

**Does access to regular work affect immigrants' integration outcomes?  
Evidence from an Italian amnesty program**

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**Abstract**

Economic inclusion is often seen as a tool for social inclusion and integration of immigrants. In this paper we estimate the impact of regular work, within one year of arrival in Italy, on the long-term integration of immigrant people, after a period of approximately 10 years. How important is it to guarantee a “sure start” for their integration and, therefore, for the social balance of the society as a whole? To answer this question, we use data from the ISTAT Social Condition and Integration of Foreign Citizens survey, collected in 2011-12, and adopt a local randomization approach to RD analysis, exploiting the 2002 amnesty. We find beneficial effects of early regular work on many indicators of integration, such as trust towards institutions, language proficiency, and local habits.

## 1. Introduction

Employability and regular work are considered fundamental for the social inclusion of all: they should promote a sense of self-efficacy in people, guarantee a decent income, the creation of stable social relationships, the maintenance of a family, access to welfare, but less dependence on it. This is especially true for the most vulnerable people, such as immigrants. For this reason, economic inclusion is often seen as a tool for social inclusion and integration. All the benefits of economic inclusion are in fact amplified in the case of immigrants, who arrive in the new country with weak social and family ties, few economic resources, and an educational qualification that is not always recognized (Dustmann, 1996; Drydakis, 2001; Devillanova, 2008; Chauvin et al., 2013; Fasani, 2015; Ims, 2021).

The aim of this paper is to estimate the impact of regular work, within one year of arrival in Italy, on the long-term integration of immigrant people, after a period of approximately 10 years. How important is it to guarantee a “sure start” for their integration and, therefore, for the social balance of the society as a whole? This piece of research aims to contribute to the debate on the centrality of the economic inclusion of immigrants as a tool for their integration and on employment as key element of the naturalization process. Social integration depends both on natives and on immigrants, as the former are asked to accept immigrants and facilitate their social inclusion, while from the latter availability to adapt to local norms and participation to the community are requested. Policy debate has then focused on how to increase immigrants’ level of integration. Possible solutions, their applicability and effectiveness may depend on a series of issues, such as immigrants’ characteristics and type of lever. Nonetheless, immigrants face notable barriers in entering the labor market of their new country due to language, adaptation, stigma and, not least, legislative constraints, so that employment opportunities can be frequently found at most in informal labor market. In order to prevent this phenomenon and its undesired consequences, in the last decades many developed countries have implemented reforms aimed at regularizing undeclared immigrant workers (Gabrielli et al., 2007; Hansen, 2012; Gathmann and Garbers, 2022; Fakiolas, 2003; Finotelli and Arango, 2011; Pan, 2012; Bahar, 2021; Hainmueller et al., 2023).

To answer the research question, we use data from the ISTAT Social Condition and Integration of Foreign Citizens survey, collected in 2011-12. We therefore compare work and integration outcomes of those who obtained a regular job within the first year of arriving in Italy compared to those who used to have an irregular job or were not working. We consider immigrants who arrived in Italy between 1999 and 2004, 7-13 years before the interview. Obviously, there may be

unobserved variables that influence both dimensions: the fact of having a regular job upon arrival and the fact of being well integrated in the country of arrival 10 years later. In order to highlight a causal link between regular work and integration, we exploit the 2002 amnesty. This amnesty, the largest in Italian history, concerned 700,000 immigrants without a work permit, resident in Italy and with irregular work for at least 3 months before the publication of the law (September 2002). This date therefore creates a discontinuity: those who arrived before June 2002 (and whose employer certifies work continuity of at least 3 months) can obtain a work permit and obtain the regularization of their work; those who arrived later did not. In our case, in which the variable of interest is represented by regular work within one year of arrival, this discontinuity means that a group of people who arrived in the “right” moment is potentially influenced by the amnesty and can be facilitated in having regular work within one year of arrival; a group of people who arrived later cannot be influenced by the amnesty; but also a group of people who arrived earlier is not influenced by the amnesty in their first year of their staying. We compare these groups, by adopting a local randomization approach to RD analysis (Cattaneo et al., 2018). We find beneficial effect of having regular employment within one year from the arrival on long-term work and integration outcomes.

Amnesties are quite frequent both in Italy and in other European countries. They respond to a need to bring order for countries that have not shared agreements with the countries of origin, which have not assessed and therefore planned the needs of the economic system, which consider immigration as an element of disorder and which therefore only respond - in a formal way - in times of emergency (Ambrosini, 2002). The unexpectedness of such amnesties has opened up the opportunity to study their impact on different dimensions. Given the number of people affected by the 2002 amnesty, several studies have investigated the impact of the amnesty itself on various outcomes. Two studies, in particular, look at the effects of the amnesty on work, in the short term. Devillanova et al. (2018) study the effect of the prospect of being legalized on employment. They observe whether the probability of having a job in the months following the amnesty period (November 2002-January 2003) is higher among those who arrived between April and May 2002 (eligible, because for at least 3 months in Italy) and those who arrived between July and August 2002 (non-eligible).<sup>1</sup> They use data collected in a health center in Milan (Northern Italy), open to non-legalized people who, following the visit, participate in a survey. They observe a positive impact

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<sup>1</sup> To consider the fact that treated have spent longer time in Italy, they also use samples of immigrants arrived in April/May/July/August of the previous years, adopting a difference-in-difference design.

on work, which in this case - due to timing and source of data – is mainly irregular. Fasani (2015) instead, using a sample of immigrants who applied for the amnesty in the Lombardy region (Northern Italy), observed for the years 2003 and 2004, compares the working outcomes of those whose regularization procedure has already been concluded successful with the working outcomes of those whose procedure has not yet been concluded. He finds beneficial effects on regular work and on the level of wages. On the corporate side, Di Porto et al. (2018) study the impact of the amnesty on staff size and wages at the company level. Taking advantage of the fact that not all companies were eligible for the amnesty, they noted an increase in the staff size only in the short term, and no change in the level of wages. Finally, on a completely different topic, Lanari et al. (2020) study the effects of the amnesty on fertility. They compare foreign mothers without Italian nationality with foreign mothers with Italian nationality / Italian mothers, using data from the birth sample survey of 2001 and 2003, adopting a difference-in-difference design with propensity score matching. They find a positive effect on the likelihood of having a first child, but not on subsequent ones.

The papers closest to ours are those carried out by Deiana et al. (2022) and Hainmueller et al. (2017). In the first paper, the same data as this work are used (the ISTAT Social Condition and Integration of Foreign Citizens survey, 2011-12). Deiana et al. (2022) compare those whose first job found in Italy was before 2002 and of informal type (eligible) with those whose first job found in Italy was after 2002 and of a formal type (non-eligible). Since the difference between the two groups may simply be due to length of stay, the authors use as a control group those whose first job found in Italy is of formal type (before/after 2002). Their conclusion is that the non-eligible have a probability of regular employment in 2011-12 that is 14 percentage points lower than the eligible. Hainmueller et al. (2017) exploit a quasi-random assignment of citizenship in Swiss municipalities that used referendums to decide on naturalization applications of immigrants. Comparing otherwise similar immigrants who narrowly won or lost their naturalization referendums, they find positive effects on integration (reading newspapers, being member of a club, having trust, planning the future in the host country).

This paper is organized as follows. In section 2 we outline the econometric model while in section 3 we describe in detail the 2002 amnesty. Section 4 describes the data, section 5 summarizes the empirical results while section 6 concludes.

## 2. Methods

Our study aims at estimating the impact of having a regular work on medium-long term integration of foreign citizens. In order to do so, we analyze a sample of about 2,400 immigrants arrived in Italy between 1999 and 2004. For an immigrant arrived in Italy in year  $t$ , the treatment we focus on is to have a regular work in year  $t+1$ , while the integration outcomes  $y_{t+n}$  are a series of individual conditions concerning work, daily life aspects, attitudes and opinions measured at time  $t+n$ , where  $n$  varies between 8 and 13 years.

The relationship between regular employment and subsequent integration can be defined as in Equation 1,

$$y_{i,t+n} = \alpha + \beta X_{i,t+1} + Z'_{i,t+n} \gamma + \varepsilon_{i,t+n} \quad (1)$$

where integration at time  $t+n$  basically depends on individual characteristics  $Z$  and on the treatment  $X_{t+1}$ , and  $\beta$  is the impact of regular employment on integration. The estimation of Equation 1 via simple OLS provides an unbiased estimate of  $\beta$  under the conditional independence assumption (Rosenbaum and Rubin, 1983): conditioning on observable attributes  $Z$ , the treatment  $X$  and the potential outcomes  $(Y^1, Y^0)$  are independent, where  $(Y^1, Y^0)$  are the outcomes if  $X=1$  and  $X=0$  respectively, and  $\beta = Y^1 - Y^0$ .

Available data let us control for a set of social and demographic characteristics (age, gender, level of education, nationality, family structure), as well as for year and region of arrival. Our estimate could be biased due to a series of self-selection mechanisms which cannot be controlled with our set of observables. As an example, immigrants with higher skills (either job, cognitive or socio emotional skills) could have a higher probability of getting a regular job as well as higher chances and propension to integrate in the new country independently from employment. Another source of bias could come from pre-existing social networks in the country of arrival (friends, relatives, other connections). The sign of the bias is uncertain: in the first example a positive bias would be expected, while in the second example the sign of the correlation between the social network existence and integration would depend on the type of network (and on the type of outcome).

Our identification strategy overcomes the self-selection issues by exploiting a natural experiment. In September 2002 a massive amnesty for immigrants took place: employers had the opportunity to regularize the job contracts of immigrant workers who had been informally hired for at least three months. The reform creates a natural discontinuity, so that immigrants who arrived in Italy later than June 2002 were not eligible for the amnesty, while those who were already in Italy and had

been informally employed for at least three months could be regularized and had a higher chance to enter the regular labor market. In our case, in which the variable of interest is represented by regular work within one year of arrival, this discontinuity means that a group of people who arrived in the “right” moment is potentially influenced by the amnesty and can be facilitated in having regular work within one year of arrival; a group of people who arrived later cannot be influenced by the amnesty; but also a group of people who arrived earlier is not influenced by the amnesty in their first year of their staying.

We use the time of arrival in Italy, which is a proxy of the eligibility to the reform, as an instrumental variable. Equations 2 and 3 illustrate our two stages estimation framework,

$$X_{i,t+1} = \delta + \theta \text{eligibility}_{i,t} + Z'_{i,t+n} \zeta + \mu_{i,t+1} \quad (2)$$

$$y_{i,t+n} = \alpha + \beta \hat{X}_{i,t+1} + Z'_{i,t+n} \gamma + \varepsilon_{i,t+n} \quad (3)$$

where *eligibility* is equal to 1 in case the immigrant arrived in Italy in the years 2001 and 2002, 0 if s/he arrived before (1999 and 2000<sup>2</sup>) or after (2003 and 2004).

At a first stage we estimate the impact of eligibility on regular employment one year after the arrival. At a second stage, we study the relationship between the estimated probability of employment conditioning on eligibility and the integration outcomes. Under usual IV assumptions (as in Angrist and Pischke, 2009),  $\beta$  is a consistent estimate of the impact of regular employment on integration. Two main issues need to be highlighted concerning IV estimates. The first is the key assumption that the instrument has an impact on the outcome only through the influence on the probability of getting a regular job. In our framework, it means that the time of arrival does not have a direct effect on integration. We deal with this issue both parametrically and non-parametrically. First, we include the length of the staying in the main results. Second, we run some placebo tests, analyzing the relationship between year of arrival and outcomes in periods when the amnesty was not in place. The second issue concerns the IV estimates generalizability and comparability with OLS. While OLS estimates, if unbiased, can be read as an average treatment effect on the population of interest, the IV estimates can be interpreted under the LATE framework (local average treatment effect, Imbens and Angrist, 1994): we will estimate the impact on compliers, i.e. the subgroup of people who would have had a regular job in  $t+1$  if and only if they were eligible for the amnesty. In the results section a description of compliers will be provided.

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<sup>2</sup> We focus on having a regular job one year after the arrival. People who arrived in Italy in 1999 and 2000 were actually eligible for the 2002 amnesty, but their employment status one year after the arrival could not be affected by it.

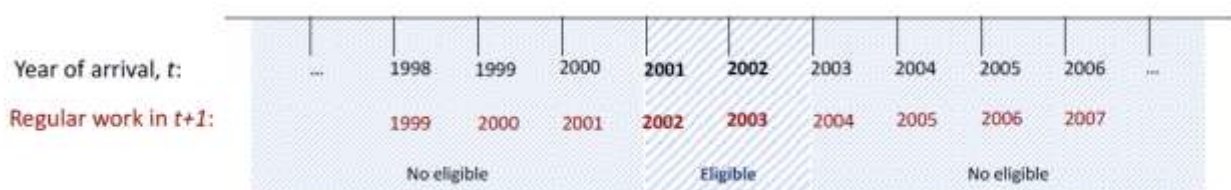
### 3. The Amnesty

The most relevant reform in Italy in the last decades took place in September 2002 (D.L. 195/2002) and involved about 640.000 immigrants. The reform offered a renewable two-year work and residence permit to undocumented immigrant workers and to immigrants who have a valid residence permit for reasons different than work (for study, tourism, humanitarian reasons, family reunification, asylum request, etc.).

The reform acts at the same time on two sides: first, offering employers the opportunity to regularize their undocumented workers in a time window after its introduction, second intensifying penalties for employers who engage undocumented workers. Also, the goal of the reform is twofold, since it simultaneously aims at legalizing the residence status and the employment relationship.

Employers were asked to apply on behalf of their irregular employees and to pay a fee roughly equivalent to (three months of) overdue social security contributions. Employers were also asked to declare that they had continuously employed the immigrant for (at least) the three months before the legalization law was passed, that is, since June 11, 2002. As also stated in Devillanova et al. (2018), while it can be seen only as a formal predetermined employment requirement (based uniquely on declaration and not verifiable), it is an effective predetermined residence requirement (in order to work from (at least) June 2002, the individuals must reside in Italy since the same date). This allows us to identify individuals who are eligible for the amnesty according to their year of arrival in Italy. However, we want to study if early access to regular work (i.e. within a year from arrival) facilitates immigrants' integration, then we combine info on immigrants' work status one year after arrival and amnesty timing to define the group of individuals eligible for the amnesty as shown in Figure 1.

Figure 1: Time of arrival and eligibility



#### 4. Data

Our analysis is based on data from ISTAT survey on Social Condition and Integration of Foreign Citizens (SCIF). The survey was carried out in 2011-2012 and involved a sample of about 9.500 families (20.000 foreign citizens). Data from the SCIF survey provide information on individual and family characteristics of respondents, along with a rich set of information on employment and economic conditions and a series of proxy of social integration regarding opinions, daily life, habits, participation in the life of the country, and the date of arrival in Italy. We select a sample of about 2.400 foreign citizens from non-EU countries who arrived in Italy between 1999 and 2004 (non-EU status is defined conditioning on the time of arrival), aged 18-50 when arrived in Italy.

We also exclude from the sample individuals who declared to be self-employed at the time of arrival, given that they cannot apply for the amnesty.

Table 1 reports average characteristics of the immigrants in our sample, divided in three groups according to the years of arrival. The average individual in our sample arrived in Italy at 29 years old; most of the immigrants we are studying are female; about half of them have upper secondary education; more than 70% of immigrants are from Romania, Ukraine, Albania and Morocco. Interestingly, these characteristics do not significantly vary across the three groups.

Table 1: Descriptive statistics of immigrants arrived in 1999-2000; 2001-2002; 2003-2004

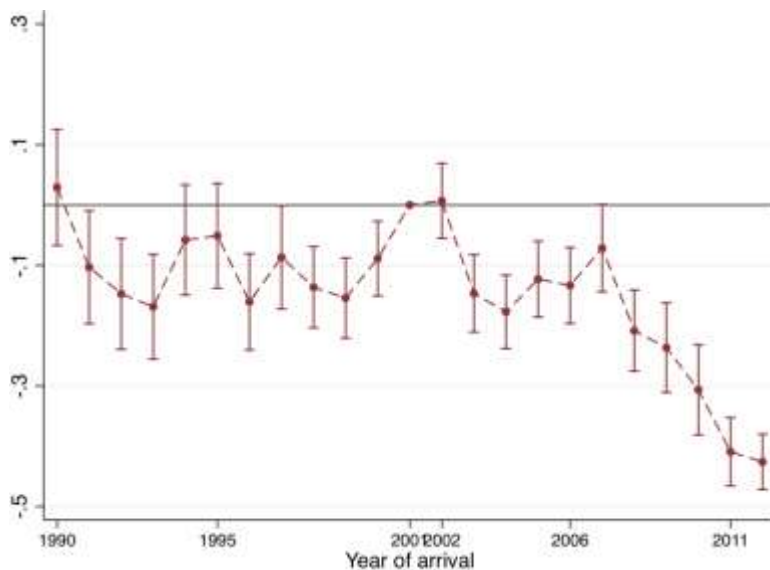
	Mean		
Female	0.635	0.635	0.712
Ever married	0.843	0.824	0.803
Any kids	0.796	0.769	0.746
Age	41.533	39.819	37.99
Any education in Italy	0.034	0.031	0.025
Primary education	0.065	0.049	0.045
Secondary education	0.298	0.261	0.296
Upper secondary education	0.482	0.561	0.541
Tertiary education	0.156	0.13	0.118
Ever work at origin	0.596	0.633	0.599
Any family member in Italy	0.613	0.578	0.547
Years spent in Italy	12.404	10.448	8.449
N	726	879	771



## 5. Empirical analyses

We first explore the relationship between eligibility for the reform and subsequent employment, which represents the basis for our IV first stage estimation. In Figure 2 we show how the probability of having a regular work one year after the arrival varies among cohorts for immigrants who arrived in Italy between 1990 and 2012. Although other (smaller) reforms took place over the years, the probability is systematically lower for cohorts different from 2001 and 2002. The differences between 2001 and 2002 are negligible.

Figure 2: Probability of regular employment one year after the arrival (baseline=2001)



Focusing on immigrants arrived in Italy between 1999 and 2004, the sample for our analysis, there is a well visible difference between the 2001-2002 cohorts and the others, while the differences between the cohorts 1999-2000 and 2003-2004 are not significant. Table 2 reports the IV first stage estimates: the eligibility for the reform increases by 16-17 points the probability of having a regular job one year after. This effect size is not affected by the model specification. Following the “rule of thumb” by Staiger and Stock (1997), the relevance of the instrument  $eligibility_{i,t}$  as a predictor of the treatment  $X_{t+1}$  is also confirmed by the F statistic.

Table 2. First stage estimates: impact of the reform eligibility on regular work one year after

	(1)	(2)	(3)	(4)
	Regular work one year after arrival			
Eligibility	0.169*** (0.021)	0.160*** (0.020)	0.158*** (0.020)	0.160*** (0.020)
Individual controls	No	Yes	Yes	Yes
Education and labor controls	No	No	Yes	Yes
Country of origin and years since migration	No	No	No	Yes
Observations	2,376	2,376	2,376	2,376
Years	1999-2004			
F-stat	67.93	62.78	61.11	63.51

Robust standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Below we summarize OLS and IV estimates as in Equations 1 and 3. Tables 3, 4 and 5 report our estimates on labor market outcomes, daily life behavior and attitudes and opinions respectively. All outcomes are measured at the time of the survey, between 8 and 13 years after the arrival in Italy. As regards work at the time of arrival, results are straightforward: a higher regular employment probability in the past is correlated to a higher employment probability in the future. Following OLS estimates, the probability of being employed increases by 7 points, as much as the probability of permanent employment increases, corresponding to an increase of about 15% and 30% respectively. The probability of having a qualified profession or higher level as first job in Italy increases too, by about 16 points. In all cases, the IV coefficients are much higher and quite big in magnitude. All estimates are statistically significant.

Table 3. Impact estimates on labor outcomes

	(1)	(2)	(3)
	<i>qualified job at arrival</i>	<i>Probability of working at survey</i>	<i>permanent job at survey</i>
<b>OLS</b>			
Regular work one year after arrival	0.158*** (0.019)	0.074*** (0.021)	0.081*** (0.022)
<b>IV</b>			
Regular work one year after arrival	0.258** (0.113)	0.340*** (0.128)	0.356*** (0.133)
Observations	2,376	2,364	2,244
Controls	YES	YES	YES
Years	1999-2004		

Robust standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Also, in the case of daily life behavior and attitudes, IV and OLS estimates yields the same results. Regular work increases the integration, in particular as regards the use of Italian language. There is

a positive impact on the probability of watching TV in Italian and reading in Italian; moreover, the probability of speaking Italian out of home increases (but not the probability of doing it at home), as well as the familiarity with the use of the language in public offices. Another significant result is the increase in the stated degree of confidence in police. Again, IV estimates size is generally higher than OLS.

Table 4. Impact estimates on daily life behavior and attitudes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	watching tv news in Italian	Probability of speaking Italian with family	with friends	Degree of trust in police	be understood in public offices	Difficulty with understand	reading in Italian
<b>OLS</b>							
Regular work one year after arrival	0.023* (0.013)	0.022 (0.020)	0.062*** (0.021)	0.094** (0.041)	-0.114*** (0.030)	-0.100*** (0.029)	-0.027 (0.034)
<b>IV</b>							
Regular work one year after arrival	0.177** (0.089)	0.056 (0.123)	0.261** (0.133)	0.713*** (0.264)	-0.324* (0.194)	-0.197 (0.189)	-0.445** (0.217)
Observations	2,257	2,376	2,376	2,376	2,376	2,376	2,376
Controls	YES	YES	YES				
Years				1999-2004			
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1							

The last set of outcomes concerns opinions. In particular, we focus on some opinions caught in the interview which are likely more connected to the cultural background of individuals: the role of men (must sustain the family) and women (must take care of house and family) in the family. Opinions seems to be more difficult to change: we find a significant effect when we estimate it with OLS, but it disappears when we move to IV.

Table 5. Impact estimates on opinions

	(1)	(2)
	men must sustain the family	Agree with women must care of house and family
<b>OLS</b>		
Regular work	-0.065***	-0.063***
one year after arrival	(0.021)	(0.020)
<b>IV</b>		
Regular work	0.021	-0.005
one year after arrival	(0.126)	(0.126)
Observations	2,361	2,361
Controls	YES	YES
Years	1999-2004	
Robust standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

### *Robustness checks*

We have presented both OLS and IV estimates, arguing that OLS could be affected by selection bias due to unobservables, and that IV should be preferred given their consistency. IV estimates are valid if the usual assumptions hold; in particular, eligibility for the amnesty is mainly driven by the time of arrival in Italy, and the threat to the validity of the instrument concerns the “exclusion restriction”, i.e. the fact that the instrument should have an impact on the outcome only through the treatment. As a matter of fact, people who have been living in Italy for 1-2 years more or less (in our sample cohorts 2003-2004 and 1999-2000 respectively) could experience different levels of integration. We address this issue with a series of falsification tests: we create two samples with cohorts 1995-2000 and 2004-2007, and in each sample, we define a placebo amnesty for those arrived in the central years (1997-1998 and 2006-2007 respectively). We estimate reduced form equations to test the direct impact of placebo amnesty, showing that (apart the outcome “qualified job at the arrival”, as in Tables 6 and 7, all the coefficients are non-significant and close to zero.

Table 6. Placebo tests: direct impact of time of arrival on work outcomes

	(1)	(2)	(3)
	<i>qualified job at arrival</i>	Probability of <i>working at survey</i>	<i>permanent job at survey</i>
<b>Reduced Form</b>			
Being eligible for the amnesty	0.041** (0.018)	0.054*** (0.020)	0.057*** (0.021)
Observations	2,376	2,364	2,244
Years Treatment in		1999-2004 2001-2002	
<b>Placebo Pre Amnesty periods</b>			
Placebo treatment	-0.042* (0.024)	0.017 (0.027)	0.022 (0.029)
Observations	1,444	1,437	1,321
Years Treatment in		1995-2000 1997-1998	
<b>Placebo Post Amnesty periods</b>			
Placebo treatment	0.010 (0.019)	0.012 (0.020)	0.018 (0.019)
Observations	1,863	1,856	1,807
Years Treatment in		2004-2009 2006-2007	
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1			

Table 7: direct impact of time of arrival on daily life behavior and attitudes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	watching tv news in Italian	Probability of speaking Italian with family	with friends	Degree of trust in police	be understood in public offices	Difficulty with understand	reading in Italian
<b>Reduced Form</b>							
Being eligible for the amnesty	0.026** (0.013)	0.009 (0.019)	0.041** (0.021)	0.112*** (0.039)	-0.051* (0.030)	-0.031 (0.030)	-0.070** (0.033)
Observations	2,257	2,376	2,376	2,376	2,376	2,376	2,376
Years Treatment in				1999-2004 2001-2002			
<b>Placebo Pre Amnesty periods</b>							
Placebo treatment	0.001 (0.018)	-0.005 (0.028)	-0.024 (0.029)	0.057 (0.055)	0.006 (0.044)	-0.011 (0.043)	-0.004 (0.048)
Observations	1,362	1,444	1,444	1,444	1,444	1,444	1,444
Years Treatment in				1995-2000 1997-1998			
<b>Placebo Post Amnesty periods</b>							
Placebo treatment	0.025 (0.021)	0.013 (0.022)	-0.007 (0.024)	-0.039 (0.047)	0.001 (0.044)	0.023 (0.044)	-0.024 (0.045)
Observations	1,762	1,863	1,863	1,863	1,863	1,863	1,863
Years Treatment in				2004-2009 2006-2007			
Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1							

*The interpretation of results in the LATE framework*

Summarizing, our analyses show that some opinions related to the background culture seem not to vary in the medium-long term because of access to work. Instead, the probability of remaining attached to the labor market, as well as habits and capacities related to integration, show a relevant increase. There is a substantial correspondence between OLS and IV estimates, and the main difference is that IV are generally higher. A comparison between the two sets of estimates would therefore lead to the interpretation that OLS are downward biased. Actually, a direct comparison between OLS and IV is not feasible because of their different interpretation: on the one hand, OLS would estimate the average treatment effect on the population. On the other hand, the interpretation of IV changes time by time. For example, if “cross-overs” did not exist in the population of interest, IV would estimate the average treatment effect on the treated. In our study we must rely on the more general LATE framework (Imbens and Angrist, 1994), and we estimate a local impact, that can be generalized to the population of compliers: those who would have had a regular job at  $t+1$  if and only if they were eligible for the amnesty. Although we cannot identify single individuals as compliers, we can calculate their incidence on the population relying on the first stage estimate (about 16%). Second, we can provide a description of their characteristics using Abadie’s kappa theorem. Abadie (2003) shows that, under usual IV assumption, any parameter regarding the compliers can be estimated as a weighted average of the population parameters. Results are in Table 8. Looking at absolute differences, the main evidence is that compliers represent an older part of the population and they already have some other family members in Italy at their arrival.

Table 8. Characteristics of compliers

	(1) Compliers mean $E[X D_1 > D_0]$	(2) Sample mean $E[X]$	(3) $\frac{E[X D_1 > D_0]}{E[X]}$
Female	0,67	0,68	0,97
Age 18 -25	0,28	0,39	0,73
Age 26-35	0,53	0,37	1,41
Age 36-45	0,17	0,19	0,90
Age 45-54	0,02	0,05	0,39
Other family member in Italy	0,65	0,57	1,14
Origin from Asia	0,14	0,11	1,21
Work at origin	0,63	0,61	1,03
Other EU countries before Italy	0,04	0,03	1,35

## **Concluding remarks**

In this paper, we study the effect of early access to regular work on integration outcomes of immigrants.

In order to control for omitted variable bias we use an IV strategy, exploit the 2002 Italian amnesty as an exogenous shock affecting the probability of having a regular work one year after arrival. Our results suggest that access to early regular work does increase integration by changing work outcomes and daily life behavior, but does not change opinions, specifically related to the role of the woman in the family.

The evidence is robust to a number of checks, but more work must be done in order to study the heterogeneity of these effects and to understand the mechanisms behind them.

Thanks to access to the data through the Adele laboratory, we would have information on the month of arrival (instead of just the year). This will allow us to better define the eligible and non-eligible groups, or to use an RD design.

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