

Matching immigrant and native workers: evidence from the recent downturn in Italy

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Abstract This paper provides some empirical evidence about the supposed vulnerability of immigrants to the recent economic downturn, by using longitudinal data from the Italian Labour Force Survey. Immigrant workers always show a higher probability of ending an ongoing employment spell when compared to their native colleagues. However, their observable characteristics are more likely associated to higher separation rates, so that, when comparing similar workers, differences between immigrants and natives disappear, both before and after the downturn. The impact of the downturn is mostly related to observed characteristics, not to the immigrant status itself, and it is markedly different by gender. In 2009 job separations are increasing for all male workers, but the impact is stronger for immigrants, mainly because their characteristics are more likely to be hit by the downturn. On the contrary, both groups of female workers show a slightly lower probability of losing a job in 2009, so that observed differences remain the same before and after the downturn.

1 Introduction

During the last decades immigrants represented a growing share of labour forces in most developed countries. Even if a huge literature explores different aspects of the effects of immigration on labour markets (*e.g.* [1]), few analyses are dedicated to the relationship between migrations and the economic cycle (*e.g.* [3] analyses data from past economic crises). About the recent crisis there seems to be only descriptive evidence (*e.g.* [4]), showing that immigrants are more hit by the downturn in terms of employment and unemployment rates.

The history of migration in Italy is similar to many Southern European countries and Ireland, former countries of emigration which has been recently substituted by a strong immigration (see [2] for a historical review). In 2011 resident immigrants in Italy were 4,570,000, with a 7.5% incidence over the whole Italian population, while

the same figures in 2005 where 2,402,000 and 4.1%. Thus, both in absolute and relative terms immigrants have almost doubled their presence in just 6 years.

Using longitudinal data from the Italian Labour Force Survey, we compare immigrant and native workers with respect to their subsequent employment performances, in order to disentangle whether (i) immigrant workers have different characteristics when compared to natives; (ii) these characteristics are related to a different subsequent behaviour, as transitions among labour force states; (iii) there are still differences between immigrants and natives even when comparing workers with the same characteristics. The goal is to understand whether it is true that immigrants are weaker than natives and are thus more suffering from the recent downturn. Our strategy is to match "similar" native and immigrant workers with regard to observable personal, household and job characteristics by using propensity score techniques [5], and then to look at subsequent behaviours of comparable groups of workers as longitudinal outcomes of interest.

2 Empirical strategy and results

In order to analyse changes observed with the downturn, we exploit the longitudinal feature of the labour force survey *Rilevazione Continua delle Forze di Lavoro* (RCFL) by Istat, the Italian National Statistical Agency. The rotating sample structure of the survey allows using three-month panels for about half sample in each wave. We pool all independent panels for both 2007 and 2009 and stratify by gender and year, obtaining for each sample between 2700 and 4700 immigrant workers, while natives are always more than 30000.

Among the many outcomes of interest that might be analysed, here we mainly focus on job separations during a three-month period for 25-54 years old workers. This definition of the population "at risk" to lose an employment is clear both for immigrants and natives, while it would be more difficult to define the set of people "at risk" to enter employment, especially for immigrants who may potentially come from the whole global labour market. Moreover, the characteristics of recent migration in Italy ensure that in this framework immigrants are well defined as those born outside Italy, as there are very few prime-age second-generation immigrants.

We initially compare immigrants and natives within a descriptive approach in order to look at "marginal" differences in the outcomes of interest. The basic idea is to compare these results to "conditional" ones, obtained by using a "control" group made of native workers with the same characteristics observed for immigrants. Observed variables useful for the analysis are individual demographics, household characteristics, characteristics of the job held in the first wave and one year before.

Compared to natives, immigrant prime-age workers are more concentrated in the North-East of Italy, they are younger and slightly less educated. As for the household structure, they are more living alone (or, for men, in large households with young children), they are much more often widowed or divorced and much less son (or descendent) of the head of the household. In immigrant households there are also fewer elders, less educated, less employed and (only for men) more unemployed people.

As regards job characteristics, as expected immigrants are strongly concentrated in blue-collar employment, they are more employed in small firms involved in specific sectors (construction for men, private and household services for women), much less

employed in the public sector. They have less tenure and total work experience when compared to natives, and they were also less employed one year before the survey.

Our strategy is to consider matched immigrant-native pairs who share the same characteristics X . As this is not feasible with high-dimensional X , we match workers with the same (or very close) propensity score [5]. Let the immigrant status I be 1 for immigrants, 0 for natives. The propensity score is then defined as the “probability” of being immigrant given some observed characteristics X , $e(X) = \Pr(I=1|X)$, and the matching is carried out without any reference to the outcome variables.

Table 1 shows a selection of the results of propensity score matching, here limited to the simple outcome “non-employed” three months after the first wave. Average differences between immigrants and natives are estimated before and after the matching procedure, and the same strategy is applied before and after the downturn. Results presented here are robust to different choices about definitions of the population of interest, longitudinal samples, outcomes and matching strategies.

The overall evidence is that matching strongly reduces differences between the two groups, which become not significant. Thus, the significant differences observed in the unmatched samples are only related to different observable characteristics of the two groups of workers, while if we only consider native workers who are similar to immigrant ones the average differences disappear.

Going into deeper details, for male workers differences between the probabilities of transition to the “non-employed” status are highly significant for the two unmatched groups (0.90 in 2007, 1.44 in 2009). On the contrary, after the matching procedure the difference turns out to be negligible (and even slightly negative) in both years. In order to better understand why this happens, sticking to the 2009 example, among the 42,407 natives involved in the analysis the average transition rate is 2.76%, but this figure jumps to 4.14% when we limit our attention to the 4,032 natives who are closer to their immigrant colleagues with respect to the whole bunch of observable characteristics. A selection acts for immigrants too, but here the difference between matched and unmatched samples is much smaller (4.20 vs. 4.04), as more than 85% immigrants find a close match among natives.

Turning to women, transition rates are much higher than those observed for men, and native women are about 2 pps more stable than immigrant ones, but differently from men these figures are similar before and after the downturn. Finally, the matching procedure confirms what observed for men, so that almost all differences between female immigrants and natives disappear once we control for observed characteristics.

Table 1: Non-employed after 3 months (%), by gender, year and immigrant status

Outcome	Sample	Imm.	Natives	Diff.	S.E.	t-stat.	Signif.
Men 2007	Unmatched	3.27	2.37	0.90	0.26	3.41	***
	Matched	3.22	3.28	-0.06	0.43	-0.14	
Men 2009	Unmatched	4.20	2.76	1.44	0.26	5.60	***
	Matched	4.04	4.14	-0.10	0.44	-0.22	
Women 2007	Unmatched	7.09	4.99	2.10	0.44	4.80	***
	Matched	7.26	7.51	-0.25	0.76	-0.33	
Women 2009	Unmatched	6.63	4.67	1.96	0.38	5.16	***
	Matched	6.92	7.28	-0.36	0.69	-0.53	

3 Conclusions

This paper analyses differences between immigrants and natives in Italy during the recent economic downturn. Before the downturn employed immigrants have a higher probability of ending their job spell when compared to natives, but differences disappear when we only consider natives sharing the same characteristics X with immigrants. How is this evidence changing after the downturn? First of all, on average the probability of exiting from employment is increasing for men, but it is decreasing for women, and the sign of the effect is the same for immigrants and natives. Thus, the analysis about the downturn and its interpretation has to be stratified by gender.

As regards men, the negative effect is stronger for immigrants than for natives, so that observed differences by immigrant status are higher after the downturn. Nevertheless, when considering only similar workers with respect to X the average differences still disappear. Why is this happening? Clear evidence comes by stratifying by propensity score classes (results not presented here for sake of brevity): immigrant-like workers face the worst effects of the downturn, independently of their true immigrant status, while for native-like workers the average effect is negligible. As an example for an intuitive interpretation, this means that industries more characterised by male immigrant labour forces, as construction, are more hit by the downturn.

The evidence for women is opposite. The overall reduction in separation rates is stronger for immigrants, so that differences with natives are slightly lower after the downturn. However, again, differences by immigrant status become not significant after matching on X . Looking at the stratification by p-score, as observed for men the stronger effects are for immigrant-like workers, but in this case this goes in the direction of a lower probability of losing the job. Thus, again as an example, sectors more characterised by female immigrant labour forces, as private and household services, are less hit by the downturn.

Summing up, if we stick to the probability of ending an ongoing job spell, the widespread idea of a stronger negative effect of the recent economic downturn for immigrants is valid on average only for male workers. For women, the effect of the downturn seems to be slightly positive and the differences by immigrant status are not much affected. But the more important result is that, on average, the different impact of the downturn for the two groups is mostly due to their characteristics, while there does not seem to be any kind of “discrimination” once we compare workers who are exactly the same with the only exception of being immigrant or not. This is true both before and after the downturn and for men and women.

References

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