

Not Just a Work Permit: EU Citizenship and the Consumption Behavior of Illegal and Legal Immigrants

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Abstract

We show that the 2007 European Union (EU) enlargement affected the consumption behavior of immigrant households in Italy. Comparing average monthly consumption expenditure of households from newly accessed and candidate countries, we find that the enlargement induced a significant and persistent consumption increase. This enlargement effect cannot be attributed to the mere legalization as it concerns both illegal and legal immigrants, albeit through different channels. Previously illegal immigrants experienced higher labor income by moving from the informal towards the formal economy, increasing consumption of basic-need items (food, clothes etc.). Immigrants who were already working legally in Italy benefitted from the increased probability of getting a permanent contract (as their work permits were no longer of limited duration). Enhanced employment stability in turn reduced the uncertainty about future labor income. Accordingly, they increased expenditure on durable goods, such as installment purchases.

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1 Introduction¹

Immigrants face higher economic uncertainty than natives, which may affect their consumption behavior.² Illegal or undocumented immigrants are constantly at risk of being deported and, when employed, they earn low, informal salaries. Legalization procedures differ by country but are costly and burdensome in general. In the case of Italy, they involve finding a sponsoring employer and their success probability is subject to yearly quotas. Legal immigrants in turn need to renew their documents, which requires them to prove that they earn high-enough income and did not entail in any criminal activity.

Against this background, the 2007 EU enlargement allowed Romanian and Bulgarian immigrants to work without the need of a work permit, and granted them the right to equal treatment with natives in employment, wages and working conditions.³ Thus, the EU accession plausibly implied an improvement in the employment opportunities of both legal and illegal immigrants, while reducing the degree of uncertainty. This could translate into higher income (and therefore consumption) for the illegal immigrants but not necessarily for the legal ones since they were already working in the formal sector. In the case of legal immigrants, the reduced labor market uncertainty as well as the higher probability of getting a permanent contract may have boosted household consumption expenditure -see Campos and Reggio (2015) for the relationship between labor market uncertainty and consumption and Barceló and Villanueva (2018) for the effect of permanent contracts on savings. These results imply that extending citizenship rights might have an important impact on domestic demand. Despite its relevance, the link between citizenship and consumption has been largely overlooked empirically.

In this paper, we study whether and through which channels the extension of EU citizenship affected the consumption behavior of immigrant households living in Italy.⁴ We com-

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²Dustmann (1997) develops a model of return migration and shows that in fact immigrants may engage in more precautionary savings due to higher income uncertainty.

³Article 45 Treaty on the Functioning of the European Union (ex 39 and 48).

⁴We do not consider immigrants that moved to Italy after the EU enlargement to avoid selection issues.

pare the monthly consumption of households from newly accessed (Romania and Bulgaria) and candidate (Albania, Bosnia and Herzegovina, Croatia, Kosovo, Macedonia, Montenegro, Serbia and Turkey) countries, before and after the enlargement.⁵ Importantly, we focus both on legal immigrants, for whom citizenship mainly implies that they do not need to renew their work permits any more, and illegal immigrants, who benefitted from legalization. Italy provides an ideal context to study the effects of the 2007 EU enlargement. First, it has long been the main destination for both Romanians and Bulgarians, who are therefore a large fraction of immigrants.⁶ Second, in the case of Italy the enlargement unexpectedly implied an immediate unrestricted access to the labor market.

While the EU accession of Romania and Bulgaria was an expected event (the accession negotiations were successfully concluded in 2004), its labor market consequences were not. The accession treaties allowed member states to impose temporal restrictions regarding work permits on Bulgarian and Romanian workers for up to seven years after accession, and the majority of member states, including Italy, did impose interim restrictions. However, just three days prior to the EU accession, Italy lifted the restrictions in sectors which had relatively large numbers of Romanian and Bulgarian immigrant workers: construction, hotel and tourism, domestic work, care services, agriculture and seasonal work. In the rest of the official economy (i.e. the manufacturing sector) migration quotas were also eased to accommodate a larger number of workers from Romania and Bulgaria. Hence, the EU accession de facto implied that Romanian and Bulgarian immigrants acquired full rights to work in Italy.⁷

We find that the EU accession significantly increased average monthly consumption of immigrant households. The increase in consumption was not temporary and involved both illegal and legal immigrants albeit through different channels. Specifically, the former increased their expenditure on food, clothes, and other basic-need items due to increased labor income, in line with the presence of liquidity constraints. By contrast, legal immigrants increased the consumption of durable goods. In their case, the underlying mechanism is an increase in employment stability, which in turn reduces the uncertainty about future labor income and thus, increases the propensity to consume. Our results are in line with Mastrobuoni and Pinotti (2016), who exploit the same natural experiment and find that

⁵A similar identification strategy has been adopted by recent papers that study the labor market effects of the 2004 enlargement (see Elsner, 2013a and 2013b; Ruhs, 2017; and Ruhs and Wadsworth, 2017).

⁶See European Commission, 2008.

⁷See Mastrobuoni and Pinotti (2016) for a similar discussion.

immigrant crime decreases due to increased employment opportunities.

The literature on the consumption behavior of both legal and illegal immigrants is scarce due to data limitations. A recent exception is Dustmann, Fasani and Speciale (2017) who use amnesty quotas to analyze the effect of immigrants legal status on their consumption behavior and find that undocumented immigrants consume about 40% less than documented immigrants and that this is partly due to their lower income. In our analysis we highlight an additional channel, i.e., the increased probability of getting a permanent contract for immigrants that were legal even before their home country accessed the EU. In the new legal framework, work permits of citizens from new member countries were no longer of limited duration, which plausibly made firms more willing to offer them permanent contracts. Enhanced labor stability in turn decreases the uncertainty about future labor income, and thus increases the propensity to consume.

Our findings also contribute to a very recent and scarce literature that studies the labor market effects of faster access to citizenship. This strand of the literature suggests that faster access to citizenship improves the labor market attachment of female immigrants and their investment in host country-specific skills (Gathmann and Keller, 2017). We also explore alternative channels such as increased fertility/family reunification or easier access to credit and find that the main underlying mechanism is the labor market one.

2 Data and Identification

We use data from an annual survey launched in 2001 by a non-governmental organization, the Institute for Multiethnic Studies (ISMU). The ISMU survey collects information on individual and household characteristics of a large and representative sample of immigrants residing in Italy's Lombardy region.⁸ From 2004 to 2012, households were asked to report their average monthly expenditure in Italy on broad categories of consumption: (i) food, clothes, and basic needs; (ii) housing such as rent, mortgage, maintenance, bills; and (iii) other items such as transportation, leisure, installment purchases and debt. We use the sum of these three types of consumption expenditure to construct the total consumption of immigrant households in the host country. The respondents are also asked about the average amount of money they send to their home country each month and about average monthly savings in Italy. However, information on monthly remittances is subject to measurement

⁸Lombardy is one of the largest, wealthiest and most populated regions of Italy. It has the largest migrant population in Italy accounting for 25% of the total immigrants in Italy (IReR, 2010).

error and we do not have information on savings held in the home country (see Dustmann et al., 2017 for a further discussion). Thus, we do not use these variables in our analysis and focus on average monthly consumption expenditure which is well measured in our data.

In our analysis we use nine waves (2004-2012) to explore the impact of the EU enlargement on the consumption of immigrant households from new member states. Our treatment group consists of Romanians and Bulgarians. A natural control group for new EU member countries is the EU candidate member countries as they should be comparable on the basis of the political and economic conditions (Mastrobuoni and Pinotti, 2016). Moreover, their attitudes towards risk should be similar to those of Romanians and Bulgarians given their common migration choices.⁹ Therefore, immigrants from Albania, Bosnia and Herzegovina, Croatia, Kosovo, Macedonia, Montenegro, Serbia, and Turkey constitute our control group.¹⁰ Since Italy experienced an expansion of migration from Romania and Bulgaria following their accession to the EU, the causal effect of the EU enlargement on the consumption of immigrant households would be contaminated by the different selection of new immigrants following the EU accession.¹¹ To address this issue, we restrict our sample to immigrants who arrived in Italy before 2007, i.e., before Romania and Bulgaria joined the EU.¹² We also restrict our sample to immigrants who do not hold Italian citizenship by the time of the interview and with no more than ten years of residence in Italy by the time of the EU accession since a non-EU citizen, having legally resided in Italy for ten years, is eligible to apply for the Italian citizenship.

Figure 1 presents the average monthly consumption of immigrant households in the host country for the treatment and the control groups, before and after the enlargement. As shown in Panel A, Romanians and Bulgarians living in Italy had lower average monthly consumption than immigrants from EU candidate countries. The difference remained fairly constant until 2007 (common trends). In 2007, with the EU accession, the average monthly consumption of the treated group increased, while the one of the control group continued to grow at approximately the same rate as in the previous years (Panel A). This increase in total

⁹There is a growing body of empirical literature supporting the existence of a relationship between the migration decision and attitudes towards risk, examples are by Bonin et. al. (2009), and Jaeger et. al. (2010).

¹⁰Although Iceland is among the candidate countries, their nationals can work in Italy, as well as in other EU countries, on the same footing as EU nationals, since they belong to the European Economic Area. Therefore, we do not consider Icelanders as part of our control group.

¹¹According to the Italian National Institute of Statistics, the number of Romanian and Bulgarian residents in Italy has almost doubled between 2006 and 2007.

¹²As a robustness check, we repeated the analysis by restricting our sample to Romanian and Bulgarian migrants who moved to Italy before 2006. Our results remained practically unchanged.

consumption was mainly driven by the increase in the expenditure on food, clothing and other basic needs and on transportation, leisure, installment purchases and debt (Panels B and D) and seems to be permanent. By contrast, the immigrant households' housing expenditure continued to grow in the year of EU accession at approximately the same rate as in the previous years, both for the treated and the control group (Panel C).

3 Regression Analysis

Since the observed differences in consumption presented in Figure 1 may reflect the underlying differences between the treatment and the control groups rather than a treatment effect, it is important to control for individual and household characteristics. For this purpose, we first focus on the short-term impact of the EU accession (i.e. from year 2006 to 2007) and set our empirical model as follows:

$$\begin{aligned} \ln(c_{icpt}) = & \alpha + \beta new\ EU_c + \gamma post_t + \delta new\ EU_c \times post_t + \overbrace{X_{icpt}\theta}^{\text{individual controls}} \\ & + \underbrace{Z_{icpt}\varphi}_{\text{household controls}} + \underbrace{\phi_c}_{\text{country of origin fe}} + \underbrace{\eta_p}_{\text{province fe}} + \epsilon_{icpt}, \end{aligned} \quad (1)$$

where i is an index for the households, c is the country of origin, p is the Italian province of residence and t is the year of the interview.¹³ The dependent variable $\ln c_{icpt}$ is the natural logarithm of immigrant household i 's average monthly consumption expenditure (total; food, clothing and other basic needs; housing such as rent, mortgage, maintenance, bills; or other items such as transportation, leisure, installment purchases and debt) in the host country.¹⁴ The variable $new\ EU_c$ is an indicator for individuals in the treated group and $post_t$ is a dummy variable that takes the value 1 in the year of enlargement (2007) and 0 in the year before (2006). The coefficient of the interaction between the $new\ EU_c$ and $post_t$ is the short-term effect of the EU enlargement on the consumption of immigrant households from the new member countries in the host country. The individual controls X_{icpt} include an indicator for whether the respondent is a female; the respondent's age and its square;

¹³The country of origin refers to the individual respondent rather than the whole household. Repeating the analysis considering only immigrants who are living with a partner with the same country of origin or single/not living with a partner does not affect our results in any way (available upon request).

¹⁴Throughout our empirical analysis, we primarily use household consumption and we control for the number of household members. Our estimates are robust to using individual consumption calculated as the ratio between household consumption and the number of members of the household residing in Italy (converted into equalized adults using an equivalence scale such as the one used for ISEE –Indicatore della situazione economica equivalente–, OECD modified and standard equivalence scales).

indicators for the respondent’s education categories (none, primary, secondary and tertiary or more); and the respondent’s years of residence in Italy. The household controls included in the vector Z_{icpt} are the number of household members living in Italy; the number of children living in Italy and abroad; the number of children and non adult children living with the respondent in Italy; an indicator for the spouse living abroad; an indicator for home ownership in Italy. In our preferred specification, we also include the respondent’s average monthly labor income net of taxes in addition to individual and household controls.¹⁵ In Table 1, we report detailed descriptive statistics for these variables. Province of residence in Italy and country of origin dummies are denoted as ϕ_c , and η_p , respectively and ϵ_{icpt} is an error term.

In Equation 1, the coefficient β can be interpreted as the effect of the systematic unobserved differences between the treatment and control groups on consumption, and the coefficient γ is the shared effect of the EU enlargement. The main coefficient of interest is δ which is the difference-in-differences coefficient, comparing monthly consumption of immigrant households from new member states and EU candidate countries in the host country, before and after EU enlargement. Table 2 presents this set of estimates in separate panels for total consumption and for the broad categories of consumption expenditure. In each panel, we condition on country of origin and Italian residence of province, and gradually add individual and household controls. In the last column of each panel, we also control for the respondent’s average monthly labor income net of taxes.

As shown in panel A of Table 2, the coefficient of the interaction term is positive, and statistically significant, suggesting that Romanian and Bulgarian households living in Italy increased their total consumption with the EU accession. This result implies an increase in total consumption of around 8.9%. The remaining panels of Table 2 focus on broad categories of the consumption expenditure. According to our estimates, the positive effect is significant for expenditure on food, clothing and other basic needs (Panel B) and on transportation, leisure, installment purchases and debt (Panel D), but there is no immediate significant effect on housing expenditure (Panel C). Our estimates imply that with the EU accession, Romanian and Bulgarian households residing in Italy increased their expenditure on food, consumption, and other basic needs of around 7.7% (similar to the effect

¹⁵One drawback of the ISMU data is that, household income information is not available for survey years earlier than 2007. We use respondent’s labor income as a proxy of the household income since the correlation coefficient between household income and respondent’s labor income in our sample is around 0.27 (for years 2007-2012). Dropping respondent’s labor income from our preferred specification, leaves our main results unchanged.

on total consumption) and their expenditure on less basic needs and durable goods such as transportation, leisure, installment purchases and debt around 14.1%.¹⁶

In order to test the validity of our analysis, we now adopt a more generalized framework like in Autor (2003) that allows us to test for common trends but also to examine the persistence of the effect. For this purpose, we use data for the period 2004-2012 and we augment equation (1) with lags and leads of the treatment as given by equation (2)

$$\begin{aligned}
 \ln(c_{icpt}) = & \alpha + \beta_{new} EU_c + \overbrace{\sum_{j=-3}^5 \delta_j D_{icpt}(t = 2007 + j) \times new EU_c}^{\text{leads \& lags of the treatment}} \\
 & + \underbrace{X_{icpt}\theta}_{\text{individual controls}} + \underbrace{Z_{icpt}\varphi}_{\text{household controls}} + \underbrace{\phi_c}_{\text{country of origin fe}} + \underbrace{\eta_p}_{\text{province fe}} + \underbrace{\lambda_t}_{\text{year fe}} + \varepsilon_{icpt}, \quad (2)
 \end{aligned}$$

including year fixed effects, λ_t in our specification.¹⁷ In Equation (2) $D_{icpt}(\cdot)$ is an indicator variable for each year of the interview t . For $j = 0$, the δ_j is the immediate effect of the enlargement in 2007. Moreover, if the δ_j for $j = -3, -2$, and -1 are not statistically significant we can conclude that the trends between the treated and the control group in the period before the EU enlargement (2004-2006) were parallel, which is crucial for the validity of our difference-in-differences estimation. Furthermore, the δ_j for $j > 0$ are informative about the persistence of the effect, i.e., whether the increase in consumption after the enlargement is permanent or temporary. Table 3 and Figure 2 show the results that we obtain from this generalized method, with year 2004 being the reference category. As expected, the estimates for 2007 are in line with those obtained by (1). The coefficients for 2005 and 2006 are not statistically significant from zero indicating that the common trends assumption is satisfied. Lastly, the coefficients of total consumption are statistically significant and positive also for 2010 and 2012 suggesting that the effect is not temporary. In the next subsection we explore whether improved employment conditions lie behind these effects.

¹⁶There is also literature that emphasizes the effects of immigration on prices (see for example Cortes, 2008). If all prices went down due to the EU enlargement this would affect both the treated and the control group. If we assume that only prices related to Romanian and Bulgarian products went down then we would expect a decrease in consumption expenditures which would make our results a lower bound.

¹⁷The common time trends in the monthly consumption expenditure of the treatment and the control groups, and the changes in macroeconomic variables (e.g. inflation) are captured by the year dummies.

4 Mechanisms

One of the most important benefit for the immigrants of the new EU member countries is the right to work in all EU countries without the need of a work permit. Italy had initially announced that it would impose interim restrictions to protect its labor market just like other EU countries did. However, just a few days before the accession Italy decided to lift these restrictions from sectors where the vast majority of Romanians and Bulgarians used to work.¹⁸ Additionally, migration quotas were also eased in the rest of the official economy (i.e. the manufacturing sector) to accommodate a larger number of Romanian and Bulgarian workers. Therefore, unexpectedly, these immigrants acquired full rights to work in Italy. This could have direct effects on the employment probability and the labor income of our treated group which may explain the increase in the immigrant household consumption that we documented in the previous section. Table 4 presents the results for different labor market aspects.¹⁹ We observe a short-lived labor force participation effect right after the accession and no employment effect. Indeed, most immigrants who were legal before the accession were already employed since obtaining a work permit is the most common way of becoming legal in Italy. Moreover, even illegal immigrants tend to work in the shadow economy. Note that the ISMU data contain information both for the formal and the informal employment. Therefore, it is not puzzling that the probability of employment did not increase. What did increase after the EU enlargement is the labor income as well as the probability of having an undetermined-time (permanent) contract.

An alternative explanation might be that the immigrant households' consumption response is due to the change in the legal status associated with the EU accession. In fact, Dustmann, Fasani and Speciale (2017) analyze the effect of immigrants' legal status on their consumption behavior and find that undocumented immigrants consume about 40% less than documented immigrants. Although ISMU data provide information on current legal status, there is no information on former legal status (before the EU enlargement). Furthermore, due to its cross-sectional nature, it is not possible to distinguish those immigrants from the newly accessed countries that were legalized by the EU enlargement, and those that were already legally residing in Italy. In order to check robustness to this, we replicate our short-term analysis using a sub-sample of legal immigrants that reported they

¹⁸Those sectors where agriculture, hotel and tourism, domestic work, care services, construction, and seasonal work.

¹⁹The ISMU data contains information on labor market outcomes in all available waves (2001-2012).

had a valid working permit in 2006 and 2007. The rationale behind our strategy is that the respondents in our treatment group, who reported to have a valid working permit in 2007, should obtain the work permit (i.e. legally residing in Italy) before the EU enlargement since there is no need for obtaining or renewing their work permit after accession. These results are reported in Table 5. We observe that the effect on food, clothing and other basic needs disappears for immigrants who were legal before the enlargement suggesting that liquidity constraints did not bind for them. On the other hand, there is an increase in their total consumption expenditure driven mainly by the increase in household consumption on durable goods such as transportation, leisure, installment purchases and debt.

Table 6 focuses on the treatment effect on labor market outcomes in the short-run for this group of immigrants in order to explore the underlying mechanism behind the response in consumption. The small and insignificant estimates on labor income and the probability of having an undetermined-time (permanent) contract suggests that labor market outcomes of legal immigrants (working with a valid permit) from newly accessed countries were not affected by the EU enlargement in the short-run.

Given that the ISMU data do not allow us to look at the long-term effects of the EU enlargement on the labor market outcomes, we provide further evidence using data from the Italian Social Security Records. The Social Security data contain information for a 6,5 per cent random sample of all private sector employees in Italy. Due to their administrative nature, these data include only immigrants that are working in the formal labor market which in principle correspond to our sample of legal immigrants (working with a valid work permit).²⁰ To have comparable results with the ISMU data, we restrict the sample to immigrants that work in a firm located in Lombardy and appear at least once in the Social Security data before 2007 with less than 10 years of experience.²¹ Figure 3 shows an increase in the percentage of permanent contracts after the EU accession with one year of delay and no effect on daily wages.

The panel nature of the administrative data allow us to perform a regression analysis with worker and firm fixed effects following Abowd, Kramarz and Margolis (1999). Table 7 reports the results. There is no statistically significant effect on daily wages while the probability of having a permanent contract increases in 2008 and especially in 2010-2011.

²⁰Hotchkiss et al. (2015) show that administrative data in the US may actually include a small number of illegal immigrants with fake fiscal code.

²¹Since we lack information on the year of arrival in Italy, we use the date of entry in the labor market as a proxy of the arrival date.

Moreover, pre-trends seem to be parallel (Figure 4). The regression estimates confirm the descriptive evidence presented in Figure 3 and suggest that although legalization is not the reason behind it, employers reacted positively to the fact that Romanians and Bulgarians did not need to pass anymore through the tedious bureaucratic procedure of renewing their work permit. In other words, the new legal framework after the EU accession acted as a "permanent" work permit. Increased employment stability reduces the uncertainty for future labor income, which in turn increases their consumption expenditure. This result is in line with Ruhs (2017) who finds that labor earnings of Eastern European immigrants in the UK have increased after the accession of their home countries in the EU and Gathmann and Keller (2017) who find that faster access to citizenship for immigrants in Germany has improved their labor market attachment.

5 Robustness Checks and Alternative Mechanisms

In this section we perform a series of exercises to check the robustness of our estimates and we examine whether alternative mechanisms may lie behind our results. We start by looking at anticipation effects as treated households that moved in Italy in 2006 may have somehow anticipated that the labor market restrictions would have not been implemented. We thus restrict our sample to those that had migrated in Italy at least one year before December 27, 2006, i.e. before January 2006. Our results remain practically unchanged (Table 8) suggesting that there is no concern of anticipation effects.

We then try to understand whether there are any spillover effects between the treated and the control group (the so-called SUTVA-see Rubin, 1977). In particular, if the treated and the control group competed for the same jobs, the EU accession could not only benefit the treated but also negatively affect the control, undermining our difference-in-difference strategy. To address this issue, we compare provinces where the treated and the control group were of similar size before 2007 (Figure 5a) with provinces where the treated group was the minority (Figure 5b). The idea behind our strategy is that spillover effects should be stronger in provinces where the treated and the control groups are of similar sizes-potentially through the competition in the labor market-than in provinces where the treatment group was a minority. The effect of the EU enlargement on consumption is not so different between the two sets suggesting that SUTVA is likely to be satisfied in our setting.

Another possible concern has to do with the composition of our sample after the EU

accession given that the treated group acquired the right to move freely to other countries within the EU. In particular, mobility may be non-random and treated households that did not prosper in Italy may decide to leave the country in search of better opportunities elsewhere in the EU. In that case a composition effect could affect our results. To address this issue, we compare the characteristics of the treated group before and after the EU accession (Table 1, columns 1 and 3). Clearly, income is not comparable as it is endogenous and it varies over time. We therefore focus on the education level of the household head that is exogenous and generally constant over time and we find that there is practically no difference in the composition of the treated household heads by education before and after the treatment. Therefore, composition is unlikely to drive our results.

We have seen so far that the EU accession increased the household consumption of the treated with respect to the control and we provided evidence that the improved labor market conditions is a possible underlying mechanism. However, this does not exclude other channels that may have also contributed such as increased fertility/family reunification. More specifically, treated households by acquiring the EU citizenship may decide to have more children. Likewise, household members (children or spouse) that are still living in their home country may decide to join the household head in Italy after their country's access to the EU. Indeed as shown in Table 1, columns 1 and 3, the number of children goes up and the fraction of households with the spouse abroad goes down only among the treated after the EU accession. This leads to an increase in the number of household members that could translate mechanically into an increase in household consumption expenditure. Note however that in the benchmark specification we control for the number of household members (Table 2). Although this control can be considered endogenous the results do not change in any significant way by including it (Table 2, columns 3 and 4) or not (Table 2, columns 1 and 2). As a further robustness check to this, we repeated the analysis using the OECD equivalence scale and the results are in line with the ones of the benchmark. Therefore, our findings on increased household consumption cannot be attributed to the increased fertility or family reunification.

The EU accession may have also facilitated the access to credit for the treated households although in our benchmark specification we do not find any evidence of increased expenditures regarding housing (Table 2, panel C). A possible reason is that mortgage payments and rent enter in the same way in the expenditures for housing. The ISMU data do not contain any information on mortgages. We therefore use data from external sources and in

particular from the Survey on Income and Life Conditions of Households with Foreigners conducted by the Italian National Institute of Statistics in 2009. This survey has been conducted only once and followed closely the design of the European Union Statistics on Income and Living Conditions (EU-SILC) but with a sample exclusively composed of households with at least one foreigner. Moreover, it has been specifically designed to be representative by nationality. This survey contains unique information on whether households have a mortgage, the year that they obtained it as well as the mortgage's interest rate. We define the treated and the control group in the same way as in the benchmark exercise and apply the same identification strategy but we find no clear effect on the fraction of treated with a mortgage or on the interest rate of the mortgage (results available upon request).

Therefore, it seems that improved labor market conditions is the most likely underlying mechanism behind the increases in the household consumption of the treated. Moving away from the shadow economy for previously illegal immigrants as well as the increased probability of getting a permanent job for previously legal immigrants, whose work permit was no longer of limited duration, are the two main channels.

6 Conclusions

In this paper we focus on Romanian and Bulgarian households that had migrated to Italy before 2007 and study whether the accession of their home country in 2007 affected their consumption behavior. We find that their average monthly consumption expenditure increased significantly as soon as their home country accessed the EU. This increase is permanent and it cannot be attributed to the mere legalization.

On the one hand, immigrants from the new member countries who were working illegally in Italy before the EU accession experience increases in labor income after the accession by moving away from the shadow economy. On the other hand, immigrants from the new member countries who were working legally in Italy even before accessing the EU face an increased probability of getting a permanent contract after the accession. We conjecture that the resolution of uncertainty regarding the renewal of work permits has contributed to this effect. In the new legal framework work permits did not have to be renewed for the citizens of the new member countries making firms more willing to offer them permanent contracts. Enhanced labor market stability decreases the uncertainty regarding future labor income and it consequently increases household expenditures-particularly those on durables. Our results

are robust to a series of robustness checks addressing anticipation and composition effects. We also discuss alternative possible channels such as increased fertility/family reunification and improved access to credit and we conclude that improved labor market conditions is the predominant underlying mechanism.

Our results have important policy implications in a period of increased legal uncertainty, following the decision of the United Kingdom to exit the EU. Moreover, our findings of a positive effect of immigrants' legalization on consumption expenditures in the host country contribute to the recent debate over the refugee crisis in Europe and the construction of the wall in the borders of the US with Mexico.

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Figures and Tables

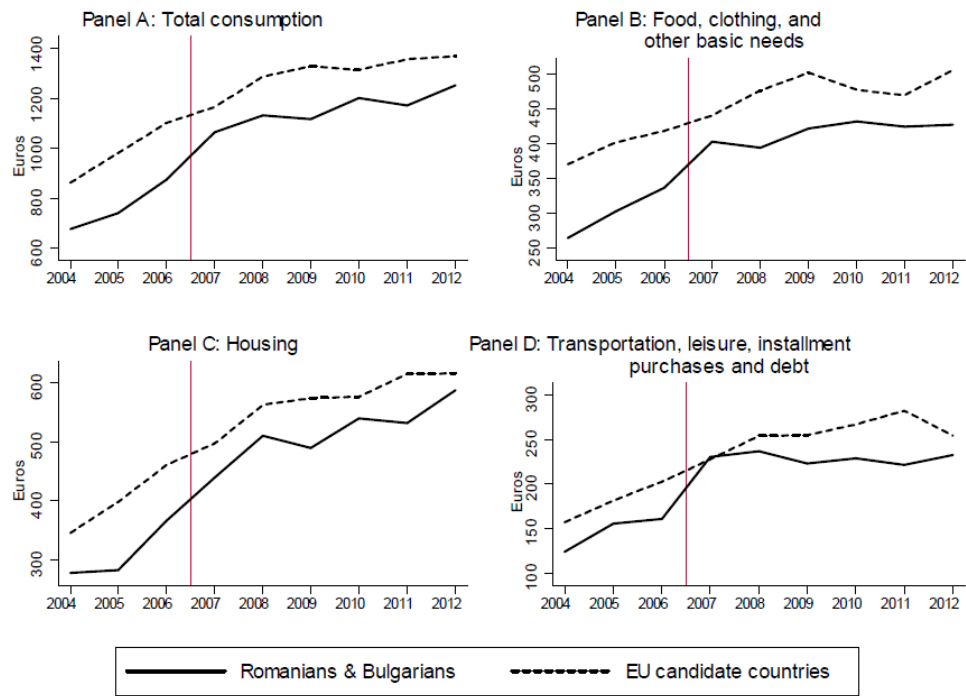


Figure 1. Immigrants from new EU member and candidate member countries residing in Italy, average monthly consumption expenditure.

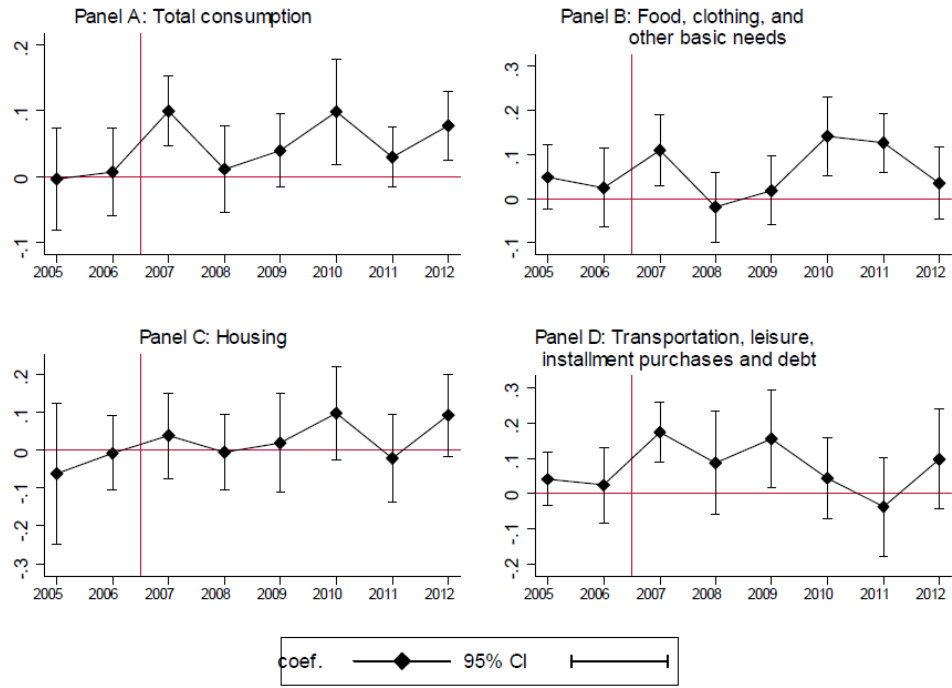


Figure 2. Estimated effect of the EU enlargement on the log monthly consumption expenditure of immigrant households from new EU member countries before, during, and after the EU accession.

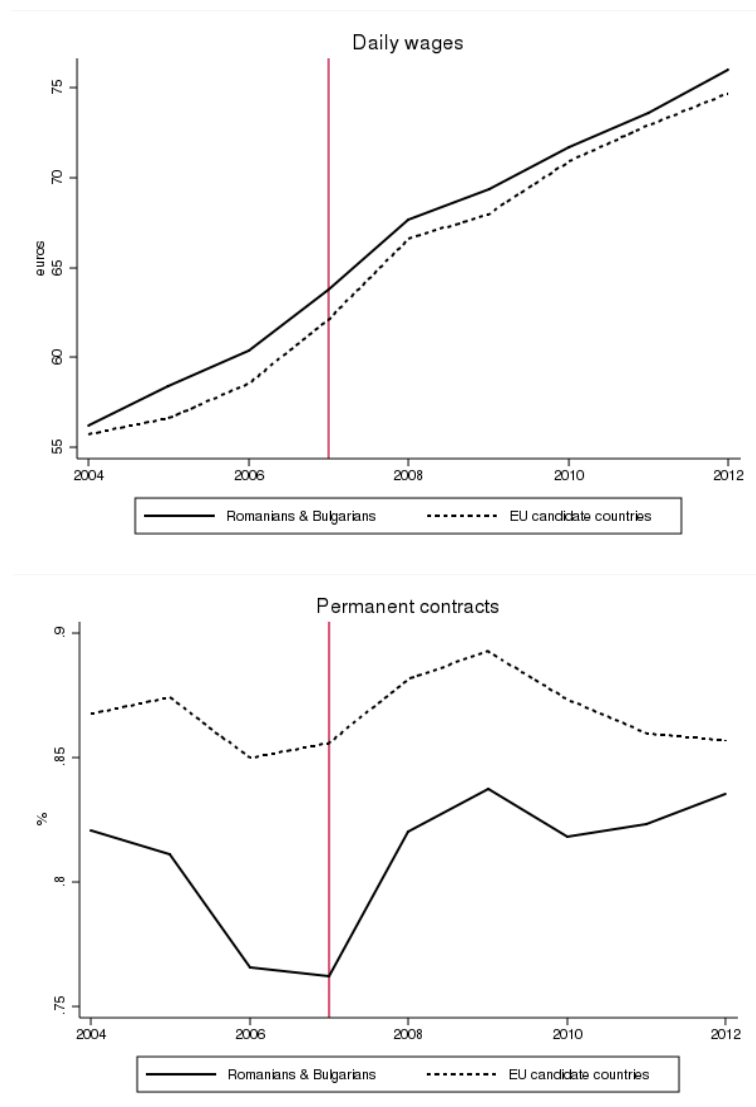


Figure 3. Labor market effects-Social security data.

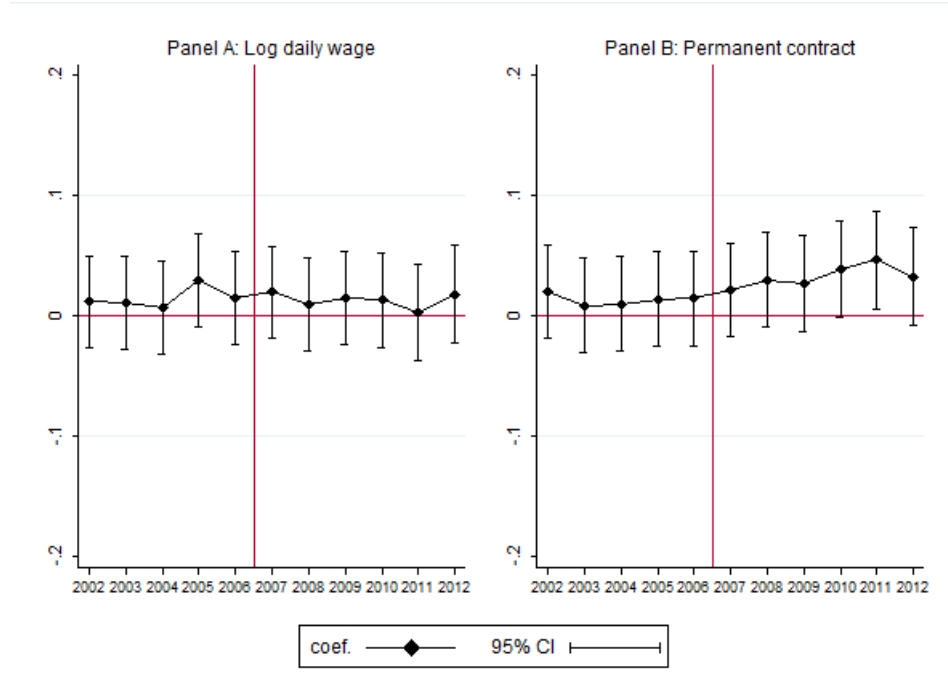


Figure 4. Estimated labor market effects-Social security data.

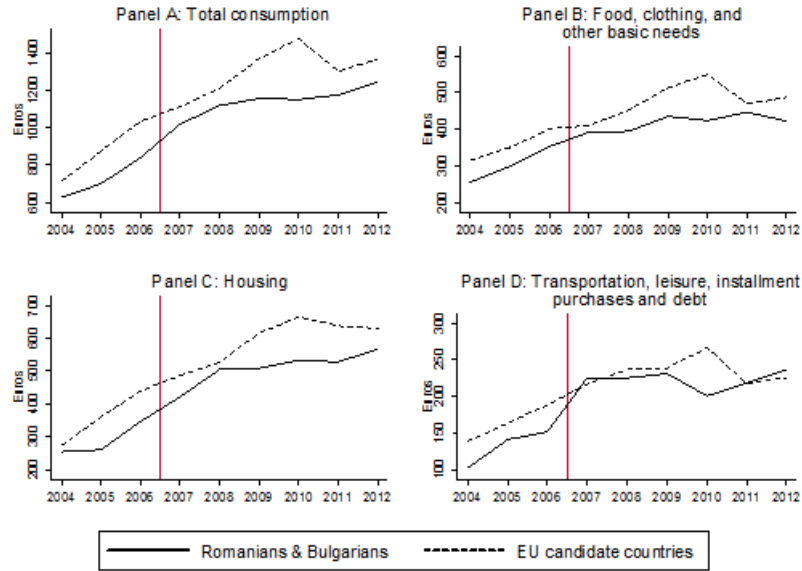


Figure 5a. Immigrants from new EU member and candidate member countries residing in Italy, provinces where the treatment and the control group were of similar size before 2007.

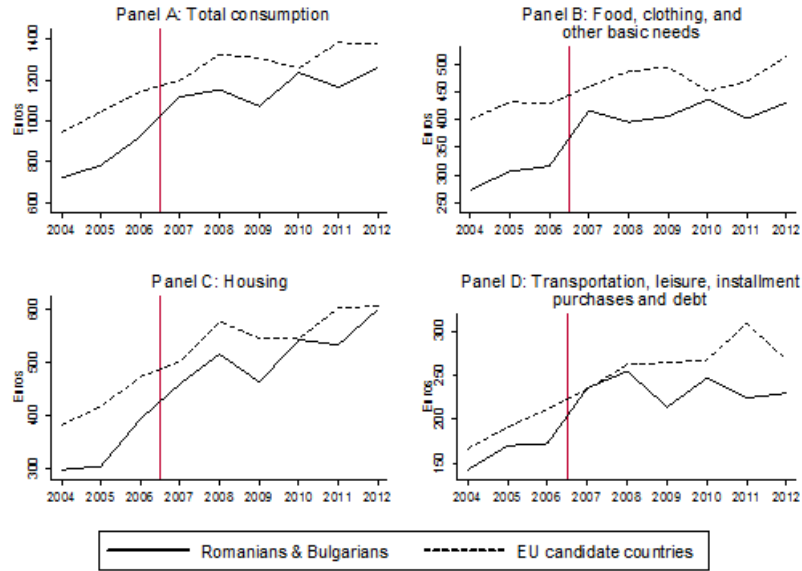


Figure 5b. Immigrants from new EU member and candidate member countries residing in Italy, provinces where the treatment group was the minority before 2007.

Table 1. Sample means

	Before EU enlargement		After EU enlargement	
	Romanians & Bulgarians		Romanians & Bulgarians	
	(1)	(2)	(3)	(4)
Outcomes				
Expenditure (euros per month)				
Total consumption	917.51 (432.99)	1073.88 (518.45)	1279.01 (526.89)	1339.95 (522.95)
Food, clothing and other basic needs	351.47 (185.07)	437.21 (284.75)	454.52 (227.30)	491.04 (243.77)
Housing	394.12 (265.46)	440.55 (283.80)	568.96 (274.98)	581.35 (247.38)
Transport., leisure, installment purchases and debt	171.92 (109.19)	196.12 (124.23)	255.54 (179.21)	267.55 (214.88)
Controls				
Individual				
Age	32.04 (7.23)	32.16 (8.45)	34.07 (8.35)	33.47 (8.67)
Female (dummy)	0.48	0.39	0.56	0.41
Education: None (dummy)	0.03	0.05	0.03	0.04
Education: Primary (dummy)	0.29	0.39	0.27	0.37
Education: Secondary (dummy)	0.56	0.45	0.56	0.48
Education: Tertiary (dummy)	0.13	0.11	0.14	0.11
Residence in Italy (years)	4.09 (2.10)	5.05 (2.23)	6.79 (2.97)	7.87 (2.89)
Labor income (net of taxes, euros per month)	913.39 (497.82)	950.88 (603.78)	967.41 (604.84)	958.57 (641.12)
Household				
Number of household members in Italy	2.32 (1.14)	2.83 (1.45)	2.84 (1.35)	3.23 (1.45)
Children (dummy)	0.53	0.57	0.63	0.61
Number of children (if Children>0)	1.53 (0.67)	1.84 (0.88)	1.61 (0.78)	1.84 (0.90)
Number of children living in Italy (if Children>0)	1.42 (0.59)	1.74 (0.80)	1.48 (0.66)	1.75 (0.74)
Number of non adult children living in Italy (if Children>0)	1.40 (0.57)	1.68 (0.76)	1.41 (0.62)	1.67 (0.68)
Spouse abroad (if Married>0) (dummy)	0.12	0.08	0.06	0.05
Living in own house in Italy (dummy)	0.09	0.10	0.19	0.20
Legal (dummy)	0.79	0.91	1.00	0.96
Number of observations	657	1,208	1,273	2,286

Data source: ISMU data 2004-2012. Sample includes immigrants who arrived in Italy before 2007, with no more than ten years of residence in Italy by 2007, who do not hold Italian citizenship by the time of the interview. EU candidate countries Albania, Bosnia and Herzegovina, Croatia, Kosovo, Macedonia, Montenegro, Serbia, and Turkey. Standard deviations of the continuous variables are in parenthesis.

Table 2. Estimated effect of EU enlargement on the log monthly consumption expenditure of immigrant households from new EU member countries, short-term analysis (2006-2007)

	Panel A. Total Consumption				Panel B. Food, clothing and other basic needs			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
new EU	-0.100** (0.032)	-0.090*** (0.025)	-0.045 (0.036)	-0.059 (0.037)	-0.133*** (0.037)	-0.125*** (0.033)	-0.066 (0.042)	-0.081 (0.046)
post	0.111*** (0.026)	0.048 (0.028)	0.056* (0.027)	0.052* (0.025)	0.098 (0.056)	0.046 (0.055)	0.057 (0.052)	0.054 (0.050)
new EU x post	0.059*** (0.010)	0.102*** (0.025)	0.102** (0.033)	0.089* (0.035)	0.062** (0.021)	0.097*** (0.024)	0.090** (0.029)	0.077* (0.033)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country of origin dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Household controls	No	No	Yes	Yes	No	No	Yes	Yes
Labor income	No	No	No	Yes	No	No	No	Yes
Nobs	1,628	1,628	1,628	1,628	1,628	1,628	1,628	1,628
Adjusted R ²	0.090	0.205	0.439	0.468	0.094	0.163	0.346	0.365

* p<0.05, ** p<0.01, *** p<0.001. Two way clustered standard errors in parentheses: Italian region of residence and country of origin (114 clusters). All specifications include year, country of origin and Italian province of residence fixed effects. Individual controls include respondent's sex, age, age squared, dummies for education level (none, primary, secondary, tertiary), and years of residence in Italy. Household controls include an indicator for having a spouse living abroad, number of household members living in Italy, number of children living in Italy and abroad, number of young children living in Italy, and a dummy for living in own house in Italy. Labor income is the average monthly labor income (net of taxes) of the respondent.

Table 2.(continued) Estimated effect of EU enlargement on the log monthly consumption expenditure of immigrant households from new EU member countries, short-term analysis (2006-2007)

	Panel C. Housing				Panel D. Transportation, leisure, installment purchases and debt			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
new EU	-0.056 (0.037)	-0.047 (0.031)	-0.004 (0.030)	-0.017 (0.029)	-0.095* (0.042)	-0.059 (0.044)	-0.036 (0.052)	-0.054 (0.058)
post	0.124*** (0.033)	0.040 (0.035)	0.049 (0.036)	0.046 (0.036)	0.110*** (0.024)	0.056* (0.026)	0.060* (0.029)	0.055 (0.031)
new EU x post	-0.007 (0.044)	0.050 (0.036)	0.056 (0.051)	0.045 (0.054)	0.131* (0.058)	0.159** (0.062)	0.158* (0.066)	0.141* (0.070)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country of origin dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Household controls	No	No	Yes	Yes	No	No	Yes	Yes
Labor income	No	No	No	Yes	No	No	No	Yes
Nobs	1,628	1,628	1,628	1,628	1,628	1,628	1,628	1,628
Adjusted R ²	0.065	0.166	0.340	0.351	0.056	0.093	0.144	0.170

* p<0.05, ** p<0.01, *** p<0.001. Two way clustered standard errors in parentheses: Italian region of residence and country of origin (114 clusters). All specifications include year, country of origin and Italian province of residence fixed effects. Individual controls include respondent's sex, age, age squared, dummies for education level (none, primary, secondary, tertiary), and years of residence in Italy. Household controls include an indicator for having a spouse living abroad, number of household members living in Italy, number of children living in Italy and abroad, number of young children living in Italy, and a dummy for living in own house in Italy. Labor income is the average monthly labor income (net of taxes) of the respondent.

Table 3. Estimated effect of EU enlargement on the log monthly consumption expenditure of immigrant households from new EU member countries, pre-trends and persistence (2004-2012)

	Panel A. Total Consumption				Panel B. Food, clothing and other basic needs			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
new EU x year 2005	0.003 (0.051)	-0.014 (0.052)	0.000 (0.044)	-0.004 (0.039)	0.053 (0.047)	0.039 (0.050)	0.052 (0.039)	0.048 (0.037)
new EU x year 2006	0.041 (0.040)	0.029 (0.027)	0.026 (0.032)	0.007 (0.034)	0.051 (0.045)	0.041 (0.038)	0.042 (0.043)	0.025 (0.045)
new EU x year 2007	0.113** (0.041)	0.131*** (0.035)	0.127*** (0.028)	0.100*** (0.027)	0.130** (0.048)	0.145*** (0.043)	0.135** (0.041)	0.110** (0.041)
new EU x year 2008	0.053* (0.025)	0.065* (0.029)	0.028 (0.030)	0.012 (0.034)	0.026 (0.025)	0.036 (0.031)	-0.005 (0.039)	-0.019 (0.041)
new EU x year 2009	0.069 (0.037)	0.069 (0.041)	0.065* (0.030)	0.040 (0.028)	0.056 (0.043)	0.056 (0.043)	0.041 (0.040)	0.018 (0.041)
new EU x year 2010	0.149** (0.056)	0.144** (0.055)	0.131** (0.045)	0.099* (0.041)	0.190*** (0.046)	0.187*** (0.047)	0.171*** (0.044)	0.141** (0.045)
new EU x year 2011	0.082* (0.032)	0.059* (0.026)	0.053* (0.021)	0.030 (0.023)	0.166*** (0.046)	0.148*** (0.036)	0.147*** (0.034)	0.127*** (0.034)
new EU x year 2012	0.106 (0.055)	0.081 (0.060)	0.100*** (0.027)	0.078** (0.027)	0.056 (0.057)	0.030 (0.059)	0.056 (0.040)	0.035 (0.042)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country of origin dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Household controls	No	No	Yes	Yes	No	No	Yes	Yes
Labor income	No	No	No	Yes	No	No	No	Yes
Nobs	5,424	5,424	5,424	5,424	5,424	5,424	5,424	5,424
Adjusted R ²	0.142	0.214	0.417	0.441	0.082	0.124	0.319	0.333

* p<0.05, ** p<0.01, *** p<0.001. Two way clustered standard errors in parentheses: Italian region of residence and country of origin (114 clusters).

All specifications include year, country of origin and Italian province of residence fixed effects. Individual controls include respondent's sex, age, age squared, dummies for education level (none, primary, secondary, tertiary), and years of residence in Italy. Household controls include an indicator for having a spouse living abroad, number of household members living in Italy, number of children living in Italy and abroad, number of young children living in Italy, and a dummy for living in own house in Italy. Labor income is the average monthly labor income (net of taxes) of the respondent.

Table 3 (continued). Estimated effect of EU enlargement on the log monthly consumption expenditure of immigrant households from new EU member countries, pre-trends and persistence (2004-2012)

	Panel C. Housing				Panel D. Transportation, leisure, installment purchases and debt			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
new EU x year 2005	-0.049 (0.116)	-0.072 (0.109)	-0.058 (0.100)	-0.061 (0.095)	0.043 (0.034)	0.035 (0.036)	0.046 (0.037)	0.040 (0.039)
new EU x year 2006	0.034 (0.074)	0.016 (0.052)	0.009 (0.049)	-0.008 (0.050)	0.055 (0.046)	0.053 (0.045)	0.050 (0.049)	0.023 (0.055)
new EU x year 2007	0.046 (0.085)	0.066 (0.059)	0.064 (0.055)	0.039 (0.057)	0.195*** (0.039)	0.214*** (0.047)	0.214*** (0.044)	0.174*** (0.043)
new EU x year 2008	0.046 (0.041)	0.052 (0.037)	0.009 (0.048)	-0.005 (0.051)	0.110 (0.057)	0.136* (0.065)	0.111 (0.067)	0.087 (0.075)
new EU x year 2009	0.050 (0.095)	0.047 (0.089)	0.042 (0.069)	0.020 (0.067)	0.175*** (0.051)	0.189** (0.059)	0.192** (0.069)	0.155* (0.071)
new EU x year 2010	0.153 (0.083)	0.141 (0.082)	0.127 (0.067)	0.098 (0.063)	0.087 (0.060)	0.097 (0.062)	0.091 (0.056)	0.044 (0.059)
new EU x year 2011	0.043 (0.057)	0.011 (0.059)	-0.001 (0.057)	-0.021 (0.059)	-0.000 (0.064)	-0.006 (0.071)	-0.006 (0.065)	-0.039 (0.071)
new EU x year 2012	0.132 (0.085)	0.095 (0.090)	0.113* (0.057)	0.092 (0.055)	0.121 (0.070)	0.122 (0.078)	0.131 (0.070)	0.098 (0.073)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country of origin dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Province dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Household controls	No	No	Yes	Yes	No	No	Yes	Yes
Labor income	No	No	No	Yes	No	No	No	Yes
Nobs	5,424	5,424	5,424	5,424	5,424	5,424	5,424	5,424
Adjusted R ²	0.128	0.198	0.335	0.346	0.095	0.117	0.161	0.186

* p<0.05, ** p<0.01, *** p<0.001. Two way clustered standard errors in parentheses: Italian region of residence and country of origin (114 clusters).

All specifications include year, country of origin and Italian province of residence fixed effects. Individual controls include respondent's sex, age, age squared, dummies for education level (none, primary, secondary, tertiary), and years of residence in Italy. Household controls include an indicator for having a spouse living abroad, number of household members living in Italy, number of children living in Italy and abroad, number of young children living in Italy, and a dummy for living in own house in Italy. Labor income is the average monthly labor income (net of taxes) of the respondent.

Table 4. Estimated effects of EU enlargement on the labor market outcomes of immigrant households from new EU member countries (2001-2012).

	Labor force participation	Employment	log(labor income)	Permanent contract
new EU x year 2002	0.023 (0.037)	-0.020 (0.059)	-0.024 (0.041)	0.109* (0.054)
new EU x year 2003	0.047 (0.024)	0.045 (0.051)	0.019 (0.024)	0.007 (0.044)
new EU x year 2004	0.036 (0.025)	0.033 (0.041)	-0.076 (0.064)	-0.063 (0.071)
new EU x year 2005	0.069 (0.040)	0.063 (0.078)	0.022 (0.041)	0.010 (0.057)
new EU x year 2006	0.080 (0.050)	0.084 (0.070)	0.044 (0.023)	0.008 (0.065)
new EU x year 2007	0.064* (0.032)	0.073 (0.059)	0.080*** (0.021)	0.063* (0.030)
new EU x year 2008	0.075 (0.043)	0.036 (0.069)	0.030 (0.028)	0.118*** (0.029)
new EU x year 2009	0.085** (0.033)	0.081 (0.081)	0.085** (0.032)	0.091* (0.040)
new EU x year 2010	0.057 (0.029)	0.086 (0.054)	0.091* (0.041)	0.037 (0.046)
new EU x year 2011	0.043 (0.040)	0.083 (0.063)	0.051 (0.051)	0.066 (0.062)
new EU x year 2012	0.087 (0.045)	0.074 (0.048)	0.045 (0.056)	0.078 (0.058)
Year dummies	Yes	Yes	Yes	Yes
Country of origin dum.	Yes	Yes	Yes	Yes
Province dummies	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes
Nobs	10,581	10,581	6,321	6,321
Adjusted R ²	0.194	0.177	0.284	0.068

* p<0.05, ** p<0.01, *** p<0.001. Two way clustered standard errors in parentheses: Italian province of residence and country of origin (i.e. 114 clusters). All specifications include year, country of origin and Italian province of residence fixed effects. Individual controls include respondent's sex, age, age squared, dummies for education level (none, primary, secondary, tertiary), and years of residence in Italy.

Table 5. Estimated short-term effect of EU enlargement on the log monthly consumption expenditure of immigrant households from new EU member countries (2006-2007), immigrants who were legal before accession

	Panel A. Total consumption	Panel B. Food, clothing, and other basic needs	Panel C. Housing	Panel D. Transportation, leisure, installment purchases and debt
new EU	-0.041 (0.033)	-0.049 (0.054)	-0.008 (0.039)	-0.071 (0.058)
post	0.046 (0.030)	0.087 (0.051)	0.006 (0.044)	0.038 (0.030)
new EU x post	0.080*** (0.021)	0.063 (0.061)	0.056 (0.061)	0.127** (0.039)
Year dummies	Yes	Yes	Yes	Yes
Country of origin dum.	Yes	Yes	Yes	Yes
Province dummies	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes
Labor income	Yes	Yes	Yes	Yes
Nobs	801	801	801	801
Adjusted R ²	0.518	0.426	0.381	0.218

* p<0.05, ** p<0.01, *** p<0.001. Two way clustered standard errors in parentheses: Italian region of residence and country of origin (114 clusters). All specifications include year, country of origin and Italian province of residence fixed effects. Individual controls include respondent's sex, age, age squared, dummies for education level (none, primary, secondary, tertiary), and years of residence in Italy. Household controls include number of household members living in Italy, number of children living in Italy and abroad, number of children living in Italy, number of young children living in Italy, an indicator for the spouse living abroad and a dummy for living in own house in Italy. Labor income is the average monthly labor income (net of taxes) of the respondent.

Table 6. Estimated short-term effects of EU enlargement on the labor market outcomes of immigrant households from new EU member countries (2006-2007), immigrants who were legal before accession

	log(labor income)	Permanent contract
new EU	-0.017 (0.026)	-0.062 (0.056)
post	0.005 (0.027)	-0.096*** (0.024)
new EU x post	0.022 (0.039)	0.039 (0.063)
Year dummies	Yes	Yes
Country of origin dum.	Yes	Yes
Province dummies	Yes	Yes
Individual controls	Yes	Yes
Nobs	801	801
Adjusted R ²	0.148	0.113

* p<0.05, ** p<0.01, *** p<0.001. Two way clustered standard errors in parentheses: Italian province of residence and country of origin (i.e. 114 clusters). All specifications include year, country of origin and Italian province of residence fixed effects. Individual controls include respondent's sex, age, age squared, dummies for education level (none, primary, secondary, tertiary), and years of residence in Italy.

Table 7. Estimated long-term effects of EU enlargement on the labor market outcomes of immigrant households from new EU member countries (Italian Social Security Records 2001-2012), immigrants who were legal before accession

	log(labor income)	Permanent contract
new EU x year 2002	0.013 (0.019)	0.020 (0.020)
new EU x year 2003	0.012 (0.020)	0.010 (0.020)
new EU x year 2004	0.008 (0.020)	0.012 (0.020)
new EU x year 2005	0.031 (0.020)	0.016 (0.020)
new EU x year 2006	0.016 (0.020)	0.016 (0.020)
new EU x year 2007	0.021 (0.019)	0.023 (0.020)
new EU x year 2008	0.010 (0.020)	0.032* (0.020)
new EU x year 2009	0.016 (0.020)	0.028 (0.020)
new EU x year 2010	0.015 (0.020)	0.039** (0.020)
new EU x year 2011	0.004 (0.020)	0.047** (0.021)
new EU x year 2012	0.020 (0.021)	0.034* (0.021)
Year dummies	Yes	Yes
Worker FE	Yes	Yes
Firm FE	Yes	Yes
Individual controls	Yes	Yes
Nobs	40,607	40,821
Adjusted R ²	0.653	0.737

* p<0.10, ** p<0.05, *** p<0.01. Robust standard errors in parentheses.

All specifications include year, worker and firm fixed effects. Individual controls include tenure.

Table 8. Robustness check: Estimated effect of EU enlargement on the log monthly consumption expenditure of immigrant households from new EU member countries (2004-2012), immigrants who arrived in Italy before 2006

	Panel A. Total consumption	Panel B. Food, clothing, and other basic needs	Panel C. Housing	Panel D. Transportation, leisure, installment purchases and debt
new EU x year 2005	-0.004 (0.039)	0.048 (0.036)	-0.062 (0.095)	0.038 (0.039)
new EU x year 2006	0.013 (0.033)	0.028 (0.044)	-0.008 (0.049)	0.040 (0.053)
new EU x year 2007	0.098** (0.030)	0.106* (0.046)	0.035 (0.065)	0.178*** (0.046)
new EU x year 2008	0.025 (0.030)	-0.015 (0.043)	0.012 (0.043)	0.104 (0.066)
new EU x year 2009	0.051* (0.023)	0.019 (0.035)	0.036 (0.069)	0.166* (0.071)
new EU x year 2010	0.105* (0.046)	0.136** (0.052)	0.102 (0.065)	0.071 (0.065)
new EU x year 2011	0.028 (0.026)	0.118** (0.041)	-0.014 (0.065)	-0.062 (0.081)
new EU x year 2012	0.072* (0.032)	0.020 (0.046)	0.092 (0.068)	0.098 (0.074)
Year dummies	Yes	Yes	Yes	Yes
Country of origin dum.	Yes	Yes	Yes	Yes
Province dummies	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes
Household controls	Yes	Yes	Yes	Yes
Labor income	Yes	Yes	Yes	Yes
Nobs	5,096	5,096	5,096	5,096
Adjusted R ²	0.451	0.338	0.353	0.193

* p<0.05, ** p<0.01, *** p<0.001. Two way clustered standard errors in parentheses: Italian region of residence and country of origin (114 clusters).

All specifications include year, country of origin and Italian province of residence fixed effects. Individual controls include respondent's sex, age, age squared, dummies for education level (none, primary, secondary, tertiary), and years of residence in Italy. Household controls include number of household members living in Italy, number of children living in Italy and abroad, number of children living in Italy, number of young children living in Italy, an indicator for the spouse living abroad and a dummy for living in own house in Italy. Labor income is the average monthly labor income (net of taxes) of the respondent.