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Hacking Anti-Immigrant Attitudes among Teenagers in Italian High Schools

Sara Giunti, Andrea Guariso, Mariapia Mendola, and Irene Solmone

Immigration has become one of the most politically and socially divisive issues in advanced economies. While increasing ethnic diversity has generated important economic, demographic, and cultural opportunities, it has also fueled concerns about social cohesion, national identity, and integration. Across Europe, rising immigration has often been accompanied by growing support for anti-immigrant political parties, increasing political polarization, and persistent negative stereotypes about migrants.

A growing body of research in economics and political science suggests that attitudes toward immigration matter because they shape not only individual behavior, but also broader social and political outcomes. Perceptions of immigration influence voting decisions, support for redistribution, trust in institutions, and preferences regarding welfare policies. Negative attitudes toward immigrants can contribute to social exclusion, discrimination in schools and labor markets, and wider societal tensions.

Importantly, hostility toward immigrants is often driven less by direct personal experience than by perceptions of what immigration means for society as a whole. People frequently express concerns about crime, cultural change, competition for jobs, or pressure on public services, even when these concerns are not fully supported by objective evidence. Moreover, cognitive biases affect how individuals perceive immigration. Research consistently shows that people tend to overestimate the size of immigrant populations and exaggerate certain characteristics of immigrants, reinforcing stereotypes and misconceptions. Such distorted perceptions can in turn strengthen prejudice and increase support for exclusionary policies.

Given the growing diversity of contemporary societies, identifying effective ways to address these misconceptions and reduce discrimination has become an important policy challenge. Schools represent a particularly promising setting for such interventions. Adolescence is a critical period in the formation of social and political attitudes, and schools provide opportunities for structured learning, discussion, and exposure to diverse perspectives.

Against this backdrop, a crucial question emerges: can correcting misperceptions about immigration help reduce prejudice and discriminatory behavior? This [paper](#) addresses that question by evaluating a short educational intervention implemented in Italian high schools.

Why Italy?

Italy provides a particularly interesting setting for this research. Over the past few decades, the country has undergone a rapid demographic transformation. The share of foreign-born residents increased from just over 2 percent in the early 2000s to around 10 percent today. Schools have become increasingly diverse as well, with more than one in ten students lacking Italian citizenship and many being second-generation immigrants born in Italy.

Despite this growing diversity, misconceptions about immigration remain widespread. Many Italians substantially overestimate the size of the immigrant population and associate immigration with crime, labor market competition, and social disorder. Similar misconceptions are also present among young people.

The “Integration Beyond Prejudices” Program

The intervention studied in the paper is called Integration Beyond Prejudices (IBP). Developed in collaboration with the NGO Helpcode and university researchers, the program is inspired by principles of Global Citizenship Education promoted by UNESCO.

The intervention was intentionally designed to be brief and scalable. It consists of only four hours of activities delivered during regular school hours, divided into two sessions of two hours each. This design makes it relatively inexpensive and easy to integrate into existing school curricula.

Rather than relying on traditional lectures, the program uses active-learning methods. Students participate in games, group activities, simulations, and guided discussions that encourage them to reflect critically on migration, stereotypes, discrimination, and global inequalities. Alongside these activities, facilitators provide factual information about migration patterns, refugee movements, and immigration in Italy.

A distinctive feature of the program is its peer-learning component. University students trained by the NGO serve as peer educators and work alongside professional facilitators. The goal is to create an environment where students feel comfortable discussing sensitive topics and challenging their own assumptions.

The Experimental Evaluation

To rigorously evaluate the program, the researchers conducted a randomized controlled trial involving 252 classrooms across 40 high schools in Milan and Genoa.

Within each school, classes were randomly assigned either to receive the intervention or to serve as a control group. Students in the control classes continued with their regular school activities and did not participate in the program.

Researchers collected survey data before and after the intervention. In addition to standard questionnaires, they used incentivized behavioral experiments that allowed them to measure actual behavior toward immigrants rather than relying solely on self-reported attitudes.

This experimental design provides strong evidence that any differences observed between the two groups can be attributed to the intervention itself.

The Program Improved Attitudes Toward Immigrants

The results show clear and statistically significant improvements in students' attitudes. Compared with students in the control group, participants in the program were:

- less likely to believe that there are “too many immigrants” in Italy;
- less likely to associate immigrants with higher crime rates;
- less likely to believe that Italians should automatically be given priority over immigrants in the labor market.

The intervention also affected how students interpreted situations involving immigrant-background individuals. For example, students were presented with a vignette describing a boy named Mohammad, born in Italy to Moroccan parents, who had few friends at school. Students exposed to the program were less likely to blame Mohammad himself for this situation and more likely to recognize the possible role of external factors or discrimination.

Importantly, the intervention did not increase polarization. Instead, it primarily shifted the views of students who initially held the most negative attitudes, moving them toward more moderate and inclusive positions.

The Program Reduced Discriminatory Behavior

One of the most compelling aspects of the study is that it goes beyond attitudes and examines actual behavior.

At the end of the study, students participated in a modified ultimatum game. In this experiment, students interacted with partners identified only by their names. Some names sounded typically Italian, while others sounded foreign.

Among students in the control group, a clear pattern of discrimination emerged. Participants demanded more favorable terms when interacting with someone who had a foreign-sounding name than when interacting with someone who had an Italian-sounding name.

Among students who had participated in the educational program, however, this discriminatory behavior disappeared entirely.

This finding is particularly important because it demonstrates that the intervention affected not only what students said in surveys but also how they behaved when making decisions involving members of an outgroup.

No Effect on Altruism

The researchers also measured students' willingness to donate money to organizations supporting immigrants. Here, the intervention produced no significant effects. Students exposed to the program were no more likely than others to donate part of a potential monetary reward to migrant-support organizations.

This result suggests that the program primarily influenced perceptions, attitudes, and discriminatory behavior rather than broader forms of altruism or prosocial behavior. In other words, the intervention reduced hostility toward immigrants without necessarily making students more generous overall.

The Importance of Classroom Diversity

One of the most interesting findings concerns the role of classroom composition. The program was substantially more effective in classrooms with a relatively high share of immigrant-background students.

Importantly, these classrooms were not initially more pro-immigrant than others. The stronger effects therefore cannot be explained by pre-existing differences in attitudes. Instead, the authors argue that immigrant classmates make the topic of immigration more concrete and socially relevant. In more diverse classrooms, discussions about migration are not abstract debates about distant groups but conversations connected to students' everyday experiences.

This increased salience appears to amplify the effectiveness of the intervention, particularly among native Italian students.

Why Did the Program Work?

A central contribution of the paper is its analysis of the mechanisms behind the observed effects. The authors consider three possible channels:

- 1. Improved knowledge and correction of misconceptions;**
- 2. Greater empathy and emotional change;**
- 3. Changes in perceived social norms.**

Their evidence points strongly toward the first and third explanations.

Before the intervention, students dramatically overestimated the size of the immigrant population in Italy. On average, they believed immigrants represented about 34 percent of the population, while the true figure was closer to 10 percent.

The program significantly improved migration literacy. Students became better informed about migration flows, the origins of migrants, and the definition of refugees. Their estimates of the immigrant population also became substantially more accurate.

These findings suggest that misinformation and ignorance play an important role in shaping anti-immigrant attitudes.

Perhaps the most novel result concerns social norms. After participating in the program, students believed that their classmates held more positive attitudes toward immigrants than they had previously assumed. They also became more confident in these assessments.

This suggests that many students may have been operating under a form of pluralistic ignorance—incorrectly believing that their peers were more hostile toward immigrants than they actually were.

The intervention helped reveal more inclusive norms within the classroom. Once students realized that tolerance and openness were more widely shared than expected, their own attitudes shifted in the same direction.

This mechanism was especially strong in classrooms with larger numbers of immigrant students, where discussions about immigration were likely more visible and credible.

Finally, the intervention had no significant effect on several factors that are often assumed to drive prejudice reduction. Students did not become more empathetic. Measures of perspective-taking and emotional concern remained unchanged. Similarly, the program did not alter implicit bias, as measured through an Implicit Association Test (IAT). Nor did it significantly change friendship networks between native and immigrant students.

These findings challenge the common assumption that reducing prejudice necessarily requires emotional transformation or deeper interpersonal contact. Instead, the results suggest that correcting beliefs and reshaping social expectations may be sufficient to produce meaningful changes in attitudes and behavior.

Broader Implications

The study contributes to a growing body of research showing that anti-immigrant attitudes are often driven less by direct economic concerns than by misconceptions, stereotypes, and beliefs about social norms.

Many previous interventions have focused either on providing information or on promoting empathy and contact between groups. The evidence from this study suggests that combining factual information with collective discussion may be particularly effective.

The findings are also encouraging from a policy perspective. The intervention required only four hours of classroom time, was implemented within the regular school schedule, and relied on relatively simple educational activities. Yet it produced measurable improvements in both attitudes and behavior.

This makes the program potentially scalable and relevant for educational systems seeking practical tools to promote social cohesion in increasingly diverse societies.

Conclusion

The paper provides strong evidence that anti-immigrant attitudes among adolescents can be reduced through a brief, carefully designed educational intervention.

The program improved attitudes toward immigrants, reduced discriminatory behavior, corrected widespread misconceptions, and reshaped students' perceptions of social norms. At the same time, it did not rely on increasing empathy, changing friendship networks, or altering implicit biases.

The results suggest that hostility toward immigrants is not simply the product of deep-seated prejudice. Instead, it is often sustained by inaccurate information and mistaken beliefs about what others think. By correcting these misconceptions and revealing more inclusive social norms, educational interventions can promote greater openness and reduce discrimination.

More broadly, the study highlights the potential of schools as important arenas for fostering social cohesion and preparing young citizens to navigate increasingly diverse societies.

Reference

Giunti, S., Guariso, A., Mendola, M., and Solmone, I. (2025) 'Hacking Anti-Immigration Attitudes and Stereotypes: A Field Experiment in Italian High Schools', IZA DP No. 17978

Voluntary Environmental Standards and Trade

Daniela Lena and Tamar Taralashvili

The reduction of traditional trade barriers has facilitated the expansion of international trade and the development of cross-border production and distribution networks. As trade relationships have become deeper and more complex, firms increasingly operate across countries that differ in regulatory frameworks, institutional conditions, technical requirements, and environmental expectations. These differences may create uncertainty, raise transaction costs, and discourage firms from entering or expanding in foreign markets. In this context, international standards may play an important role. Standards can provide a common language for firms, consumers, regulators, and trading partners. They may help harmonise expectations, support mutual recognition, and reduce uncertainty in cross-border transactions (Blind et al., 2024).

Standards function as mechanisms for coordinating activities and regulating processes. Within institutional theory, they are conceptualised as a distinct form of institution that specifies requirements for processes, products, and services across value chains and markets. By ensuring that products and services meet defined quality criteria, standards foster trust among consumers and stakeholders and facilitate coordination throughout various phases of the value chain (Blind and Müller, 2020).

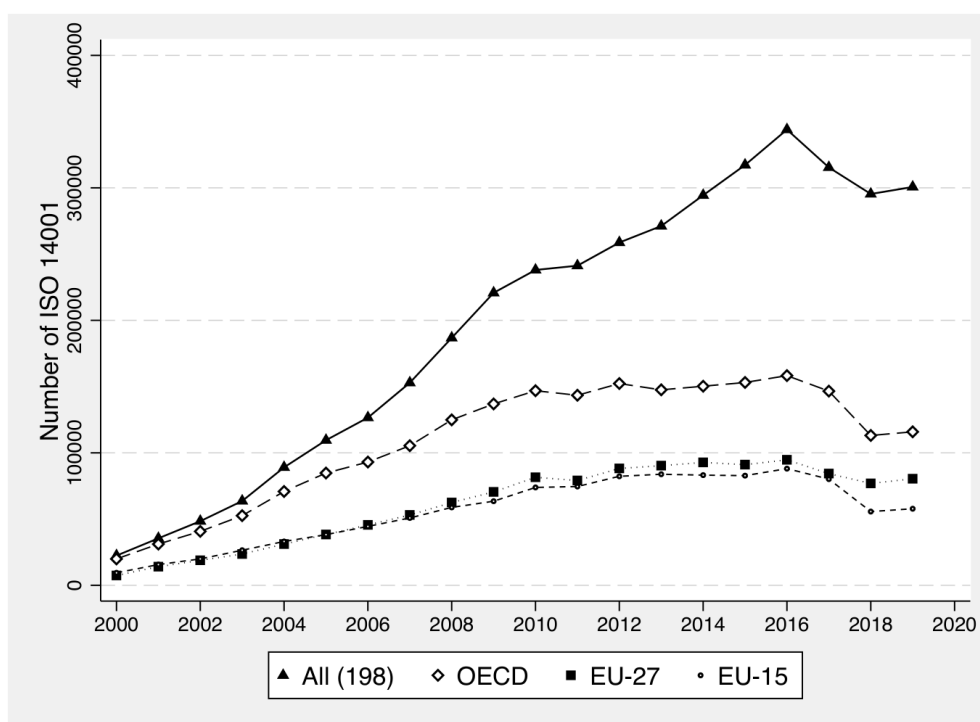
At the same time, while standards can facilitate trade by reducing information asymmetries and transaction costs, they may also act as non-tariff barriers (NTBs) when compliance is costly (Zahoor et al., 2023). Certification can involve significant fixed and variable costs, including documentation, audits, managerial adjustments, monitoring activities, and process reorganisation. These costs may disproportionately affect smaller firms or firms located in countries with weaker certification. The ability to meet standards also depends on the national context, such as accreditation bodies, laboratories, and enforcement institutions. Countries with strong institutions can turn standards to enhance competitiveness, whereas weaker institutions may view them as obstacles (Beghin et al., 2021). Standards may disadvantage low-income and developing nations, limiting their trade opportunities. Furthermore, highly restrictive standards may act as NTBs, reducing trade, especially for developing countries.

Several scholars have studied the role of standards in trade (Sun et al., 2023). However, most empirical research focuses on export competitiveness (Potoski and Prakash, 2009), specific countries (Martincus et al., 2010), or particular industries (Ni et al., 2022; Sun et al., 2023). This leaves a gap in studies analysing the broader impact of specific standards, particularly in bilateral trade context.

Thus, this study examines the relationship between ISO 14001 certification intensity and bilateral trade over the period 2000-2019. Among the various standards currently in use, ISO 14001, an environmental management system (EMS) standard, has expanded rapidly and is regarded as one of the most prominent voluntary environmental standards. As a voluntary, commitment-based standard, it is designed to promote environmentally sustainable practices among organisations. It belongs to the ISO 14000 family of environmental management standards and provides a managerial framework through which organisations can identify environmental aspects, set objectives, monitor performance, and pursue continuous improvement. Certification is usually granted by an accredited certification body and maintained through periodic audits (International Organization for Standardization, 2026).

Figure 1 gives a sense of the scale of the phenomenon. It shows the growth in ISO 14001 certificates between 2000 and 2019 and highlights the substantial share accounted for by OECD countries.

Figure 1: ISO 14001 certificates throughout diverse country groups.



Notes: This figure shows the total number of ISO 14001 certifications for all countries (198), 38 OECD countries, EU-27, and EU-15 over the period 2000-2019. The figure highlights the substantial share of certifications accounted for by 38 OECD countries.

Source: Authors' elaboration on the survey of the ISO compiled in 2022.

The literature indicates that EMS standards can help organisations improve their environmental performance, reduce information asymmetries, and overcome trade barriers related to environmental regulations (Camilleri, 2022). Although some research acknowledges the critical role of EMS in export outcomes (Sun et al., 2023) the mechanisms and connections between EMS and bilateral trade flows remain underexplored. Consequently, current evidence remains insufficient to determine whether

ISO 14001 systematically facilitates bilateral trade by reducing information asymmetries and enhancing reputation or restricts trade by increasing market-entry barriers. This ambiguity leaves an important gap in the literature: we still know relatively little about how ISO 14001 shapes bilateral trade relationships across countries.

To address this question, we compare international trade flows with intra-national trade flows. This comparison helps distinguish trade that crosses a national border from trade within the same country. In the analysis, ISO 14001 certification intensity is assigned to the exporting country and interacted with an international-border indicator, allowing us to examine whether certification is associated with cross-border trade relative to domestic trade. The analysis also accounts for stable differences between country pairs and for country-specific changes over time.

The empirical analysis combines several data sources. Bilateral trade flows, including both international and intra-national trade, are sourced from the International Trade and Production Database for Estimation. Exporter-specific ISO 14001 certification intensity is derived from the 2022 edition of the ISO Survey and measured as the number of valid certificates per million inhabitants, using population data from the World Development Indicators. This population-adjusted measure makes countries of different sizes more comparable, while the logarithmic transformation reduces the influence of extreme values. Additional variables include time-varying bilateral policy and geopolitical controls, such as regional trade agreements (RTAs), tariffs, sanctions, soft conflicts, militarised interstate disputes, and state acts from the relevant databases. The baseline sample consists of 38 OECD countries, with robustness checks conducted using a global sample of 198 countries and alternative European Union (EU) subsamples.

The baseline results show that higher ISO 14001 certification intensity is associated with higher international trade relative to domestic trade. The size of the association is meaningful: countries with higher certification intensity tend to trade about 5-6% more internationally, relative to domestic trade. The result is very similar when certification is measured with a one-year delay, suggesting that the trade-related benefits of certification may materialise gradually. This is plausible because firms need time to implement environmental management practices, complete certification, signal compliance to foreign partners, and adjust their international market relationships. Additional checks show that the effect persists in the short to medium term, although it weakens over longer horizons.

The results remain robust across several sensitivity analyses. The estimated effect remains positive when additional bilateral controls are introduced, including RTAs, tariffs, sanctions, conflicts, and other trade policy measures. The findings also remain stable across alternative time periods, including 2000-2018, 2000-2014, and 2008-2019. Crisis-period checks further show that the result is not driven by the global financial crisis: the relationship remains positive in the pre-crisis period, 2000-2008, the post-crisis period, 2009-2019, and when the crisis years, 2008-2010, are excluded from the full sample. The estimates are also robust when the analysis accounts for persistence in bilateral trade relationships. Extending the analysis to a global sample of 198 countries, as well as to EU subsamples, yields positive estimates, suggesting that the relationship generalises beyond the baseline group of countries.

Patterns also differ across sectors. We study four broad sectors: agriculture, manufacturing, mining and energy, and services. Since ISO certification data are observed at the country-year level, this

analysis does not measure sector-specific certification intensity. Instead, it examines whether exporter-level ISO certification intensity has different effects across sector-specific trade flows. The results reveal substantial differences. The estimated effect is strongest in agriculture and manufacturing, where ISO 14001 appears most closely linked to production processes, quality assurance, and market access. The effect is smaller in services, while no statistically significant effect is found for mining and energy, where trade is more likely to be driven by natural resource endowments, long-term contracts, or less standardised activities. Replicating the analysis for the global sample of 198 countries yields broadly similar results, supporting the external validity of the sectoral findings.

For policymakers, the key implication is that voluntary environmental standards are not only compliance instruments. They can also support sustainable trade and international competitiveness by reducing uncertainty, strengthening credibility, and facilitating firms' participation in international markets.

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