\mathbb{1}(\cdot)$ is an indicator function that takes the value 1 whenever the simulated coefficient is at least as large as the observed coefficient in absolute value. The vertical line corresponds to the value of β_{obs} obtained with the baseline specification in Table 1, column 6.

model, is 0.0072 (72 coefficients out of 10,000), thereby providing strong confirmation of the statistical significance of the DiD effect for our treated group of African immigrants (see Fig. 6). Therefore, given the consistency of the results across these approaches, we can be confident that our findings are not merely an artifact of small-sample bias.

5.3.2. Selection bias

A potential concern is that the Camorra attack may have altered Africans' willingness to participate in the interviews. This could introduce selection bias in both observable characteristics and, more importantly, unobservable factors, thereby distorting our estimates. For example, it is possible that after the massacre, and under the heightened scrutiny of the media and public authorities, individuals without legal residence status have preferred not to expose themselves publicly, either by refusing to be interviewed altogether or by declining to answer questions regarding their ties with Italy. In this case, respondents interviewed after the massacre would be disproportionately represented by regular immigrants, who are more integrated into the labor market and therefore more attached to Italy.²⁰ Moreover, attachment to Italy may be driven by some unobservable individual characteristic, such as ideological or cultural factors or prior personal experiences, that is negatively correlated both with identification with Italy and with the decision to participate in the interviews. Such sample selection could partly contribute to our finding of increased identification of Africans with Italy following the massacre.

The nonresponse rate in the ISMU survey is relatively low. In the province of Naples, the share of contacted immigrants who refused to be interviewed is 25%, corresponding to 33% of respondents. These percentages are even lower in the period following the massacre, amounting to 19% and 24%, respectively. Unfortunately, we do not have any information on the characteristics of potential respondents who chose not to participate in the survey. For this reason, we cannot address selection bias by estimating a selection model. Therefore, to assess the relevance of selection bias in our context, we implement two strategies: (i) we use

²⁰ Numerous empirical studies document a relationship between immigrants' labor market outcomes and self-identification with the destination country (Mason, 2004; Constant and Zimmermann, 2008; Battu and Zenou, 2010; Nekby and Rodin, 2010; Casey and Dustmann, 2010; Bisin et al., 2011; Cai and Zimmermann, 2024; Carillo et al., 2023).

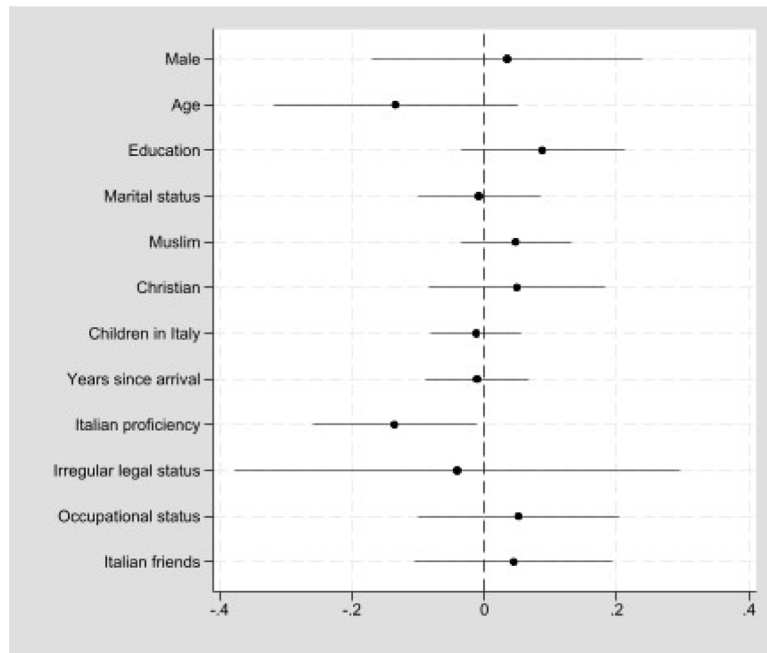


Fig. 7. Balance test on control variables between missing and non-missing responses for *Host* after the massacre.

Notes. The figure displays the estimated β s and 95% confidence intervals of a regression model

$$\text{Missing } Host = \alpha + \sum_j \beta_j X_j + \epsilon_j$$

on the sample of African immigrants interviewed after 19 September 2008. X includes all the individual characteristics that we have in our baseline regressions, where age, years since arrival, and Italian proficiency are measured as dummy variables equal to one for individuals above the median of their respective distributions, education is a dummy that takes value 1 for when immigrants have high school or bachelor or above education level, and only the two main religious groups of Christian and Muslim are included. In addition, X includes dummies for having Italian friends and for occupational status.

information from the observed sample to account for potential selection associated with missing values in our outcome variable; and (ii) we perform a sensitivity analysis to assess the possible impact of selection on unobservable factors driving survey non-response.

First, we examine whether African immigrants interviewed after the massacre who did not answer the question on their sense of belonging to Italy differ systematically from those who did answer it. In general, the non-response rates to the identity outcome question are very low both before and after the massacre (1.2% and 3.6% for Africans and 4% to 2.8% for non-Africans) and are not statistically different. That said, for the sample of African immigrants after the massacre, we regress an indicator *Missing Host*, which takes the value 1 for individuals with missing *Host* and 0 otherwise, on the individual characteristics used in our DiD model as well as on additional features such as employment status and personal friendship networks. The results, reported in Fig. 7, show no systematic differences between Africans for whom *Host* is missing and those who do disclose their sense of identification with Italy. Most of the estimated coefficients are not statistically significantly different from zero, including those of variables significant in the DiD model, except for Italian language proficiency, which reduces the likelihood of a missing response for the variable *Host*. The fact that non-response on our dependent variable among Africans after the massacre does not reflect a selected subgroup suggests that any potential non-participation in the survey is also unlikely to originate from a group selected on observables.

In addition, to assess how much selection on non-response could alter our DiD estimates, we implement Manski's (1990) worst-case bounds approach and residual Manski bounds. The first approach relies solely on the outcome variable and computes the lower and upper bounds for each of the four DiD cells, control-pre, control-post, treated-pre, and treated-post. The bounds are obtained by assigning missing outcomes to values that, given the model's structure, minimize and maximize the estimated DiD effect, respectively. In our setting, these correspond to assigning missing observations to 0 and 1, respectively. Using only observed outcomes, the DiD coefficient is 0.148, with lower and upper bounds of 0.085 and 0.201, respectively. These results suggest that if all missing values were set to *Host* = 0, the DiD coefficient would shrink by 42% (yet remain positive), whereas assigning all missing values to *Host* = 1 would increase the estimate by 36%. The residual Manski bounds incorporate covariates and compute worst-case bounds by assigning missing outcomes to the values that, respectively, minimize and maximize the residualized outcomes implied by the estimated model. In this case, we find that missing observations do not meaningfully affect our estimate: the worst-case lower bound is 0.27, which coincides exactly with the baseline DiD coefficient reported in column (6) of Table 1. The upper bound

Table 3
Sensitivity to survey nonresponse under the worst-case scenario.

	Dependent variable: <i>Host</i>			
	% of hypothetical African immigrants in the post-massacre period with <i>Host</i> = 0			
	0% (1)	10% (2)	25% (3)	30% (4)
African × Post	0.271*** (0.062)	0.199** (0.072)	0.137* (0.075)	0.104 (0.082)
Controls	yes	yes	yes	yes
Continent of origin FEs	yes	yes	yes	yes
Place of interview FEs	yes	yes	yes	yes
Observations	655	661	670	673

Notes. OLS estimates. Column (1) reports the baseline specification in column (6) of Table 1. Columns (2)–(4) add hypothetical observations corresponding to 10%, 25%, and 30% of the number of African immigrants interviewed after the massacre, for whom the variable *Host* is equal to 0. Controls as in Table 1. All regressions use sampling weights. Standard errors in parentheses, clustered at the municipality level; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

indicates that the differential effect of the massacre on African immigrants could be up to 9% larger (i.e., 0.294) than the estimate obtained using only observed values of *Host*.²¹

To assess the relevance of immigrant selection into survey participation and the robustness of our results to unobserved factors that may be non-randomly correlated with it, we conduct two types of sensitivity analyses. First, we augment the sample with a number of hypothetical African immigrants who refused the interview after the massacre under a worst-case assumption. Specifically, we randomly duplicate existing post-massacre African observations with *Host* = 0, preserving their observed covariates. This procedure allows us to evaluate the potential downward bias in the estimated DiD effect that could arise if non-respondents systematically had lower levels of attachment to Italy. We run this sensitivity exercise assuming that the number of fake observations is 10%, 25%, or 30% of the original post-massacre African sample.

As reported in Table 3, the DiD coefficient remains positive and statistically significant even under the extreme scenario in which we augment the observed sample by adding more than 25% hypothetical non-interviewees who do not identify with Italy, while keeping unchanged the number of Africans reporting a high sense of attachment to Italy. This corresponds to more than doubling the number of African immigrants with *Host* = 0 after the massacre.²²

As an additional sensitivity analysis, we employ the proportional selection method proposed by Altonji et al. (2005) and the delta-method proposed by Oster (2019). Both approaches rely on the intuition that the sensitivity of the estimated effects to unobserved selection can be gauged by comparison with selection on observed covariates. Under the assumption that unobserved selection is proportional to observed selection, the AET method evaluates how much the estimated coefficient could change if unobservables were as important as observables in determining the outcome. Oster's delta-method, in turn, uses both the change in the estimated treatment coefficient and the change in the model R^2 when including observed covariates to compute a measure, δ , which, under an assumption on the maximum R^2 the model could theoretically attain, quantifies how strong selection on unobservables would need to be, relative to observables, to fully explain the estimated effect. The proportional selection method yields $\delta_{\text{AET}} = 1.28$, indicating that the estimated DiD effect is relatively robust, as unobserved factors would need to be 1.28 times as important as observed covariates to nullify the effect. Consistently, Oster's method shows that, under the assumption that the maximum R^2_{max} is equal to 2.5 times the R^2_{full} of the full model with covariates, the required selection strength is $\delta = 1.21$, implying that unobservables would need to be more influential than observables to fully account for the estimated effect. Under a much less conservative assumption $R^2_{\text{max}} = 1.5 \times R^2_{\text{full}}$, a fraction $\delta = 0.40$ of the selection on observed covariates is still required to explain away the effect. Overall, these sensitivity analyses indicate that our baseline results are generally robust to plausible selection on unobservables.

²¹ To further corroborate the robustness of our findings to missing values, in the Appendix we estimate a DiD model in which the dependent variable is, alternatively, an indicator for irregular immigration status or for irregular employment, taking the value 1, respectively, for immigrants who are not legally resident in Italy and for those engaged in undeclared work that does not entitle them to social protection or labor rights. The underlying rationale is that irregular immigrants may be less willing to expose themselves and report their views; hence, if this group became relatively smaller among Africans compared with non-Africans after the massacre, this could provide suggestive evidence of selection concerns. The regression results, however, show no meaningful increase in the differential probability that African versus non-African respondents are illegally resident in Italy or engaged in irregular employment in the post-massacre period (see Table A.8).

²² To corroborate this sensitivity analysis, in the Appendix we perform a tipping-point analysis under the missing not at random (MNAR) assumption, allowing us to consider milder scenarios in which the proportion of missing observations with *Host* = 1 is greater than zero. Specifically, we consider a range of counterfactual scenarios for potential African immigrant non-respondents after the massacre, assuming that the proportion of *Host* = 1 among missing observations is lower by an amount δ than among African immigrants who were actually interviewed post-massacre. For each value of δ , we compute the minimum fraction of non-respondents (p_{miss}) required to nullify the estimated DiD effect. In our setting, the proportion of African respondents with *Host* = 1 in the post-period is 0.741. Assuming $\delta = 0.3$ (i.e., that the proportion of African non-respondents with *Host* = 1 is 0.441, about 40% lower than the observed proportion), approximately 52 additional non-respondents would be required to eliminate the estimated effect. When δ is increased to 0.5 (i.e., assuming that the proportion of *Host* = 0 among the missing observations equals 0.76), the share of non-respondents among African immigrants required to nullify the DiD effect is approximately 54% of the number of African respondents after the massacre (see Fig. A.1). Consistent with the sensitivity analysis reported in Table 3, this corresponds to adding 24 observations with *Host* = 0 to the sample (compared with 18 in the scenario in which all African non-respondents are assumed to have *Host* = 0), effectively more than doubling their number.

5.3.3. Treatment assignment and attenuation bias

We have assumed that the treated group consists of African immigrants belonging to the same ethnic group as the victims of the massacre. Implicitly, this assumption is equivalent to considering the San Gennaro massacre as a racially salient event, with the treatment status of immigrants determined by a minimum threshold of racial salience, which in turn depends on ethnicity. However, the degree of racial salience of an event for a given individual is an intrinsically unobservable variable, which may raise concerns about the validity of our treatment group and the identification of the treatment effect. This is all the more relevant given that the significance of the *Post* variable in Table 1 indicates that, after the massacre, there is an average increase in attachment to Italy among all immigrants, including non-Africans. If the non-African community also reacts to the shock, this would generate an attenuation bias; in this case, the estimated effect on the social identity of African immigrants (our “treated” group) would represent only a lower bound.

To check for possible contamination of the control group and potential attenuation bias, we run two robustness exercises. First, in the spirit of a placebo test, we focus on non-African immigrants, distinguishing them by the genetic distance between their countries of origin and Ghana, under the hypothesis that ethnic and ancestral proximity to the victims is the main determinant of racial salience.²³ We replicate the DiD estimates, assigning treatment status to immigrants from countries that are in the first decile or else in the first quartile of the distribution of the variable *Genetic distance from Ghana*. In this way, we test for the differential impact on the feeling of attachment to Italy of the non-African immigrants who are culturally more similar to the African population of the victims and to our treatment group, for which racial salience should be more likely to be above some relevant threshold. The regression results (Table 4) indicate that the impact of the massacre on the sense of attachment to Italy among non-African immigrants who are genetically closer to the treated group does not differ statistically from that of non-African immigrants who are genetically more distant from the victims, although the estimated coefficient is positive, as expected. This evidence provides indirect support for our hypothesis that the massacre had a particularly strong racial salience for African immigrants in the Naples metropolitan area, sufficient to identify the treatment group and trigger a differential impact on their social identity.

Second, we use the non-African immigrants who are genetically close to the Ghanaian victims as the control group. As we have just seen, for this group of immigrants, the massacre did not produce a differential effect on attachment to Italy compared with non-Africans residing in the Naples metropolitan area. Given its greater similarity to the treated group, it may be more appropriate to use it as the control group to mitigate concerns about attenuation bias. Therefore, we re-estimate our baseline model, including non-African immigrants in the control group who originate from countries with a genetic distance from Ghana below the median, or, in a more restrictive specification, below the 25th percentile. Although restricting the control group to genetically closer immigrants further reduces our sample’s statistical power, the regression results reported in Table 4 are consistent with our baseline analysis. The estimated coefficients appear to be slightly different in magnitude. However, when accounting for differences in sample size by standardizing the coefficients, no statistically significant difference emerges between the parameters estimated using the full sample and those obtained using only the genetically closer immigrants as the control group.

5.3.4. Measuring social identity

To further assess the robustness of our baseline results, we employ alternative measures of immigrants’ social identity and perceived closeness to Italy, drawing on endorsed norms and intended actions.

To gauge agreement with norms and attitudes that are widely shared in Italian society, we use two survey questions on the gender gap in pay and education: (i) “Do you agree that men should earn more than women for the same job?”; (ii) “Do you agree that getting a good degree is more important for men than women?” Gender norms, including those related to work and education, vary substantially across societies. On average, however, less industrialized and economically emerging countries display less egalitarian gender attitudes compared to wealthier, post-industrial societies (Inglehart and Norris, 2003; Seguino, 2007).²⁴ In this perspective, numerous studies employ self-reported attitudes and actual behaviors of immigrants regarding female education and women’s labor market participation as indicators of assimilation and cultural integration in host countries, showing that among second-generation immigrants the gap relative to natives tends to narrow significantly (Antecol, 2000; Blau et al., 2011; Röder and Mühlau, 2014; Pessin and Arpino, 2018; Scoppa and Stranges, 2019; Bredtmann and Otten, 2025). Particularly relevant to our analysis, Gould and Klor (2016) find that school enrollment and labor market participation among Muslim immigrant women in the United States are strongly and negatively associated with intra-marriages between couples originating from Muslim countries, and are shaped by the local incidence of hate crimes in the State where immigrants reside. Following this literature, we argue that agreeing with statements (i) and (ii), which claim that it is not unfair for men and women to lack equal educational and labor market opportunities, reflects a weaker identification with the values of the host society. Operationally, we therefore construct two dummy variables that take the value 1 if the respondent answers “Very much” to questions (i) and (ii), respectively, and 0 if the response is “Fairly much”, “Not much”, or “Not at all”.

Second, we consider two survey questions regarding the self-reported willingness to undertake actions aimed at promoting one’s own and one’s family’s social integration in Italy: (iii) “In which country would you like your child to go to school?”; and (iv) “How

²³ Genetic distance is a measure of differences in genetic composition between two populations. It is used increasingly in economics as an indicator of cultural differences between countries. For details on the genetic distance measure we use in the analysis, see Spolaore and Wacziarg (2009).

²⁴ For example, drawing on information from the 5th, 6th, and 7th waves of the World Values Survey for the period 2005–2022, the 2023 Gender Social Norms Index released by the United Nations Development Programme indicates that the share of individuals holding gender bias against women in access to education and employment averages 31% and 72%, respectively, across the 14 African countries considered, whereas the corresponding figures for Italy amount to 8% and 29% (see UNDP website: <https://hdr.undp.org/gender-social-norms-index>).

Table 4
The effect of the San Gennaro massacre: alternative treated and control groups.

	Dependent variable: Host				
	Treated: Non-Africans by genetic distance from Ghana		Baseline	Control: Non-African by genetic distance from Ghana	
	25th percentile (1)	10th percentile (2)		25th percentile (4)	50th percentile (5)
Treated $\times$ Post	0.073 (0.086)	0.083 (0.066)	0.271*** (0.062)	0.167** (0.070)	0.330*** (0.075)
<i>Standardized coefficients</i>					
African $\times$ Post			0.055*** (0.013)	0.042*** (0.018)	0.080** (0.018)
Controls	yes	yes	yes	yes	yes
Continent of origin FEs	yes	yes	yes	yes	yes
Place of interview FEs	yes	yes	yes	yes	yes
Adjusted R^2	0.143	0.141	0.157	0.213	0.184
Observations	520	520	655	279	367
Mean dependent	0.610	0.610	0.597	0.605	0.619
$\beta_{bas} - \beta_{25} = 0$: p-value				0.542	
$\beta_{bas} - \beta_{50} = 0$: p-value					0.263

Notes. OLS estimates. In the first two columns, we restrict the analysis to non-African immigrants residing in the Naples metropolitan area. Column (1) reports the regression results considering as the treated group the non-African immigrants originating from countries included in the first quartile of the distribution of genetic distance from Ghana, whereas column (2) further restricts the treated group to non-African immigrants originating from countries in the first decile of this distribution. Column (3) reports the baseline specification using non-African immigrants as the control group, corresponding to column (6) of Table 1. Column (4) restricts the control group to non-African immigrants originating from countries below the median of the distribution of genetic distance from Ghana, while column (5) restricts the control group to non-African immigrants originating from countries in the first quartile of that distribution. Z-score standardization is performed on the main independent variables, *African*, *Post*, and *African $\times$ Post*. Controls as in Table 1. All regressions use sampling weights. Standard errors in parentheses, clustered at the municipality level; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 5
The effect of the San Gennaro massacre: alternative measures of *Host* identity.

	Dependent variable: <i>Host</i>			
	Men earn more than women	Education is better for men	Children study in Italy	Citizenship children
	(1)	(2)	(3)	(4)
African $\times$ Post	-0.109** (0.037)	0.006 (0.068)	0.205*** (0.069)	0.121* (0.065)
Continent of origin FE	yes	yes	yes	yes
Controls	yes	yes	yes	yes
Place of interview FE	yes	yes	yes	yes
Adjusted R^2	0.018	0.083	0.138	0.112
Observations	614	618	631	612
Mean dependent	0.082	0.108	0.483	0.678

Notes. OLS estimates. Controls as in Table 1. All regressions use sampling weights. Standard errors in parentheses, clustered at the municipality level; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

important is it for your children to get Italian citizenship?” For question (iii), we construct an indicator that takes the value of 1 for the answer “In Italy” and 0 otherwise; for question (iv) the indicator takes the value of 1 if the respondent answers “Very much”, and 0 if the response is “Fairly much”, “Not much”, or “Not at all”.

Table 5 reports the results of the DiD estimation of the massacre’s effect on indicators of self-identification with Italy derived from questions (i)–(iv). All coefficients have the expected sign. The likelihood that Africans residing in Naples agree with gender pay inequalities decreases significantly, by 10.9 percentage points more than for non-Africans after the massacre (column 1). By contrast, the share of Africans who state that a good education is more important for men than for women is positive (column 2), although the coefficient is nearly zero and not statistically significant. Similarly, with regard to the indicators of willingness to integrate reported in columns (3) and (4), the likelihood that Africans consider it very important for their children to study in Italy and to obtain Italian citizenship increases by 20.5 and 12.1 percentage points, respectively.

Summarizing, the baseline results are robust to alternative measures of social identity. Overall, the estimated models confirm that African immigrants in the area affected by the massacre exhibit an increased propensity to act in accordance with the intention to integrate into Italy and to share its cultural values.

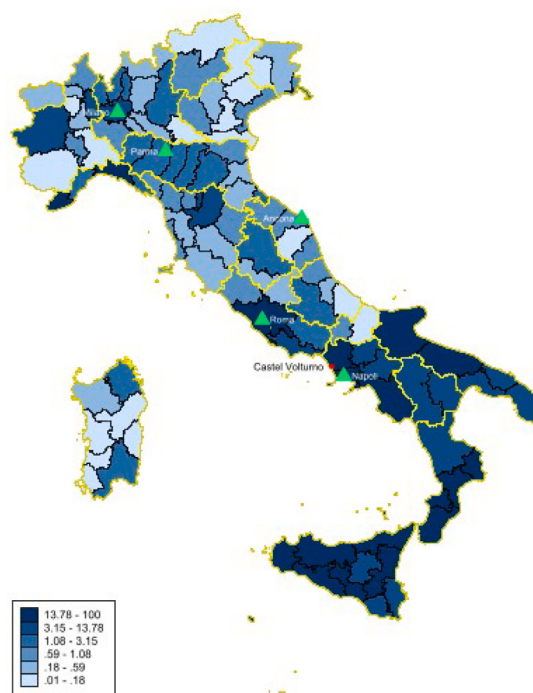


Fig. 8. Mafia-type criminality and solidarity manifestations in Italy.

Notes. The figure displays the Index of Mafia by NUTS 3 provinces for the period 2000–11 provided by the Joint Research Center on Transnational Crime (TRANSCRIME) at the Catholic University of Milan (Italy). Green triangles indicate the cities where demonstrations in support of the African community took place between September and October 2008. Regional borders are marked by yellow lines. (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)

Table 6

The effect of the San Gennaro massacre: the channels.

	Dependent variable: <i>Host</i>			
	Naples		Channels	
			Fear	Solidarity
			<i>MPI_c</i>	<i>Rally_D</i> <i>Rally_md</i>
	(1)	(2)	(3)	(4)
African × Post	−0.014 (0.040)	−0.136* (0.068)	−0.054 (0.035)	0.173* (0.098)
African × Post × Naples	0.237*** (0.051)	0.171** (0.068)	0.251*** (0.061)	0.160 (0.096)
African × Post × Fear		0.003 (0.002)		
African × Post × Solidarity			0.165*** (0.053)	−0.045* (0.022)
Controls	yes	yes	yes	yes
Province FE	yes	yes	yes	yes
Place of interview FE	yes	yes	yes	yes
Continent of origin FE	yes	yes	yes	yes
Adjusted <i>R</i> ²	0.157	0.160	0.161	0.161
Observations	10 256	10 256	10 256	10 256
Mean dependent	0.567	0.567	0.567	0.567

Notes. OLS estimates. Controls as in Table 1. All regressions use sampling weights. Standard errors clustered at province level in parenthesis; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

5.4. Channels

As discussed in Section 3, the strengthening of the identification with Italy within the African community in the Naples area in the aftermath of the racial attack could be due to a heightened perception of the importance of being part of the local community and/or to a diminished sense of social distance from it (Shayo, 2009; Bernard et al., 2016). The first channel might be driven by the fear of living apart from the settlement community and its civil society in a palpably insecure environment under the threat of organized crime. As for the second channel, an increased sense of access to the local community could have stemmed from the demonstrations of solidarity held in response to the massacre by local associations and social groups, which saw extensive participation of Italians calling for justice and greater integration of African immigrants and opposing racism.²⁵

However, the Camorra is active throughout the territory surrounding Castel Volturno, and the power of the clans is felt by immigrants across all the municipalities of the Naples metropolitan area. Similarly, the solidarity rallies in Naples in the days following the massacre saw broad participation of associations and citizens from all over the metropolitan area. Therefore, to shed some light on the channels through which the racial salience of the massacre has affected African immigrants' identification with Italy in the Naples metropolitan area, we extend the analysis to the national level, estimating the following model:

$$\begin{aligned} Host_{it} = & \alpha + \beta_1 African_i + \beta_2 Post_t + \beta_3 Naples_i + \beta_4 Channel_i + \gamma^T DIT \\ & + \delta_1 African_i \times Post_t \times Naples_i + \delta_2 African_i \times Post_t \times Channel_i \\ & + \theta^T X + \lambda_i + \eta_c + \mu_p + \epsilon_{it} \end{aligned} \quad (2)$$

where $Channel = \{Fear, Solidarity\}$ are the variables capturing either the fear or the solidarity effects stemming from the massacre (see below); DIT denotes the vector of the five double interaction terms $African \times Post$, $Naples \times Post$, $Channel \times Post$, $African \times Naples$, and $African \times Channel$; the vector X comprises the same set of individual control variables as the baseline model; λ_i , η_c and μ_p are a set of fixed effects for the place of the interview, the continent of origin and the province of residence of immigrants in Italy.

The fear channel is captured by the relative presence of organized crime in the municipality of residence, measured by the index of mafia presence MPI_c created by Transcrime research center at Cattolica University of Milan for the period 2000–2011. MPI is a comprehensive index of the presence and criminal activity of mafia-type organizations, by municipality.²⁶ It features five indicators: number of murders and attempted murders by mafia, number of crimes of mafia association membership, dissolution of city governments for mafia infiltration, assets confiscated from the mafia, and number of active mafia groups. The indicators are normalized to 100 for the municipality with the highest value, and MPI is the unweighted mean of the five normalized indicators. Fig. 8 reproduces the map of organized crime in Italy. Although, as is known, there is a strong concentration of organized crime in the South, what emerges, interestingly, is that mafia-type crime is spread patchily in the rest of the country with a strong presence, for example, in major cities like Milan, Rome, and Turin, but also in smaller realities such as Florence, Genoa, Imperia and Rimini. In our sample, the highest MPI value (81.7) is for San Gennaro Vesuviano, a municipality in the Naples metropolitan area; the area's MPI average is above the 90th percentile of the nationwide distribution.

The solidarity channel is captured by the mobilization of civil society to protest against racism and to advocate for more effective immigrant integration policies. We gathered information through manual Google searches of the main national media outlets, which reported on large street demonstrations in the cities of Ancona, Milan, Naples, Parma, and Rome in response to the Castel Volturno massacre (the green triangles in Fig. 8). Our first solidarity-channel variable, then, is the dummy variable $Rally_D$, which takes the value 1 if the immigrant resides in one of the six municipalities where demonstrations were held. Second, given the possible mobility of immigrants and the participation in demonstrations of natives from other municipalities, we also use a continuous indicator, $Rally_md$, that captures the geographic distance of immigrants to the demonstrations, and is equal to the log of 1 plus the minimum distance between the immigrant's residence and the six municipalities hosting a street demonstration.

To the extent that in the Naples area both the presence of organized crime and demonstrations of solidarity assume the maximum values in Italy, if the channels of fear and solidarity are operating we expect that (i) the coefficient δ_2 is positive (negative in case of $Rally_md$) and statistically significant and (ii) the value and significance of δ_1 decreases when the channel variable and its interaction terms are included.

The regression results are reported in Table 6. Column (1) confirms that the Castel Volturno massacre induced a statistically significant increase in identification with Italy within the treatment group of African immigrants living in the area. The response of Africans in other Italian municipalities, by contrast, was, on average, not statistically different from that of non-African immigrants.

²⁵ The solidarity rallies that followed the San Gennaro massacre were conceived, organized, and attended by community-based associations and civil-society groups, labor unions, and political organizations that were already active in the area and consistently engaged in pro-immigrant initiatives prior to the massacre. In other words, these groups reacted to the violent event within the framework of their ongoing activities. As a result, the solidarity demonstrations reflect intrinsic features of the local communities, which, owing to the massacre, became salient to the African immigrant community at whom the demonstrations were primarily directed. Just as the San Gennaro massacre may have made it evident to African immigrants that criminality can increase the risk of being separated from the civic segment of the local society and highlighted the need to become part of the host community, the ensuing demonstrations of solidarity may have strengthened their perception of proximity and support from local civil society and institutions and reinforced their sense of belonging. In this sense, both channels – the fear channel and the solidarity channel – originate from the massacre and reflect a more general information disclosure effect generated by the event, which, possibly through different mechanisms, exhibits clear external validity.

²⁶ This index is widely used in the crime literature. For a detailed description of the MPI index and a review of the relevant literature, see Dugato et al. (2020).

Column (2) controls for the presence of mafia-type organizations in the immigrant's municipality of residence. Consistent with the fear channel, we find that after the massacre, the probability that Africans residing in municipalities with a high rate of mafia crime, including those in the Naples area, identify with Italy increases, although the coefficient for the interaction with *Fear* is significant at the 10.6% level. This result may reflect a threshold effect of the mafia's presence, above which the danger of remaining confined to their own ethnic enclave, separated from and in opposition to the rest of society, becomes perceptible, triggering the fear mechanism. However, as noted, the MPI index is above the 90th percentile across all municipalities in the Naples metropolitan area, so no such threshold effect can be considered. Anyway, as confirmation of a fear channel, the results in column (2) show that, once purged of the fear effect of living in an environment with high Camorra intensity, the DiD coefficient for the impact of the massacre on the social identity of the Africans residing in the Naples area is 27.8% lower than in the specification that does not control for the fear channel. Columns (3) and (4) assess the role of civil mobilization against racism in the aftermath of the massacre, using, respectively, a dummy variable for a solidarity rally in the municipality of residence and the minimum distance of immigrants from one of the rallies. In both specifications, the coefficients for the solidarity channel have the expected sign and are statistically significant. What is important to note is that, once again, when solidarity is measured continuously using the minimum distance to the demonstrations, the DiD coefficient for Africans residing in the area of the massacre is 32.5% smaller than in the baseline specification (although only weakly significant, with a p-value of 10.4%), confirming the importance of natives' solidarity demonstrations in explaining the increased attachment to Italy among African immigrants after the massacre.

Summing up, our findings suggest that the increased identification with Italy on the part of African immigrants in the Naples metropolitan area after the massacre was triggered by the vivid perception of both the risks of living apart from the local civil society and the empathy shown by many Italians in numerous, large, and heartfelt street demonstrations against racism.

6. Extensions

6.1. Spillovers

The non-significance of the coefficient for *African* $\times$ *Post* in the first column of Table 6 indicates that, on average, the social identity effects of the massacre were limited to the treatment group of African immigrants in the Naples area. However, the coefficients on the triple-DiD variables for the fear and solidarity channels also capture responses in African communities in other regions, potentially obscuring heterogeneous spillover effects.

6.1.1. The African community in Italy

At the time of the massacre, as still nowadays, African immigrants were a widespread group in Italy, with strong concentrations in the regions of Piedmont, Lombardy, Veneto, Emilia Romagna, Umbria, but also in Calabria, Puglia, and Sicily (Fig. 9 maps the presence of African immigrants in Italian provinces). It is therefore very likely that knowledge of the massacre reached other African communities in the country. The news of the brutal racial violence in Castel Volturno and the protests that followed echoed throughout the country, widely covered by national and local media. In addition to the media, it is conceivable that the information traveled throughout African communities also through word of mouth from those who were at the site of the massacre or came into contact with others who experienced the events. However, insofar as the availability and vividness of media and word-of-mouth information about the massacre decline with geographic distance and, more importantly, with socio-environmental differences from the area of Castel Volturno and the directly affected community, the emotional involvement of African immigrants and the perceived racial salience of the massacre in other regions should also diminish as these differences increase. In particular, the wide presence of mafia-type organizations in other Italian regions and the many demonstrations of support by Italian civil society make it likely that the effect of the fear of living under the yoke of organized crime, as well as the effect of solidarity on the social identity, spills over to the members of the African communities in other municipalities, outside the Naples area.

6.1.2. Estimated model and results

In order to isolate possible spillover effects, we follow the strategy proposed by Albright et al. (2021), estimating the following model:

$$\begin{aligned} Host_{it} = & \alpha + \beta_1 African_i + \beta_2 Post_t + \beta_3 Naples_i + \beta_4 Spillover_i + \gamma^T DIT \\ & + \delta_1 African_i \times Post_t \times Naples_i + \delta_2 African_i \times Post_t \times Spillover_i \\ & + \theta^T X + \lambda_i + \eta_c + \mu_p + \epsilon_{it} \end{aligned} \quad (3)$$

By construction, the *Spillover* variables take the value 0 for immigrants residing in the treatment municipalities of the Naples metropolitan area. In this case, δ_1 captures the direct effect of the massacre on the social identity of African immigrants in Naples, while δ_2 captures the indirect, spillover effects on African immigrants living elsewhere. Therefore, our assumptions for the existence of spillover effects are that: (i) δ_2 is statistically significant; (ii) the estimated differential impact of the massacre on the social identity of the treatment group (δ_1) increases after removing the attenuation effect generated by the spillover impact on the sense of attachment to Italy of African immigrants outside Naples.

First, we consider spillovers via geographical proximity to Castel Volturno, assuming that formal and informal information about the massacre increases with physical proximity. We construct a dummy variable *Proximity_D* that equals 1 for immigrants residing in municipalities within 200 km of Castel Volturno. We also measure proximity as a continuous index ranging from 0 to 1, computed for each municipality as $Proximity_{c_j} = 1 - d_{j,cv}/d_{z,cv}$, where $d_{j,cv}$ is the distance of municipality j from Castel Volturno and $d_{z,cv}$ is the

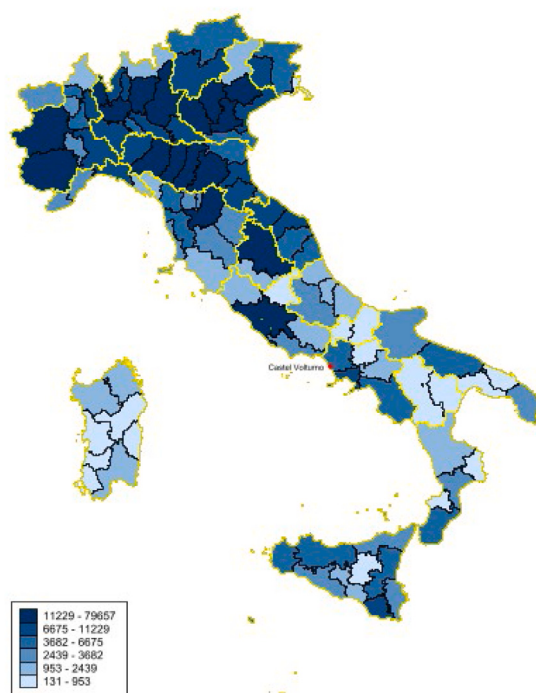


Fig. 9. African community in Italy.

Notes. The Figure shows the number of African immigrants by NUTS 3 province (NUTS-3) in January 2008, drawn from the National Institute of Statistics (ISTAT) “Immigrati.stat” (<http://stra-dati.istat.it/>).

maximum distance between Castel Volturno and the municipalities included in our sample (866 km). Second, we examine possible spillovers working through the fear and solidarity mechanisms described above. Apart from the variables discussed in Section 5.4, to take into account of a possible minimum threshold of mafia intensity below which the fear mechanism is not at work, we also use the indicator variable *MPI_D* which takes value 1 for immigrants in municipalities with an MPI above the median for Italian municipalities and 0 for those below it.

Table 7 reports regression results of this spillover analysis. For the sake of comparison, column (1) reproduces the estimate in the absence of the spillover effects. Columns (2) and (3) show that the impact of the massacre on social identity formation would not appear to have been transmitted to the African communities in the rest of Italy according to the geographical distance from the site of the event: the DiD coefficients for proximity to Castel Volturno is statistically insignificant, and the DiD coefficient for Africans in Naples remains broadly unchanged in magnitude and significance. It is worth noting, in passing, that this null result is reassuring with respect to the correct definition of the control group.

By contrast, the regression results in columns (4)–(7) indicate the presence of spillovers on the social identity of African immigrants in municipalities marked by strong mafia-type organizations and in those where solidarity demonstrations were held. The coefficient on the direct effect of the massacre on identification with Italy in the Naples area is generally higher than in the specification without spillovers, while the coefficients on the triple interactions involving the spillover variables are significant and have the expected sign. This result is confirmed in column (8), which includes both spillover channels. Since *Rally_D* is equal to 1 in municipalities where the mafia presence is above the median, the estimated coefficient on *African* × *Post* × *Rally_D* increases, while that of *African* × *Post* × *MPI_D* decreases and loses significance. More interestingly, the coefficient on *African* × *Post* is negative and statistically significant. This suggests that for African immigrants outside Naples in municipalities with weaker mafia presence and less of a show of community solidarity, an “animosity” effect may have prevailed, undermining their identification with Italian society.

6.2. Persistence effects

The analysis to this point shows that the racial hatred that led the violent attack on the African community produced an immediate change in the self-reported social identity of Africans in the area of the massacre. An interesting question is whether the memory of the massacre prolonged the immediate response, generating longer-term persistence within the African community.

A strand of the literature holds that the formation of immigrants’ identities is a long-term process shaped primarily by the transmission of values and beliefs deeply rooted in their country of origin Bisin and Verdier (2000, 2001, 2023). Less explored are

Table 7

The effect of the San Gennaro massacre: spillover effects.

	Dependent variable: <i>Host</i>							
	Naples	Spillovers						
		Proximity to Castel Volturno		Fear		Solidarity		Fear & Solidarity
		<i>Proximity_D</i>	<i>Proximity_c</i>	<i>MPI_D</i>	<i>MPI_c</i>	<i>Rally_D</i>	<i>Rally_md</i>	<i>Dummy</i>
African × Post	−0.014 (0.040)	−0.020 (0.042)	0.004 (0.043)	−0.086** (0.032)	−0.141** (0.067)	−0.054 (0.035)	0.214 (0.134)	−0.094*** (0.032)
African × Post × Naples	0.237*** (0.051)	0.243*** (0.054)	0.219*** (0.059)	0.309*** (0.037)	0.362*** (0.073)	0.273*** (0.045)	0.006 (0.139)	0.313*** (0.037)
African × Post × Proximity C.V.		0.122 (0.072)	−0.054 (0.117)					
African × Post × Fear				0.135* (0.070)	0.003* (0.002)			0.064 (0.066)
African × Post × Solidarity						0.254*** (0.046)	−0.053* (0.029)	0.339*** (0.052)
Controls	yes	yes	yes	yes	yes	yes	yes	yes
Province FE	yes	yes	yes	yes	yes	yes	yes	yes
Place of interview FE	yes	yes	yes	yes	yes	yes	yes	yes
Continent of origin FE	yes	yes	yes	yes	yes	yes	yes	yes
Adjusted R^2	0.157	0.157	0.156	0.157	0.160	0.161	0.161	0.162
Observations	10 256	10 256	10 256	10 256	10 256	10 256	10 256	10 256
Mean dependent	0.567	0.567	0.567	0.567	0.567	0.567	0.567	0.567

Notes. OLS estimates. Controls as in Table 1. All regressions use sampling weights. Standard errors in parentheses, clustered at the province level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

the possible long-term effects of one-off and transient events on immigrants' self-identification. In this case, the question is whether the emotional response to significant events is destined to hold only in the short run, or instead to trigger deeper identity changes that can persist and be passed on to subsequent cohorts of immigrants.

This section examines the persistence effects of the San Gennaro massacre on Africans' sense of attachment to Italy in the Naples metropolitan area. We exploit data from the 2015 wave of the ISMU survey. This second wave gives the same information on individual characteristics, social and economic conditions, and social identity of immigrants as the first wave, on which our analysis of the immediate impact is based. Although the second wave covers a smaller sample of immigrants for a subset of the municipalities included in the 2008 survey, 45% of the interviews (1600 out of 3550) were in the Naples metropolitan area.

We augment the baseline model (1) with a difference-in-differences term to test for the persistence, seven years after the event, of a differential impact of the massacre on the social identity of African compared to non-African immigrants:

$$Host_{it} = \alpha + \beta_1 African_i + \beta_2 Post_{08}_i + \beta_3 Post_{15}_i + \gamma_1 African_i \times Post_{08}_i + \gamma_2 African_i \times Post_{15}_i + \theta^T X + \lambda_i + \eta_c + \epsilon_{it} \quad (4)$$

where *Post₀₈* and *Post₁₅* are dummies taking the value 1 for immigrants interviewed in the 2008 and 2015 waves of the ISMU survey, respectively.

To capture the role of the event in transmitting identity values of closeness and integration with the local community, among the African and non-African immigrants interviewed in 2015, we select immigrants whose countries of origin were included in the post-shock 2008 survey. The results (Table 8) indicate that the impact on the social identity of Africans persisted in 2015 but was somewhat less strong than on the heels of the massacre.

In particular, we find that for the Africans who reside in the Naples metropolitan area, the difference between the probability of feeling a strong sense of belonging to Italy before and seven years after the massacre is 16.4 percentage points greater than for immigrants belonging to ethnic groups not directly affected. In column (2), which extends the analysis to ethnic groups not present in the Naples area in the months immediately preceding or following the massacre and thus not directly experiencing the fear and solidarity of those dramatic days, the persistence effect is much smaller and not statistically significant. This supports the hypothesis that transitory shocks can have persistent effects on social identity through the transmission of new beliefs and preferences within ethnic groups.

6.3. Identity orientation

The strengthening of identification with Italy in the African community in the aftermath of the San Gennaro massacre could reflect radically different patterns of adaptation to the norms and values of the host society, engendering positive or negative repercussions on the level of self-esteem and psychological well-being. In particular, it is possible that the increased sense of attachment to Italy was experienced by Africans as the renunciation of their own ethnic identity, forced by the context rather than freely chosen, a sort

Table 8
The long-term effects of the San Gennaro massacre.

	Dependent variable: <i>Host</i>	
	Countries in 2008 sample (1)	All countries (2)
African × Post (2008)	0.186*** (0.061)	0.176** (0.066)
African × Post (2015)	0.164* (0.082)	0.033 (0.085)
Controls	yes	yes
Continent of origin FE	yes	yes
Place of interview FE	yes	yes
Adjusted R^2	0.178	0.177
Observations	1880	2147
Mean dependent	0.487	0.473

Notes. OLS estimates. Controls as in Table 1. All regressions use sampling weights. Standard errors in parentheses, clustered at the municipality level; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

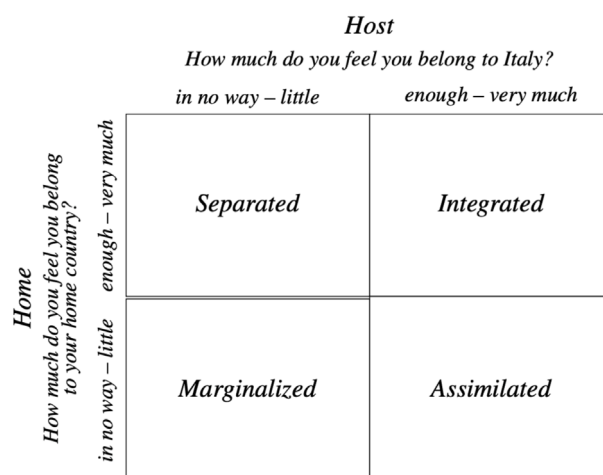


Fig. 10. Social identity orientation.

of betrayal of the values of their community and family of origin. In this case, as recent literature on social psychology and economic integration has highlighted, a clash of cultures could result, potentially negatively affecting immigrants' self-esteem (Phinney et al., 1997; Dahl et al., 2022).

Following the acculturation model of Berry (1997), we can distinguish four identity orientations that reflect the immigrant's desire to absorb and conform to the cultural traits of the host country and the desire to retain and strive for the culture of origin (see Fig. 10). If the strong sense of belonging to the host country is accompanied by an equally strong attachment to the norms and values of the country of origin and the will not to give them up, we have an *integrated* identity orientation. If, instead, the desire to integrate into the host community goes hand in hand with the desire to detach from the community of origin, we have an *assimilation* identity. Likewise, we can distinguish between a *separated* and a *marginalized* identity orientation depending on whether a weak sense of affinity with host-country norms and values is accompanied by either a strong or a weak sense of identification with the community of origin.

The choice of identity orientation has important consequences for immigrants. The empirical evidence suggests that young and adult immigrants with an integrated identity orientation, connected equally strongly to the host and origin cultures, have greater subjective well-being, better academic performance, and economic outcomes than those with separated and marginalized identities and also, albeit less markedly, compared with those who have an assimilated orientation (Phinney et al., 2001; Constant and Zimmermann, 2008; Nekby and Rodin, 2010).

To gauge the impact of the Camorra attack on the broader identity orientation of African immigrants, we use survey information on immigrants' attachment to their ethnic group, based on responses to the question "How much do you feel you belong to your home country?" Given four possible answers: "far too little", "only a little", "fairly much", and "very much", we create an indicator variable *Home* that takes the value 1 if the respondent indicates "fairly much" or "very much" and 0 otherwise.

Table 9
The effect of the San Gennaro massacre on immigrants' identity orientation.

	OLS	Biprobit	
	<i>Home</i> (1)	<i>Home</i> (2)	<i>Host</i> (3)
African	0.197*** (0.051)	1.085*** (0.203)	−0.602** (0.238)
Post	0.017 (0.042)	−0.040 (0.198)	0.365** (0.180)
African × Post	−0.055 (0.060)	−0.266 (0.316)	0.853*** (0.197)
Controls	yes	yes	yes
Continent of origin FE	yes	yes	yes
Place of interview FE	yes	yes	yes
R ²	0.121		
ρ			−0.186**
Observations	652	652	652

Notes. OLS estimates in columns (1), bivariate probit estimates in columns (2)–(3). Robust standard errors in parenthesis; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. The sample consists of immigrants in Naples. Controls as in Table 1. Sampling weights are used.

Table 10
Probability of identity orientation.

	Pr(<i>Identity orientation</i>) Before September 18th			Pr(<i>Identity orientation</i>) After September 18th		
	Africans	Non Africans	Δ	Africans	Non Africans	Δ
Marginalized	0.015***	0.051***	−0.037***	0.008	0.038***	−0.030***
Separated	0.630***	0.395***	0.235***	0.248***	0.291***	−0.043
Assimilated	0.015***	0.094***	−0.079***	0.041**	0.115***	−0.073**
Integrated	0.340***	0.460***	−0.119*	0.702***	0.556***	0.146**

Notes. The table reports the average probability of identity orientations for Africans and non-Africans – $E[Pr(Home = z, Host = z' | X)]$, for $z, z' = (0, 1)$ – and the corresponding differences computed from the bivariate probit estimates for the Naples subsample reported in Table 9, using the Stata commands “margins Africans#Post, predict(p)” and “margins r.Africans, at(Post=(0 1))”. Robust standard errors. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

As a preliminary step, we replicate our baseline DiD analysis using *Home* as the dependent variable. The regression for the subsample of immigrants in Naples (Table 9, column (1)) shows that Africans are more attached to their own ethnic group than other immigrants, but the racial attack had no differential effect between immigrants of different ethnic groups. Taken together with the increase in the sense of attachment to Italy, this finding indicates that the identity orientation of African immigrants shifted from segregation/separation toward assimilation/integration.

To determine which of these patterns of change in identity orientation were triggered by the massacre, we estimate a bivariate probit model for *Home* and *Host*, allowing for possible correlations between the unobserved factors in the error terms of the two models. Results are reported in columns (2) and (3) of Table 9. The correlation coefficient is negative and statistically significant; hence, the attachment to home and host countries needs to be estimated simultaneously. The effects of the massacre on immigrants' social identity are confirmed: Africans are significantly more attached to Italy than other immigrants, while the attachment to their home country remains unchanged. Based on the bivariate regression, we compute the average predicted probability of immigrants' being integrated, assimilated, separated and segregated – respectively $Pr(Host = 1 \text{ and } Home = 1)$, $Pr(Host = 1 \text{ and } Home = 0)$, $Pr(Host = 0 \text{ and } Home = 1)$ and $Pr(Host = 0 \text{ and } Home = 0)$ – before and after the massacre. Table 10 reports the contrast estimate for African and non-African immigrants.

The African immigrants' increased sense of belonging to Italy in the aftermath of the massacre took the form of a shift in their identity orientation from separated to integrated, contradicting the hypothesis of a clash of cultures. Specifically, the average probability of Africans' nourishing a feeling of identity separation, swinging between the high value attributed to the culture of origin and the relative lack of interest in interacting with the settlement community, plummeted from 63% before to 25% after the massacre. At the same time, the probability of identity integration among Africans who value both the absorption of Italian culture and respect for the original culture and norms jumped by more than 36 percentage points, from 34% to 70.2%. A similar shift from separation to integration was also experienced by immigrants of other ethnicities, but with much lower intensity than for African immigrants, leading in fact to a reversal in the model of identity orientation prevalent between the two groups: before the massacre Africans were on average more likely than non-Africans to have a separated identity orientation (23 percentage points

higher) and less likely to have an integrated orientation (−12 percentage points), whereas after the massacre the opposite held (−4 and 15 percentage points for separated and integrated identity, respectively).

7. Conclusions

Notwithstanding the pressing need to foster the integration of immigrants in destination countries and reduce their opposition to the host society, little is known about how this process may be influenced by the contexts in which they live. This paper helps to plug this gap by analyzing the effects of an immediate event – the brutal San Gennaro massacre of 2008 against the African community in a small town near Naples at the hands of the powerful local Camorra clans – on African immigrants' sense of self.

Using a difference-in-differences approach, we compare the change in social identity outcomes of African immigrants (the treatment group) before and after the massacre with the change in social identity outcomes of non-African immigrants in the same area (the control group). We find that in response to the brutal crime of racial hatred, the heightened perception of the dangers of living apart from the host community and of the solidarity of Italian natives led the African immigrants to develop a stronger sense of belonging to Italy. The racial salience of the massacre persisted over time in the African community of the Naples metropolitan area, with a long-term impact on the sense of identification with Italy. This strengthened attachment to Italy among immigrants from the African community in the Naples metropolitan area has been accompanied by a persistent attachment to their countries of origin, indicating a process of identity integration rather than assimilation.

Finally, we find that the impact of the massacre on the social identity of immigrants has spilled over to African communities in the rest of Italy, increasing identification with Italy in municipalities characterized by a context marked, like that of Naples, by a strong presence of mafia-type organizations and by a broad mobilization of civil society in street demonstrations against racism, and reducing it in other municipalities.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A

See Fig. A.1 and Tables A.1–A.8.

Appendix B. Supplementary data

Supplementary material related to this article can be found online at <https://doi.org/10.1016/j.euroecorev.2026.105413>.

Data availability

Data will be made available on request.

Table A.1

Descriptive statistics: restricted sample.

Variables	Panel A: Naples								
	All			Africans			Non-Africans		
	(1) obs.	(2) mean	(3) sd	(4) obs.	(5) mean	(6) sd	(7) obs.	(8) mean	(9) sd
Host	655	0.603	0.490	135	0.526	0.501	520	0.623	0.485
Home	652	0.906	0.291	134	0.910	0.287	518	0.905	0.293
Male	655	0.510	0.500	135	0.830	0.377	520	0.427	0.495
Age	655	36.441	9.659	135	34.474	8.075	520	36.952	9.973
No education	655	0.122	0.328	135	0.170	0.377	520	0.110	0.313
Compulsory	655	0.302	0.460	135	0.363	0.483	520	0.287	0.453
High school	655	0.408	0.492	135	0.326	0.470	520	0.429	0.495
Bachelor or above	655	0.168	0.374	135	0.141	0.349	520	0.175	0.380
Marital status	655	0.478	0.500	135	0.385	0.488	520	0.502	0.500
Muslim	655	0.218	0.413	135	0.733	0.444	520	0.085	0.279
Christian	655	0.573	0.495	135	0.200	0.401	520	0.669	0.471
Buddhist	655	0.095	0.293	135	0.000	0.000	520	0.119	0.324
Hindu	655	0.024	0.154	135	0.000	0.000	520	0.031	0.173
Sikh	655	0.008	0.087	135	0.000	0.000	520	0.010	0.098
Other religion	655	0.008	0.087	135	0.007	0.086	520	0.008	0.087
No religion	655	0.075	0.263	135	0.059	0.237	520	0.079	0.270
Children in Italy	655	0.311	0.463	135	0.274	0.448	520	0.321	0.467
Years since arrival	655	7.814	5.598	135	9.296	6.903	520	7.429	5.144
Italian proficiency	655	3.276	1.037	135	3.343	1.038	520	3.259	1.037
Irregular legal status	655	0.290	0.454	135	0.370	0.485	520	0.269	0.444
Variables	Panel B: Italy								
	All			Africans			Non-Africans		
	(1) obs.	(2) mean	(3) sd	(4) obs.	(5) mean	(6) sd	(7) obs.	(8) mean	(9) sd
Host	10 256	0.558	0.497	3644	0.528	0.499	6612	0.575	0.494
Home	10 177	0.907	0.290	3615	0.921	0.269	6562	0.900	0.301
Male	10 256	0.524	0.499	3644	0.726	0.446	6612	0.413	0.492
Age	10 256	35.196	10.178	3644	34.151	9.127	6612	35.771	10.670
No education	10 256	0.072	0.258	3644	0.115	0.319	6612	0.048	0.214
Compulsory	10 256	0.320	0.467	3644	0.353	0.478	6612	0.303	0.459
High school	10 256	0.423	0.494	3644	0.385	0.487	6612	0.445	0.497
Bachelor or above	10 256	0.184	0.388	3644	0.148	0.355	6612	0.204	0.403
Marital status	10 256	0.533	0.499	3644	0.520	0.500	6612	0.541	0.498
Muslim	10 256	0.389	0.487	3644	0.745	0.436	6612	0.192	0.394
Christian	10 256	0.484	0.500	3644	0.220	0.414	6612	0.629	0.483
Buddhist	10 256	0.033	0.179	3644	0.001	0.033	6612	0.051	0.220
Hindu	10 256	0.016	0.125	3644	0.011	0.105	6612	0.018	0.134
Sikh	10 256	0.006	0.075	3644	0.000	0.017	6612	0.009	0.092
Other religion	10 256	0.010	0.098	3644	0.009	0.093	6612	0.010	0.100
No religion	10 256	0.063	0.243	3644	0.014	0.116	6612	0.090	0.287
Children in Italy	10 256	0.339	0.473	3644	0.312	0.463	6612	0.354	0.478
Years since arrival	10 256	7.347	6.155	3644	8.322	6.976	6612	6.809	5.580
Italian proficiency	10 256	3.458	1.034	3644	3.423	1.062	6612	3.477	1.018
Irregular legal status	10 256	0.112	0.315	3644	0.156	0.363	6612	0.088	0.283

Table A.2

Descriptive statistics: whole sample.

Variables	Panel A: Naples								
	All			Africans			Non-Africans		
	(1) obs.	(2) mean	(3) sd	(4) obs.	(5) mean	(6) sd	(7) obs.	(8) mean	(9) sd
Host	870	0.608	0.488	164	0.512	0.501	702	0.628	0.484
Home	883	0.906	0.292	167	0.910	0.287	713	0.905	0.294
Male	894	0.515	0.500	166	0.819	0.386	724	0.445	0.497
Age	890	35.976	9.632	167	33.850	8.174	720	36.532	9.847
No education	811	0.143	0.350	161	0.199	0.400	647	0.130	0.336
Compulsory	811	0.307	0.462	161	0.373	0.485	647	0.289	0.454

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Table A.2 (continued).

Variables	Panel A: Naples								
	All			Africans			Non-Africans		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	obs.	mean	sd	obs.	mean	sd	obs.	mean	sd
High school	811	0.386	0.487	161	0.298	0.459	647	0.408	0.492
Bachelor or above	811	0.164	0.370	161	0.130	0.338	647	0.173	0.379
Marital status	881	0.474	0.500	165	0.364	0.483	713	0.501	0.500
Muslim	846	0.217	0.413	164	0.756	0.431	679	0.085	0.280
Christian	846	0.556	0.497	164	0.183	0.388	679	0.647	0.478
Buddhist	846	0.119	0.324	164	0.000	0.000	679	0.149	0.356
Hindu	846	0.022	0.148	164	0.000	0.000	679	0.028	0.165
Sikh	846	0.006	0.077	164	0.000	0.000	679	0.007	0.086
Other religion	846	0.011	0.103	164	0.006	0.078	679	0.012	0.108
No religion	846	0.069	0.253	164	0.055	0.228	679	0.072	0.259
Children in Italy	839	0.321	0.467	162	0.259	0.440	674	0.337	0.473
Years since arrival	883	7.398	5.252	166	8.831	6.640	715	7.073	4.824
Italian proficiency	895	3.183	1.049	167	3.256	1.024	725	3.161	1.053
Irregular legal status	832	0.281	0.450	157	0.350	0.479	671	0.264	0.441
Variables	Panel B: Italy								
	All			Africans			Non-Africans		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	obs.	mean	sd	obs.	mean	sd	obs.	mean	sd
Host	11 748	0.555	0.497	4106	0.520	0.500	7615	0.574	0.495
Home	11 896	0.906	0.291	4162	0.921	0.270	7708	0.899	0.302
Male	11 990	0.522	0.500	4201	0.723	0.448	7763	0.413	0.492
Age	11 990	35.044	10.132	4202	33.953	9.096	7764	35.647	10.599
No education	11 702	0.077	0.267	4110	0.123	0.329	7565	0.052	0.223
Compulsory	11 702	0.323	0.468	4110	0.358	0.479	7565	0.304	0.460
High school	11 702	0.417	0.493	4110	0.373	0.484	7565	0.441	0.497
Bachelor or above	11 702	0.182	0.386	4110	0.146	0.353	7565	0.202	0.402
Marital status	11 881	0.524	0.499	4167	0.505	0.500	7689	0.536	0.499
Muslim	11 619	0.385	0.487	4098	0.738	0.440	7498	0.193	0.395
Christian	11 619	0.484	0.500	4098	0.226	0.418	7498	0.625	0.484
Buddhist	11 619	0.035	0.185	4098	0.001	0.031	7498	0.054	0.227
Hindu	11 619	0.016	0.125	4098	0.011	0.105	7498	0.018	0.134
Sikh	11 619	0.006	0.075	4098	0.000	0.022	7498	0.009	0.092
Other religion	11 619	0.010	0.099	4098	0.009	0.092	7498	0.011	0.103
No religion	11 619	0.064	0.245	4098	0.015	0.121	7498	0.090	0.286
Children in Italy	11 847	0.332	0.471	4159	0.301	0.459	7663	0.349	0.477
Years since arrival	11 937	7.188	6.091	4189	8.041	6.920	7727	6.727	5.537
Italian proficiency	11 958	3.421	1.046	4181	3.382	1.070	7751	3.440	1.032
Irregular legal status	11 675	0.114	0.318	4080	0.155	0.362	7567	0.092	0.289

Table A.3

Variables description.

Home	dummy = 1 if the respondent answers <i>Enough</i> or <i>Very Much</i> to the question: <i>How much do you feel you belong to your home country?</i>
Host	dummy = 1 if the respondent answers <i>Enough</i> or <i>Very Much</i> to the question: <i>How much do you feel you belong to Italy?</i>
African	dummy = 1 if the respondent's nationality belongs to an African country
Post	dummy = 1 if the respondent is interviewed after the date of the massacre (September 18th)
Male	dummy = 1 if the respondent is male
Age	Respondent's age
No education	dummy = 1 if the respondent has no educational qualification
Compulsory	dummy = 1 if the respondent has attended compulsory schooling
High school	dummy = 1 if the respondent has a high school diploma
Bachelor or above	dummy = 1 if the respondent has graduated or more
Marital status	dummy = 1 if the respondent is married
Muslim	dummy = 1 if the respondent is Muslim
Christian	dummy = 1 if the respondent is Christian
Buddhist	dummy = 1 if the respondent is Buddhist

(continued on next page)

Table A.3 (continued).

Hindu	dummy = 1 if the respondent is Hindu
Sikh	dummy = 1 if the respondent is Sikh
Other religion	dummy = 1 if the respondent reports affiliation with other religions
No religion	dummy = 1 if the respondent is not religious
Children in Italy	dummy = 1 if the respondent has children and they live in Italy with her/him
Years since arrival	Respondent's # of years spent in Italy
Italian proficiency	Average reading, writing, listening, and speaking score, as self-reported by the respondent (in a scale from 1 to 5)
Irregular legal status	dummy = 1 if the respondent is undocumented

Table A.4

Place of interviews.

Support centers	<i>reception, work, health, counseling service, refectory, public offices</i>
Service centers	<i>phone centers, money transfer agencies</i>
Training centers	<i>Italian courses, professional training courses, schools, universities</i>
Worship centers	<i>churches, mosques, temples</i>
Ethnic shops	<i>kebab shops, Islamic butchers, take-aways, food products</i>
Places of entertainment	<i>cinema, discos, sports facilities, bars, restaurants, shopping centers</i>
Meeting places	<i>stations, squares, parks, lakes</i>
Markets	<i>municipal markets, flower markets, fruit and vegetable markets</i>
Workplaces	<i>construction sites, textile workshops, restaurants and hotels, gatehouses, agricultural fields and farms</i>
Associations and cultural centers	
Private residences	

Table A.5

Descriptive statistics before and after the massacre: restricted sample.

Variables	Naples						Italy					
	African			Non-African			African			Non-African		
	Before (1)	After (2)	t-test (3)	Before (4)	After (5)	t-test (6)	Before (7)	After (8)	t-test (9)	Before (10)	After (11)	t-test (12)
Host	0.364	0.741	0.378***	0.550	0.684	0.134**	0.436	0.551	0.115***	0.492	0.600	0.108***
Home	0.935	0.877	-0.058	0.899	0.911	0.012	0.921	0.922	0.000	0.897	0.900	0.004
Male	0.805	0.862	0.057	0.387	0.461	0.074	0.772	0.715	-0.057**	0.446	0.403	-0.043**
Age	33.688	35.517	1.829	38.487	35.656	-2.831**	34.243	34.128	-0.116	35.619	35.817	0.199
No education	0.117	0.241	0.124	0.046	0.163	0.117***	0.128	0.111	-0.016	0.046	0.049	0.003
Compulsory	0.299	0.448	0.150	0.269	0.301	0.033	0.391	0.343	-0.048*	0.349	0.289	-0.060***
High school	0.416	0.207	-0.209*	0.433	0.426	-0.007	0.349	0.394	0.045*	0.433	0.448	0.015
Bachelor or above	0.169	0.103	-0.065	0.252	0.110	-0.142***	0.132	0.152	0.020	0.172	0.214	0.042***
Marital status	0.351	0.431	0.080	0.513	0.493	-0.020	0.539	0.515	-0.025	0.517	0.548	0.031*
Muslim	0.662	0.828	0.165*	0.080	0.089	0.009	0.812	0.728	-0.085***	0.176	0.197	0.021
Christian	0.286	0.086	-0.200**	0.718	0.628	-0.091*	0.164	0.234	0.070***	0.684	0.613	-0.071***
Buddhist	0.000	0.000	0.000	0.067	0.163	0.096***	0.001	0.001	-0.000	0.044	0.053	0.009
Hindu	0.000	0.000	0.000	0.034	0.028	-0.005	0.000	0.014	0.014**	0.014	0.020	0.006
Sikh	0.000	0.000	0.000	0.013	0.007	-0.006	0.000	0.000	0.000	0.010	0.008	-0.002
Other religion	0.013	0.000	-0.013	0.008	0.007	-0.001	0.005	0.010	0.004	0.007	0.011	0.004
No religion	0.039	0.086	0.047	0.080	0.078	-0.002	0.016	0.013	-0.003	0.065	0.098	0.032***
Children in Italy	0.182	0.397	0.215**	0.307	0.333	0.027	0.302	0.315	0.013	0.328	0.361	0.034*
Years since arrival	8.506	10.345	1.838	7.391	7.461	0.070	8.410	8.300	-0.110	6.499	6.902	0.403*
Italian proficiency	3.269	3.440	0.170	3.297	3.226	-0.071	3.300	3.455	0.155***	3.398	3.501	0.103***
Irregular legal status	0.519	0.172	-0.347***	0.366	0.188	-0.178***	0.236	0.135	-0.101***	0.119	0.078	-0.041***

Table A.6

Descriptive statistics before and after the massacre: whole sample.

Variables	Naples						Italy					
	African			Non-African			African			Non-African		
	Before (1)	After (2)	t-test (3)	Before (4)	After (5)	t-test (6)	Before (7)	After (8)	t-test (9)	Before (10)	After (11)	t-test (12)
Host	0.393	0.637	0.245**	0.570	0.669	0.099**	0.445	0.539	0.094***	0.503	0.595	0.092***
Home	0.906	0.915	0.009	0.892	0.914	0.022	0.922	0.921	-0.001	0.894	0.900	0.007
Male	0.800	0.840	0.040	0.382	0.486	0.104**	0.752	0.716	-0.037*	0.436	0.406	-0.031*

(continued on next page)

Table A.6 (continued).

Variables	Naples						Italy					
	African			Non-African			African			Non-African		
	Before (1)	After (2)	t-test (3)	Before (4)	After (5)	t-test (6)	Before (7)	After (8)	t-test (9)	Before (10)	After (11)	t-test (12)
Age	33.667	34.036	0.369	38.320	35.351	−2.969***	34.151	33.905	−0.246	35.570	35.678	0.108
No education	0.120	0.282	0.162*	0.044	0.195	0.151***	0.134	0.120	−0.014	0.051	0.053	0.003
Compulsory	0.313	0.436	0.123	0.263	0.306	0.043	0.391	0.350	−0.041*	0.346	0.291	−0.054***
High school	0.398	0.192	−0.205**	0.434	0.388	−0.047	0.344	0.380	0.036	0.430	0.444	0.014
Bachelor or above	0.169	0.090	−0.079	0.259	0.111	−0.148***	0.130	0.150	0.019	0.174	0.211	0.037***
Marital status	0.353	0.375	0.022	0.481	0.517	0.036	0.520	0.501	−0.019	0.504	0.545	0.041**
Muslim	0.671	0.848	0.178**	0.081	0.089	0.008	0.799	0.723	−0.075***	0.171	0.200	0.029**
Christian	0.282	0.076	−0.206***	0.724	0.592	−0.133***	0.176	0.238	0.061***	0.690	0.606	−0.084***
Buddhist	0.000	0.000	0.000	0.071	0.202	0.131***	0.001	0.001	−0.000	0.042	0.058	0.016*
Hindu	0.000	0.000	0.000	0.032	0.026	−0.006	0.000	0.014	0.014***	0.013	0.020	0.007
Sikh	0.000	0.000	0.000	0.011	0.005	−0.005	0.000	0.001	0.001	0.009	0.008	−0.001
Other religion	0.012	0.000	−0.012	0.007	0.015	0.008	0.006	0.009	0.003	0.007	0.012	0.005
No religion	0.035	0.076	0.041	0.074	0.071	−0.003	0.017	0.014	−0.003	0.068	0.097	0.029***
Children in Italy	0.171	0.350	0.179**	0.312	0.353	0.041	0.292	0.303	0.011	0.325	0.356	0.031*
Years since arrival	8.214	9.463	1.249	7.210	6.998	−0.212	8.200	8.003	−0.197	6.463	6.804	0.341*
Italian proficiency	3.253	3.259	0.006	3.280	3.081	−0.199*	3.282	3.407	0.125**	3.393	3.454	0.061*
Irregular legal status	0.506	0.176	−0.330***	0.357	0.189	−0.169***	0.227	0.137	−0.091***	0.120	0.083	−0.037***

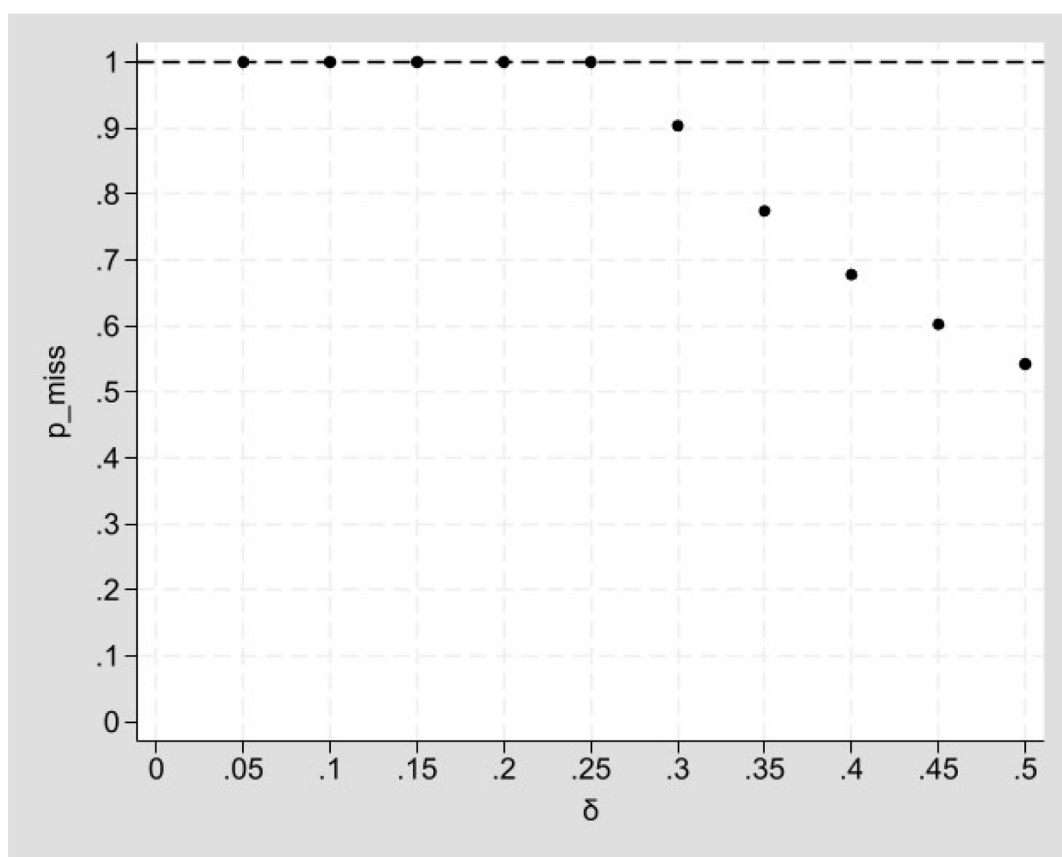


Fig. A.1. Tipping-point analysis for the DiD estimate under the missing not at random assumption (MNAR).

Notes. The figure displays the share p_{miss} of missing observations for African immigrants in the post-massacre period that would need to be added to the observed sample to eliminate the DiD effect, under the assumption that the proportion of $Host = 1$ among missing observations is lower by an amount δ compared to the proportion of $Host = 1$ among non-missing observations, where $p_{miss} = \hat{\beta}_{DiD}/\delta$ and $\hat{\beta}_{DiD} = 0.269$ (see Table 1, column 6).

Table A.7

The effect of the San Gennaro massacre in the Naples metropolitan area: - control variables coefficients.

	Dependent variable: <i>Host</i>				
	Whole sample	Restricted sample			
	(1)	(2)	(3)	(4)	(5)
African	−0.142*** (0.035)	−0.141*** (0.042)	−0.168** (0.068)	−0.191** (0.074)	−0.208** (0.081)
Post	0.052 (0.039)	0.094** (0.042)	0.139*** (0.045)	0.124** (0.048)	0.128* (0.065)
African × Post	0.139** (0.060)	0.226*** (0.069)	0.220*** (0.057)	0.233*** (0.056)	0.271*** (0.062)
Male			0.085 (0.051)	0.083* (0.046)	0.094** (0.037)
Age			0.036*** (0.011)	0.035*** (0.011)	0.036*** (0.010)
Age ²			−0.001*** (0.000)	−0.000*** (0.000)	−0.000*** (0.000)
Compulsory			0.035 (0.076)	0.035 (0.080)	0.060 (0.076)
High school			0.029 (0.117)	0.026 (0.120)	0.057 (0.119)
Bachelor or above			0.049 (0.080)	0.040 (0.086)	0.065 (0.081)
Marital status			0.033 (0.051)	0.033 (0.054)	0.025 (0.059)
Christian			0.129** (0.060)	0.130* (0.063)	0.146* (0.076)
Buddhist			0.038 (0.066)	0.047 (0.071)	0.032 (0.079)
Hindu			0.309*** (0.082)	0.308*** (0.088)	0.341*** (0.083)
Sikh			0.239*** (0.081)	0.235** (0.104)	0.260** (0.122)
Other religion			0.177 (0.207)	0.175 (0.214)	0.160 (0.152)
No religion			0.008 (0.073)	0.018 (0.075)	0.042 (0.095)
Children in Italy			−0.011 (0.036)	−0.006 (0.034)	−0.010 (0.041)
Years since arrival			0.019*** (0.003)	0.019*** (0.003)	0.018*** (0.002)
Italian proficiency			0.099*** (0.018)	0.102*** (0.017)	0.103*** (0.017)
Irregular legal status			0.047 (0.046)	0.054 (0.043)	0.046 (0.043)
Continent of origin FEs	no	no	no	yes	yes
Place of interview FEs	no	no	no	no	yes
Adjusted R^2	0.010	0.025	0.151	0.156	0.157
African × Post (standardized β s)	0.027** (0.012)	0.046*** (0.014)			
$\beta_w - \beta_r = 0$: p -value	0.30				
Observations	862	655	655	655	655
Mean dependent	0.599	0.597	0.597	0.597	0.597

Notes. OLS estimates. Column (1) reports estimates for the whole sample, while columns (2)–(5) use the restricted sample as in Table 1. β_w and β_r denote the z -score standardized coefficients for African × Post in regression based on the whole and restricted samples, respectively. All regressions use sampling weights. Standard errors in parentheses, clustered at the municipality level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.8

DiD results for immigrant status.

	Dependent variable:	
	Irregular legal status (1)	Irregular employed (2)
African $\times$ Post	−0.081 (0.105)	0.004 (0.081)
Controls	yes	yes
Continent of origin FEs	yes	yes
Place of interview FEs	yes	yes
Adjusted R^2	0.210	0.087
Observations	655	633
Mean dependent	0.263	0.281

Notes. OLS estimates. Controls as in Table 1. All regressions use sampling weights. Standard errors in parentheses, clustered at the municipality level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

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