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Why economists and public opinion views on immigrants' contribution to local economy do not match? The role of tv exposure

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Why economists and public opinion views on immigrants' contribution to local economy do not match ? The role of tv exposure

There is a paradoxical divergence between the opinions of economists (favourable) and those of the general public (much less favourable) about the impact of immigrants on the economies of destination countries. We try to shed light on the issue by investigating the determinants of the general public opinions in European countries in the last decade and find that the paradox has some rational and some less rational explanations. First, as expected, low skilled workers and less educated respondents have a more negative view, likely due to the stronger competition threat they suffer from immigrants. Second, and more surprising, differently from what happens with exposure to other media, time spent watching TV gives a strong and significant contribution to the negative opinions on the role of immigrants.

Keywords: economic effects of migratory flows, labour market competition, media exposure.

JEL numbers: F22, J15.

1. Introduction

The dramatic reduction of distance in travel and communication has by far increased migratory flows in the last decades, with hundreds million people taking the risk and paying the cost of leaving their countries, enticed by the expected difference between quality of life in country of destination vis-à-vis country of origin. As a result, immigrants have grown at a higher speed than economic growth at world level from 2000 to 2017 and their share on the total world population has risen from 2.8 to 3.4 percent (United Nations, 2018)

Migratory flows are for this reason one of the most hotly debated social and political issues in high income countries. The view of the public opinion on them plays a huge role in shaping political choices of governments whose consensus depends for a relevant part on decisions regulating entry and access of immigrants.

Our work starts by outlining the paradox by which the general views of economists and the public opinion on the role that immigrants play on economies of destination countries do not match. While the economic literature has largely emphasized the positive economic aspects of immigration, the public opinion has a much more critical view on the issue.

Our research hypothesis is that television exposure plays a relevant role in shaping the views of the public opinion on the role of immigrants on the negative side. A likely rationale is that television audience grows more on extreme and, in general, negative news and that immigrants' voices in it are under-represented. The consequence of these two facts is that television tends to over-represent immigrants' misbehaviour and natives' negative comments on it. As a consequence, individuals with higher television exposure tend to share this view extending the negative opinion on the role of immigrants to the effects on local economies.

In what follows we motivate our starting point. The economic literature has in general a positive view on migration (see among others Benhabib and Jovanovic, 2012; Clemens, 2011; di Giovanni, Levchenko, and Ortega, 2015; Docquier, Machado, and Sekkat, 2015; Kennan, 2013; Klein and Ventura, 2007; Lundborg and Segerstrom, 2002; Moses and Letnes, 2004; Pritchett, 2010 and Walmsley and Winters, 2005). The positive view is well resumed by Borjas (2015) in its survey with the extreme optimistic metaphore of the trillion dollar bills available on the sidewalks would countries eliminate restrictions to migratory flows.

Even though not all economists (Borjas, 2015 included) agree on this position, a general positive view is broadly shared. De Benedictis and De Maio (2011) find that, out of 331 Italian economists interviewed on policies needed to improve the Italian economy, only one of them suggests to reduce immigration even though Italy has been subject to a strong irregular migratory pressure in the last decade for its position on the Mediterranean Sea. Aubry et al. (2016) calibrate a model accounting for interactions among labor market, market size and fiscal effects of immigrants. More specifically, they focus on broad effects of changes in total factor productivity, wage inequality and geographical disparities in the production of goods and find that immigrations are economically beneficial for 83 percent of citizens of the richest 22 OECD countries.

The positive view on the role of immigrants among economists is generally supported by five arguments.

First, data and evidence challenge the "lump of labour" fallacy according to which immigrants take jobs of natives. Jobs of immigrants and natives tend to be complementary and immigrant workers occupy low skilled jobs in agriculture, manufacturing industry, care-giving services and small trade that native workers are generally less inclined to accept and that increase the productivity of the latter when working in complementary activities or positions. Along this line Ottaviano and Peri (2012) argue that immigrants have complementary skills with those of most native workers. They provide empirical findings for the US between 1990 and 2004 consistent with their general equilibrium model where only high school dropouts register a negative effect on real wages due to migration, while all other natives register a positive effect. Card (1990), Borjas (2003) and Manacorda et al. (2012) also find negligible effects of immigrants on wages of native workers. Clemens (2011) provides an interesting anecdotal example on the complementarity between immigrants and native workers. The government of North Carolina offered in 2011 around 6500 positions for temporary workers in agriculture. Only 7 of the half million native unemployed accepted and completed the offered work, while the author calculates that any 3-4 temporary Mexican workers taking those jobs create one additional job for natives.

A second argument supporting the positive view states that, by taking jobs and being paid for them, immigrants contribute to the internal demand for goods and services (Hercowitz and Yashiv, 2002) thereby creating jobs also for native low skilled workers (Malchow-Møller et. al., 2009; Constant, 2014).

A third argument is that immigrants can as well be considered like investors buying a high risk/high return financial asset whose return is represented by the difference between the expected quality of life in the destination country and that in the country of origin, with the risk being represented by the difficulties of their journey. This process produces a positive self-selection where only the more entrepreneurial and less risk averse immigrants succeed with the consequence of positively contributing to start-ups and innovation in the destination country (Jensen, 2014).

A fourth argument is that immigrants who succeed to arrive are for the largest part young in working age and often return home before retiring. As a consequence, when they get regular jobs, they are net contributors to public finances and their arrival has a positive impact on productivity of the labour

force, especially in ageing societies given the young age of those who arrive (Liebig and Mo, 2013). This effect may be counterbalanced by access to sick, unemployment or family benefits for immigrant workers competing with native on these resources but empirical studies find that the overall contribution of immigrants to welfare finances tend not to be negative (Rowthorn, 2008; Dustmann et al., 2010).

A fifth argument relates to the cultural difference between immigrants and natives contributing positively to diversity with a significant impact on creation of economic value (Ottaviano and Peri, 2006; Alesina et al., 2016; Bove and Elia, 2017).

In spite of these arguments and of the general broad consensus on them on the side of the economic profession the public opinion tends to have a much more critical view on the effects of immigrants on the local economy. As Aubry et al. (2016) remark 58 percent of the European citizens consider immigrants a problem and not an opportunity, with almost half of the respondents believing that immigrants take away jobs and 55 percent that they contribute negatively to the welfare state.

These views are confirmed when looking at the European Social Survey, the database used in our empirical analysis collecting opinions of Europeans on large scale, where 62 percent of respondents interviewed on the role of immigrants on local economy are on the nonpositive side (answer between 0 and 5) on a 0-10 scale and the extreme negative answers (0 and 1) corresponds to 11 percent of respondents whereas the highest positive answers (9-10) are only 6 percent.

How can we explain this difference ?

Our hypothesis is that the agenda setting of media has a fundamental role in creating the divergence between economists and the public opinion on the role that immigrants have on the economy, net of the expected impact of education, job status, political orientation of citizens and other standard controls. Media are a bridge between political and social actors and, by setting the agenda and a hierarchy on the relative importance of news, they have a strong role in shaping political views of the general public (Bleich et al. 2015). Kosho (2016) argues that media find it more profitable in terms of audience to present negative news in a simplified way with a sensationalistic version of the stories. As a consequence, immigrants appear in the media associated in general to crime and negative news. Overrepresentation of negative news about immigrants leads to a distortion of the statistical effects of immigrants on the economy and the society. Kim et al. (2011) support this view showing that Western media overuse the term “illegal migration” and generally focus on topics such as crime and border protection. Branton and Dunaway (2008), Benson (2002) and Benson and Saguy (2005) argue that media tend to show most alarming news in order to create more audience. Within this general view the literature also reflects on the differences among medias. Igartua and Cheng (2009) and Ruhrmann et al. (2006) argue that television tends to portray more negative immigrants than the press.

A second important aspect is that, in general, immigrants have no direct voice on media. Indeed, a recent report on migration media coverage in 17 countries from 2015 to 2016 confirms that media generally fails to give adequate voice to migrants themselves and often media reporting relies too heavily on single, official sources of information (The Ethical Journalism Network, 2017[1]).

A third aspect is that right-wing parties and voters tend to be more polarised toward a negative view on migration. Right-oriented media have therefore a political interest in emphasizing the negative news about immigrants to reinforce the views of their readers and shift a larger share of the public

[1] The report was carried out and prepared by the Ethical Journalism Network and commissioned in the framework of EUROMED Migration IV project which has been financed by the European Union and implemented by the International Centre for Migration Policy Development (ICMPD).

opinion in direction of a negative attitude toward immigrants that can increase consensus for right-wing parties (Bleich et al. 2015).

As a consequence of these three points, the negative discourse on immigrants tends to be prevalent on the media (Boomgaarden and Vliegenthart, 2009; Burscher et. al., 2015; The Ethical Journalism Network, 2017).

Based on this theoretical background our paper tests the relationship between TV exposure and opinions on the role of migrants in the economy at European level. Contributions closer to ours are Eberl et al. (2018) and Hericourt and Spielvogel (2014). Eberl et al. (2018) find a positive nexus between respondents' opinion about media portrayal (perception that media treat too positively immigrants) and fear of migration. Hericourt and Spielvogel (2014) investigate the joint determination of beliefs about the economic impact of immigration and immigration policy preferences. A common finding of Eberl et al. (2018) and Hericourt and Spielvogel (2014) papers is that the type of media matter. TV exposure produces a much more negative effect on views about immigrants than newspaper, radio or internet access. One likely rationale for these results is that consumers are much more active and reflexive when reading press, listening radio or surfing on the web, while they are much less so when watching TV (that many may just live it open while doing other things). In addition to it, images have a much stronger effect on our absorption than words.[2] As a result, individuals are much more free to determine with their own evaluation salience of news and much less affected by frames and an externally imposed agenda setting process when using media different from TV.

Differently from Hericourt and Spielvogel (2014) we do not use a bivariate approach while focusing only on opinions about the effect of immigrants on the economy and not on policy preferences about migration. We as well control for socio-demographic variables not accounted for (income deciles[3], type of job, marital status, political orientation) and use an instrument that is valid for our dependent variable (while Heircourt an Spielvogel declare that their instruments are valid for policy preferences about migration but not for opinions on the effect of immigrants on the economy).

Based on these considerations and this research hypothesis our paper is divided into four sections. The second section presents our database and descriptive findings. The third section illustrates the econometric specification we use to test our research hypothesis and comments the empirical findings. The fourth section concludes.

2. Our database

The source of our data is the European Social Survey, a well-established cross-national survey run every two years since 2001 with face-to-face interviews in cross-sectional samples. We used the data of the five rounds of the survey for the period from 2003 to 2014 as the variables related to immigrants and television watching are available in that period.

The goal of the survey is that of providing a picture of the social structure, conditions and attitudes in more than thirty countries. One of the main dimensions of the survey is the analysis of perceptions

[2] This can be easily verified by watching a TV program without volume and finding that there is a lot of content through images we are not conscious about when watching television at normal volume.

[3]Income data of the respondents are available in deciles after the third wave. Before the fourth wave, respondents were asked their income corresponding to one of the 12 income levels constructed with constant thresholds. By assuming uniform distribution between these thresholds (Deeming and Jones, 2013), we rescale the variable and compute income in deciles also for wave 3.

and judgements of the respondents on key aspects of their societies. The quality of the analysis is ensured by accurate and rigorous design of the questionnaire, pre-testing and sampling.

The survey has been awarded the European Research Infrastructure Consortium (ERIC) status on 30th November 2013.

Summary statistics of the variables used in the econometric estimates that follow are presented in Table 1. The European Social Survey question asks whether immigration is bad or good for the economy on a 0-10 scale (10 highest good opinion), with 62 percent of the respondents giving a value not higher than 5, while 39 of them not higher than 4. Around 46 percent of respondents are male, 12 percent have a lower secondary education title and only 23 percent a tertiary education title.

The distributions of the dependent variable for individuals with zero versus those with more than three hours of TV watching are shown in Figure 1. When we look at responses on our main question of interest for the two subgroups we find that distributions are quite different. Only around 24 percent of non TV watchers give a score below 4 (negative opinion on immigrants' effect on the economy) against 36 percent of those watching TV more than 3 hours a day. On the contrary, around 23 percent of those not watching TV have very positive views (scores between 8 and 10) against 12 percent of those watching TV more than 3 hours a day.

Correlations between the opinion on the economic effects of immigrants and education and income respectively are shown in Figures 2 and 3. In both cases the negative correlation is clear cut and consistent with the idea that immigrants are a strongest competitive threat for individuals with lower income and education levels. More specifically, the share of strongly negative opinions (0-3 scores) is 36 percent among individuals with less than lower secondary education, while it falls to 18 percent among individuals with tertiary education. The same share is 34 percent among individuals in the lowest income decile against 17 percent among those in the highest decile.

3. Econometric specification and empirical findings

In order to test our research hypothesis, we estimate the following ordered logit specification

(1) $Immigrant\ good_{i,t}$

$$= \alpha_0 + \sum_a \beta_a\, DTVWatch_{i,t} + \alpha_1 Male_{i,t} + \sum_k \delta_k\, DAge\ class_{i,t}$$

$$+ \sum_l \mu_l DIncomeDecile_{i,t} + \sum_m \eta_m DMarital\ Status_{i,t}$$

$$+ \sum_n \theta_n\, DEducation\ status_{i,t} + \sum_o \lambda_o\, DJobStatus_{i,t}$$

$$+ \sum_p \xi_p\, DLeftRightScale_{i,t} + \alpha_2 Foreigner_{i,t} + \sum_q \tau_q\, DSafeAtNight_{i,t}$$

$$+ \sum_r \rho_r\, DInternet_{i,t} + \sum_s \omega_s\, DListening\ radio_{i,t}$$

$$+ \sum_u \epsilon_u\, DReading\ newspaper_{i,t} + \sum_v \varphi_v\, DCountry_i + \sum_y \chi_y\, DRound_t + \varepsilon_{i,t}$$

where the dependent variable is the 0-10 evaluation of respondents on whether immigration is bad or good for the economy (10 highest good opinion). Our main regressor of interest is a set of dummies capturing the average time per day spent watching television. The possible answers are: zero, less than 0.5 hour, 5 hour to 1 hour, more than 1 hour, up to 1.5 hours, more than 1.5 hours, up to 2 hours, more than 2 hours, up to 2.5 hours, more than 2 hours, up to 3 hours, more than 3 hours, refusal, don't know, no answer.

Among controls male is a 0/1 gender dummy taking value one if the respondent is male, eight age class dummies are introduced to capture the nonlinear effects of aging on the dependent variable, while income decile dummies capture the nonlinear effect of income. We as well introduce a categorical variable for marital status answers[4] - Married, in a civil partnership, separated (still legally married), separated (still in a civil partnership), divorced (marriage or civil union dissolved), widowed (Spouse or Civil Partner Died), never married or never in civil partnership, not applicable, refusal, don't know, no answer -, with married status being the omitted benchmark and education answers - less than lower secondary, lower secondary, upper secondary, post-secondary non-tertiary, tertiary[5], other, refusal, don't know, no answer-, with less than lower secondary education being the omitted benchmark.

[4] In rounds 3 and 4, there are three more answers for the civil partnerships as separated (still in a civil partnership), formerly in civil partnership, now dissolved and formerly in civil partnership, partner died). We consolidated these categories with the similar formerly married categories (separated, divorced and widow) in order to harmonize the marital status variable throughout the rounds.

[5] This classification is the ISCED 1997 classification except it consolidates the first and secondary tertiary education as one tertiary education level. As the education classification of 39862 observations cannot be harmonized for ISCED 2011 classification, we recoded all education data according to this consolidated ISCED 1997 classification. ISCED is the International Standard Classification of Education created by UNESCO to harmonize education levels of different countries

We group job status into nine categories: managers and senior officials, professionals, armed forces, clerks, personal service workers, agricultural workers, other manual workers, operators, low skill occupations[6].

We finally introduce in our fully augmented specification a dummy variable for foreigners, categorical variables for the hours spent listening radio, reading newspaper and internet, respondent's location on the political right-left scale, a dummy for foreigners (respondents without the nationality of the country in which they live) and a set of dummies measuring whether respondents believe that it is safe to walk alone after dark where they live.[7] With this last variable we aim to capture the effect of living areas under the assumption that immigrants pressure is stronger in suburban areas. As well we argue that individuals with a stronger worry about personal security are likely to have more negative opinions of immigrants also on the economic side.

We as well add country effects. Countries in our estimates are Albania, Austria, Belgium, Bulgaria, Switzerland, Cyprus, Czechia, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Greece, Croatia, Hungary, Ireland, Israel, Iceland, Italy, Lithuania, Latvia, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Slovakia, Turkey, Ukraine and Kosovo.

Standard errors are clustered[8] at country level. Note that, using all our controls limits the analysis to the three rounds. We therefore also use a more parsimonious model (without internet, listening radio and reading newspaper variables) in order to use also the data of the sixth and the seventh rounds for robustness checks (see section 4).

3.1 Empirical findings

The null hypothesis that the time spent watching TV has no effects on the respondents' views about the role that migrations have on the local economy is rejected (Table 2). Our empirical findings show that, the higher TV exposure, the more negative the opinion on the economic effects of migrations with respect to the omitted benchmark of individuals not watching TV (4.16 percent of the sample). Note that coefficients become progressively larger in absolute value and more significant as far as TV exposure grows. The economic significance of our result can be evaluated by calculating marginal effects. We calculate in our case that watching TV for more than 3 hours a day decreases by one percent the probability of choosing the highest positive item (10 on the 0-10 scale) in the question about how immigrants are good for the economy. The effect is much sharper if we look at the probability of declaring at least a value higher than 5 (that is, not less than a moderately positive opinion). In this case the probability is around 8 percent lower for those watching TV for more than three hours per day than for the omitted benchmark.

Findings on the relationship between type of occupation and opinion about immigrants' effects on the economy are consistent with evidence in the literature related to the differential effect of migrations on native workers (Ottaviano and Peri, 2012) and with the competition threat perceived by them (Facchini Mayda, 2012). Respondents seem to be rational in anticipating that the economic

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into common categories (those corresponding to the education dummies introduced in our estimate). For details see http://uis.unesco.org/en/topic/international-standard-classification-education-isced.

6 The survey has very detailed information about respondents' job types with more than 500 different types of jobs in the dataset. For details on the occupation classification see Table 8 in Appendix.

7 Each dummy picks up one of the following modalities (unsafe, very unsafe, refusal, don't know, no answer), with safe being the omitted benchmark.

8 We run in a robustness check Table 4 estimates with clustered standard errors at regional level. Our main findings are confirmed. Estimates are omitted for reasons of space and available upon request.

impact of immigrants is less favourable for low skilled jobs. The strongest negative and significant effect is for operators and other manual occupations who have 0.7 percent lower probability of choosing the highest positive response to the question about how immigrants are good for the economy with respect to the omitted benchmark (clerks), followed by low skilled workers and agricultural workers with 0.5 percent lower probability.

Findings on the effect of education on the dependent variable are as well consistent with the idea of the differential effect of migrations on native individuals according to their level of education. The difference with respect to the omitted benchmark of respondents whose education titles are lower than secondary school raises with increasing levels of education. For instance, the respondents with tertiary education have 2-3 percent higher probability to give the highest positive response with respect to the omitted benchmark.

The effect of self-declared political orientation (Table 2, column 3) is not linear. The omitted benchmark is the extreme left location. With respect to this omitted benchmark more moderate left (center-left) location has a more positive and significant view on the role of immigrants in the economy, while extreme right has a more negative and significant view.

As expected, saying that it is not safe to walk alone in the local area after dark is negatively and significantly correlated with the dependent variable (Table 2, column 3). The most likely interpretation is that individuals giving this answer live in suburban areas where the presence and pressure of immigrants is stronger. Urban environment has therefore an impact per se, net of education and job status. A second interpretation is that, irrespective of the place where people live, individuals with more worries about personal security (presumably more likely to say that it is not safe to walk at night in the place where they live) will tend to have also more negative views on the role of immigrants in the economy.

Results on the effects of exposure to other media are opposite to that of TV watching as time spent listening radio, reading newspaper and surfing on the web has positive effects on the dependent variable. The effect of highest exposure to radio is 0.3% (more than 2 hours), whereas it is 0.8% and 0.9% for highest exposure to newspaper reading and internet use respectively. Again, these are the effects only for the probability of choosing the most positive answer to the question about how immigrants are good for the economy and therefore economic significance calculated on the probability of declaring at least a value above 5 is larger.

4. Robustness checks

As shown by the specification presented above, we decided not to eliminate the “refusal” and “don’t know” answers since also these responses provide information. For instance, a “don’t know” answer to the education question is highly suspected to hide in prevalence a low level of education that the respondent does not want to reveal. The negative and significant effect of this dummy on the dependent variable in estimates presented in Table 2 does not contradict this hypothesis. We however check whether our findings are robust when we set these answers to missing values. Our main findings on the effect of TV watch on the dependent variable are unchanged. Results are omitted for reasons of space and available upon request.

We as well estimate our main specification in subsamples with results showing that the effect of TV exposure remains significant in male, female, low educated (having secondary or lower education), high educated (more than secondary education), right and left-wing subsamples (Table 3). Except for the right-wing respondents, we find a significant negative effect of watching TV more than three

hours on the beliefs about immigrants' effect on economy for all sample splits. Even for right-wing respondents the negative effect gets however higher with more TV watching hours and there is a significant negative effect if they refuse to answer TV watching question. Indeed, refusals for TV watching gives approximately same or higher marginal effects than "More than three hours" answer in all sample splits. Thus, refusal of those respondents might be because they watch much more than three hours.

In order to see whether our findings persist when using data of other ESS rounds we create non fully augmented specifications that allow us to do so. The simplified specification excludes internet, radio and newspaper variables from specification (1) and has data from round 3 to round 7 (2006, 2008, 2010, 2012 and 2014). The negative effect of TV watching remains strong and significant (Table 4). In terms of economic significance watching TV for more than 3 hours a day raises ceteris paribus the probability of giving at least a moderately positive opinion on the role of immigrants on the economy (a value above 5 on the 0-10 scale) by around 7 percent.

We re-estimate the specification separately for each round to see whether the effect of TV watching is robust across waves and find that this is always the case (Table 5)

We as well check whether identity attitudes explain our finding (Table 2, column 4). We add to the fully augmented specification a variable indicating whether it is important to follow traditions and customs. The variable is significant in the expected directions (the more it is considered important, the more negative the view of immigrants' effects on the economy). TV exposure categorical variables remain however strongly significant and their effects do not change in magnitude after introducing this control.

We as well look at other less general and comprehensive views about the effect of immigrants on economies of destination countries. A question is whether they take away jobs. The question is included only in round 7. Using the controls[9] in specification (1) and also adding the variable about the importance of traditions as a robustness check, we find that the higher TV watching the more negative the opinion about effects of immigrants on native jobs (Table 7, columns 1 and 2). The same when we look at the question "Tax and services: do immigrants take out more than they put in in?". Both results are significantly negative, and slightly smaller in magnitude (0.6-0.8 percent lower probability for the highest positive answer) with respect to the results for the opinions about their effects on economy (1 percent lower probability).)

5. Instrumental variable estimates

Endogeneity can affect our findings since omitted variables can have an impact on both television watching and the (negative) opinion on the effects of immigrants on the local economy. Part of these omitted factors should be captured by our education, age and employment variables but it cannot be excluded that other unmeasured factors can contribute to make the observed relationship at least partially spurious.

In order to tackle this problem we need a relevant and valid instrument, that is, an instrument correlated with the instrumented variable but not directly correlated with the dependent variable. Weather conditions are good candidates for being instruments with these characteristics. Eisinga et al. (2010) review part of the literature on the field by arguing that individuals tend to watch TV more

[9] Excluding internet, listening radio and reading newspaper variables as they are not available for the seventh round.

in presence of lower temperature, less sunshine and fewer hours of daylight. In parallel, there is as well ample literature showing that television watching peaks in winter and bottoms in summer in the US (Comstock et al. 1978; Gensch and Shaman 1980; Barnett et al. 1991) and in various European countries (Barwise and Ehrenberg 1988; Roe and Vandebosch 1996). On the other side, there is no reason to believe that weather conditions can affect views about immigrants.

Based on these considerations and this literature we looked for a weather variable that can affect the average annual watching behaviours with enough variability across regions and survey rounds. After harmonizing respondent regions[10] across rounds, we select the number of frost days during the year as our instrument among the weather variables[11] obtained from the European Climate Assessment & Dataset (ECAD[12]). The variable is significantly correlated with watching TV since the first stage F statistics[13] is greater than 10 and the Kleibergen-Paap LM statistics rejects the hypothesis that the excluded instrument is uncorrelated with the endogenous regressor. As expected, the respondents prefer to watch TV more in the frostier years (Table 6). As well, it does not make any sense for them to think differently about the immigrants just because they are living a frostier year. Second stage findings confirm that the instrumented variable has significant negative effect on opinions about the role of migrants on the economy and the magnitude of the effect is remarkably similar to the effect found using the same controls without doing an instrumental variable (IV) estimation. As a result, our main finding from non IV estimates is confirmed also by IV estimates.

6. Conclusions

Our research starts from the paradox of the divergence of opinions between economists and the general public on the role of immigrants on the economies of destination countries.

Even though not all economists share the extreme optimistic view of the "trillion dollar bill" available in case of abolition of migration restrictions, theoretical and empirical research broadly confirm the positive view on the economic effects in sharp contrast with the prevalent negative opinion of the general public. With our research hypothesis we argue that television exposure plays an important

[10] The survey has different region classification for most countries as Nomenclature of Territorial Units for Statistics (NUTS) standard of European Union evolves from 104 regions in 2001 to 1348 regions in 2016 and also some countries out of this classification have changed their own classification. Hence, we harmonized the region variables for a total of 341 different regions across the rounds in order to have as more as possible regional data.

[11]Frost days are defined as the days when the daily minimum temperature is less than 0°C. We could use the number of frost days variable after matching the meteorological stations with the regions in our data. While matching regions and stations, we used the station in the capital of the region if the region has a capital with a meteorological station, if not we match the region with the station of the most populated city among the cities which have meteorological data in that region after checking the availability of meteorological data in the most populated cities.

[12] ECAD is the result of a collaboration between meteorological institutes and universities throughout Europe and the Mediterranean area, WMO Region VI.

[13] We used linear instrumental variable regression statistics in order to understand whether there is sufficient correlation between our instrument and the TV watching dummy variable (not watching at all=0 and all other watching categories=1). But, then we simultaneously estimate the ordered probit (second stage, immigration good) and probit (first stage, tv watching dummy) using the conditional mixed process estimator (Roodman, 2011).

role on it since media tend to overrepresent negative news (included those involving migrants) and give no voice to them.

We find support to our hypothesis since more time spent watching TV has a progressively more negative effect on the opinion about the role of immigrants on the economies of destination countries. Our main finding is robust and its economic significance (coefficient magnitude) is remarkably similar in non IV and IV estimates where we instrument the time spent watching TV with the number of frost days at regional level.

Our conclusion is that, part of the hostility to the effect of migrations on local economy of the public opinion is not based on rational grounds. This is because, beyond the component that can be considered "rational" and due to competition threat (low skilled and low educated having more negative views on them), the part explained by TV exposure cannot be considered rational unless we unrealistically assume that television exposure increases viewers knowledge about the negative effects of migration more than exposure to other media (radio, newspapers, web) that instead affect views about immigrants on the opposite side.

Policy suggestions to address the issue is a more balanced mix between good and negative news (more stories of immigrants' success), statistical evidence provided to avoid overrepresentation bias of negative events when presenting the latter in TV and more room for immigrants' voices.

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Table 1 Descriptive statistics for the variables used in the econometric analysis

Immigrant Good		**Obs**	**Percent**
	0	244,059	6.52
	1	244,059	4.67
	2	244,059	7.72
	3	244,059	10.28
	4	244,059	9.78
	5	244,059	23.38
	6	244,059	10.81
	7	244,059	11.89
	8	244,059	8.98
	9	244,059	2.76
	10	244,059	3.22
		Obs	**Percent**
Male		257,493	45.78
Age Class		**Obs**	**Percent**
	<20	257,683	5.88
	20-29	257,683	14.05
	30-39	257,683	15.90
	40-49	257,683	16.92
	50-59	257,683	16.82
	60-69	257,683	15.15
	70-79	257,683	10.47
	80-89	257,683	4.09
	>89	257,683	0.72
Education Status		**Obs**	**Percent**
	Less than lower secondary	257,683	12.12
	Lower secondary	257,683	17.73
	Upper secondary	257,683	37.44
	Post secondary non-tertiary	257,683	8.76
	Tertiary	257,683	23.45
	Other	257,683	0.19
	Refusal	257,683	0.06
	Don't know	257,683	0.12

Country	**Obs**	**Percent**
Albania	257,683	0.47
Austria	257,683	3.38
Belgium	257,683	3.45
Bulgaria	257,683	3.23
Switzerland	257,683	3.16
Cyprus	257,683	1.71
Czechia	257,683	3.32
Germany	257,683	5.71
Denmark	257,683	3.04
Estonia	257,683	3.65
Spain	257,683	3.94
Finland	257,683	3.98
France	257,683	3.75
United Kingdom	257,683	4.55
Greece	257,683	1.86
Croatia	257,683	1.22
Hungary	257,683	3.23
Ireland	257,683	4.33
Israel	257,683	3.82
Iceland	257,683	0.29
Italy	257,683	0.37
Lithuania	257,683	3.12
Latvia	257,683	1.53
Netherlands	257,683	3.59
Norway	257,683	3.07
Poland	257,683	3.34
Portugal	257,683	3.94
Romania	257,683	1.66
Russia	257,683	3.89
Sweden	257,683	3.45
Slovenia	257,683	2.58
Slovakia	257,683	2.82
Turkey	257,683	0.94
Ukraine	257,683	3.09
Kosova	257,683	0.50

No answer	257,683	0.13

TV - Radio - Newspaper Variables	TV Watch		Listening Radio		Reading Newspaper	
	Obs	Percent	Obs	Percent	Obs	Percent
No time at all	257,683	4.16	162,825	26.59	162,825	30.83
Less than 0.5 hour	257,683	5.43	162,825	14.85	162,825	30.04
0.5 hour to 1 hour	257,683	13.16	162,825	15.24	162,825	25.60
More than 1 hour, up to 1.5 hours	257,683	13.48	162,825	7.76	162,825	7.39
More than 1.5 hours, up to 2 hours	257,683	16.33	162,825	6.60	162,825	3.09
More than 2 hours, up to 2.5 hours	257,683	12.97	162,825	4.20	162,825	1.17
More than 2.5 hours, up to 3 hours	257,683	12.17	162,825	3.85	162,825	0.57
More than 3 hours	257,683	21.97	162,825	20.23	162,825	0.79
Refusal	257,683	0.01	162,825	0.01	162,825	0.01
Don't know	257,683	0.28	162,825	0.56	162,825	0.36
No answer	257,683	0.04	162,825	0.11	162,825	0.14

TV Watching dummy	256,826	95.83

Internet	Obs	Percent
No access at home or work	162,825	29.11
Never use	162,825	15.02
Less than once a month	162,825	1.63
Once a month	162,825	1.28
Several times a month	162,825	3.02
Once a week	162,825	3.63
Several times a week	162,825	11.90
Every day	162,825	34.06
Refusal	162,825	0.02
Don't know	162,825	0.24
No answer	162,825	0.09

Marital Status	Obs	Percent
Married	254,144	22.81
Civil partnership	254,144	0.79
Separated	254,144	0.92
Divorced	254,144	8.80
Widowed	254,144	10.13
Never married/civil partnership	254,144	27.47
Not applicable	254,144	28.13
Refusal	254,144	0.31
Don't know	254,144	0.22
No answer	254,144	0.42

Income Decile	Obs	Percent
1st decile	241,051	8.14
2nd decile	241,051	9.05
3rd decile	241,051	9
4th decile	241,051	8.89
5th decile	241,051	8.57
6th decile	241,051	8.1
7th decile	241,051	7.87
8th decile	241,051	7.43

Left Right Scale	Obs	Percent
0(Extreme Left)	257,683	3.01
1	257,683	2.14
2	257,683	4.65
3	257,683	8.21
4	257,683	8.32
5	257,683	28.07
6	257,683	8.17
7	257,683	8.93
8	257,683	7.10
9	257,683	2.50
10(Extreme Right)	257,683	3.52
Refusal	257,683	1.26
Don't know	257,683	13.93
No answer	257,683	0.19

Job Status	Obs	Percent
Clerk	257,683	8.41
Personal Service Worker	257,683	14.67
Agricultural Worker	257,683	2.75
Other Manual Worker	257,683	11.25
Low Skill Occupation	257,683	10.20
Operator	257,683	7.54
Senior or Manager	257,683	6.91
Armed Force	257,683	0.31
Professional	257,683	26.26
Not applicable	257,683	9.72
Refusal	257,683	0.37
Don't know	257,683	0.27
No answer	257,683	1.35

Safe at night	Obs.	Percent
Very safe	257,683	24.82

9th decile	241,051	6.45	
10th decile	241,051	6.47	
Refusal	241,051	11.75	
Don't know	241,051	7.95	
No answer	241,051	0.33	

Traditions	**Obs.**	**Percent**
Very much important	257,663	20.22
Important	257,663	31.52
Somewhat important	257,663	21.65
A little important	257,663	12.84
Not important	257,663	8.2
Not important at all	257,663	3.09
Refusal	257,663	0.28
Don't know	257,663	0.86
No answer	257,663	1.34

Safe	257,683	48.79
Unsafe	257,683	20.05
Very unsafe	257,683	4.98
Refusal	257,683	0.04
Don't know	257,683	1.23
No answer	257,683	0.09

	Obs	**Percent**
Foreigner	257,515	4.12

Rounds	**Obs**	**Percent**
3	257,683	18.28
4	257,683	23.68
5	257,683	21.23
6	257,683	21.22
7	257,683	15.59

Contribute to tax and services	**Obs**	**Percent**
0 (Generally take out more)	2,165	5.76
1	1,479	3.94
2	3,181	8.46
3	4,571	12.16
4	4,257	11.33
5	12,065	32.1
6	3,428	9.12
7	3,251	8.65
8	2,038	5.42
9	524	1.39
10 (Generally put in more)	621	1.65

Create Jobs	**Obs**	**Percent**
0 (Take away jobs)	6.49	6.49
1	1,446	3.76
2	2,565	6.67
3	3,559	9.26
4	3,441	8.95
5	11,861	30.86
6	4,208	10.95
7	4,267	11.1
8	2,884	7.5
9	809	2.1
10 (Create Jobs)	904	2.35

	Obs	**Mean**	**Std. Dev.**	**Min**	**Max**
Number of frost days	180,593	74.070	46.641	0	201

Figure 1 Distribution of opinions on immigrant effects on the local economy – Individuals not watching TV (0) versus individuals watching TV for more than 3 hours per day (1)

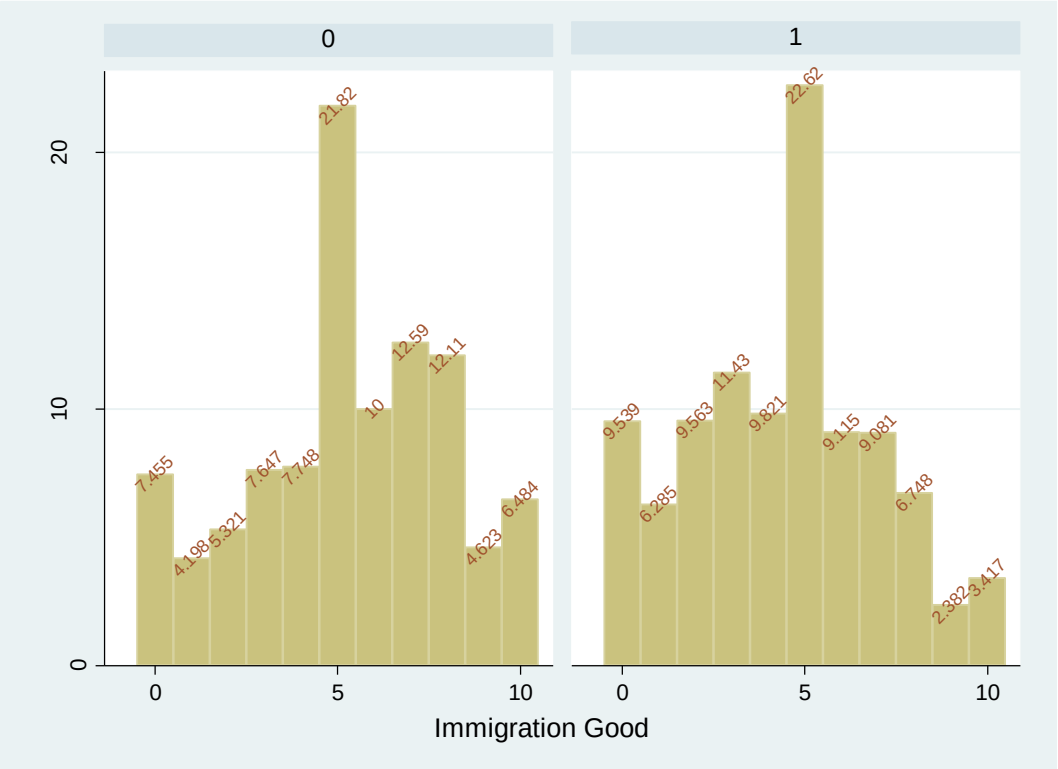

Figure 2 Share of strongly negative opinions on the role of migrants on the economy of destination country by education levels

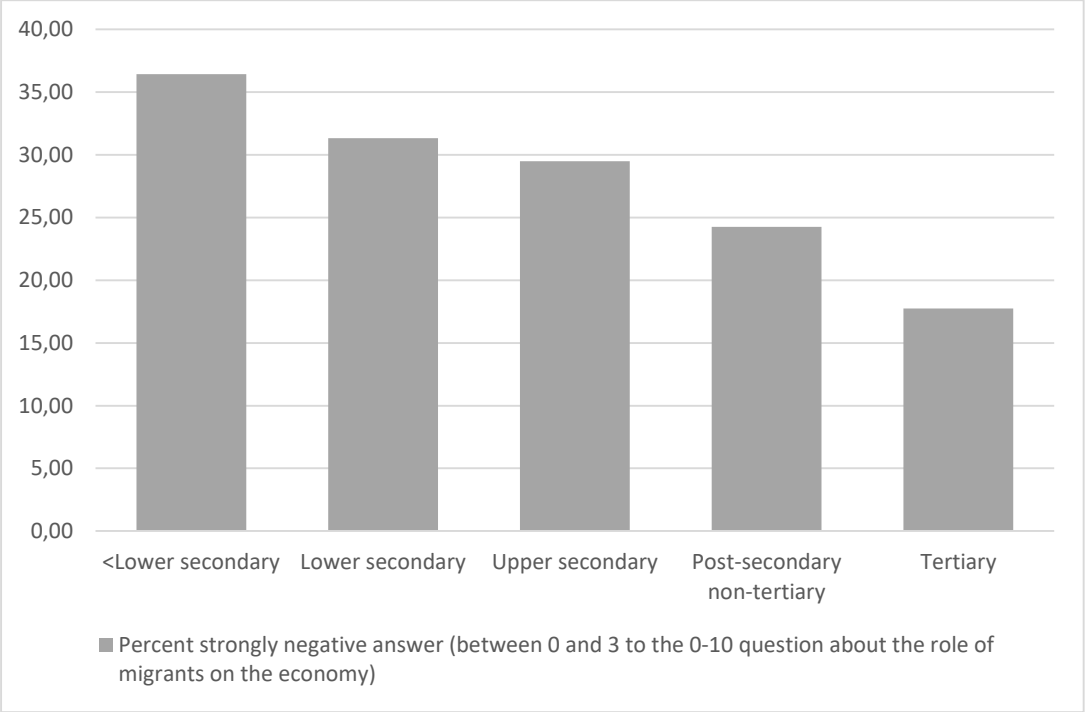

Figure 3 Share of strongly negative opinions on the role of migrants on the economy of destination country by income decile

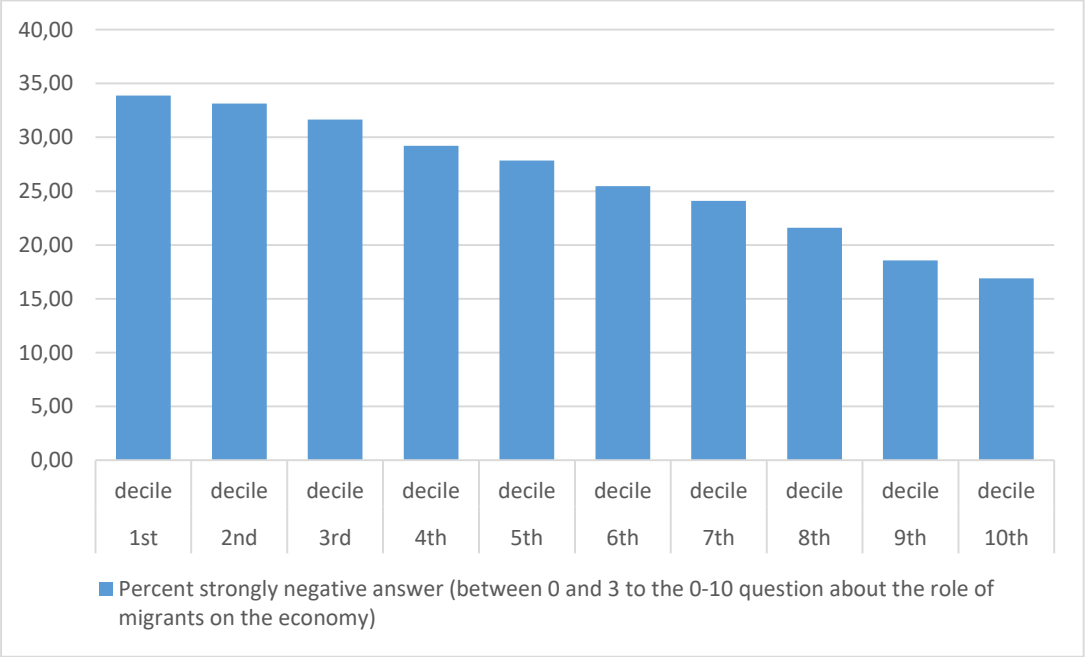

Table 2. The effect of TV watching on the opinion of immigrants effects on the local economy

In this table we report coefficients measuring the impact (calculated in marginal probabilities) of the given regressor in determining the highest positive answer in the (0-10) question about how immigrants are good for the economy. Omitted benchmark: Swedish, female, clerk, aged below 20, married, interviewed in the third wave, in the first income decile among the respondents in her country, not watching TV at all, with less than lower secondary education; native, no access to internet , not listening radio, not reading newspaper, with extreme left wing political opinion, feeling very safe while walking at night (for columns 3 and 4) and giving very much importance to traditions (for column 4).

VARIABLES	(1)	(2)	(3)	(4)
TV Watch				
Less than 0.5 hour	-0.005***	-0.005***	-0.005***	-0.005***
	(0.002)	(0.002)	(0.001)	(0.001)
0.5 hour to 1 hour	-0.007***	-0.007***	-0.006***	-0.006***
	(0.002)	(0.002)	(0.002)	(0.002)
More than 1 hour. up to 1.5 hours	-0.008***	-0.007***	-0.005***	-0.005***
	(0.002)	(0.002)	(0.002)	(0.002)
More than 1.5 hours. up to 2 hours	-0.008***	-0.008***	-0.005***	-0.005***
	(0.002)	(0.002)	(0.002)	(0.002)
More than 2 hours. up to 2.5 hours	-0.009***	-0.009***	-0.007***	-0.007***
	(0.002)	(0.002)	(0.002)	(0.002)
More than 2.5 hours. up to 3 hours	-0.010***	-0.010***	-0.007***	-0.007***
	(0.002)	(0.002)	(0.002)	(0.002)
More than 3 hours	-0.012***	-0.011***	-0.009***	-0.009***
	(0.003)	(0.003)	(0.002)	(0.002)
Refusal	-0.020***	-0.020***	-0.024***	-0.024***
	(0.004)	(0.005)	(0.006)	(0.006)
Don't know	-0.013***	-0.012**	-0.011**	-0.011**
	(0.005)	(0.005)	(0.005)	(0.005)
No answer	0.012	0.012	0.011	0.010
	(0.011)	(0.010)	(0.015)	(0.015)
Male	0.005***	0.006***	0.002***	0.002***
	(0.001)	(0.001)	(0.001)	(0.001)
Age Class				
20-29	-0.010***	-0.007***	-0.005***	-0.005***
	(0.002)	(0.002)	(0.001)	(0.001)
30-39	-0.011***	-0.008***	-0.005***	-0.005***
	(0.002)	(0.002)	(0.002)	(0.002)
40-49	-0.010***	-0.008***	-0.004**	-0.004**
	(0.003)	(0.002)	(0.002)	(0.002)
50-59	-0.011***	-0.008***	-0.004**	-0.004*
	(0.003)	(0.003)	(0.002)	(0.002)
60-69	-0.009***	-0.007***	-0.002	-0.001
	(0.003)	(0.003)	(0.002)	(0.002)
70-79	-0.010***	-0.008***	-0.001	-0.001
	(0.003)	(0.003)	(0.003)	(0.003)
80-89	-0.010***	-0.008***	0.000	0.001
	(0.003)	(0.003)	(0.003)	(0.003)
>89	-0.010***	-0.008***	-0.000	0.001
	(0.003)	(0.003)	(0.003)	(0.003)
Income Deciles				
2nd decile	0.002**	0.002**	0.002**	0.002**
	(0.001)	(0.001)	(0.001)	(0.001)
3rd decile	0.003***	0.003***	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)

4th decile	0.004***	0.004***	0.003***	0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
5th decile	0.005***	0.005***	0.003***	0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
6th decile	0.006***	0.006***	0.003**	0.003**
	(0.001)	(0.001)	(0.001)	(0.001)
7th decile	0.008***	0.007***	0.005***	0.005***
	(0.002)	(0.002)	(0.002)	(0.002)
8th decile	0.009***	0.008***	0.006***	0.006***
	(0.002)	(0.002)	(0.002)	(0.002)
9th decile	0.013***	0.011***	0.008***	0.007***
	(0.002)	(0.002)	(0.002)	(0.002)
10th decile	0.017***	0.015***	0.011***	0.011***
	(0.003)	(0.003)	(0.002)	(0.002)
Refusal	0.003**	0.002	0.002	0.002
	(0.001)	(0.001)	(0.001)	(0.001)
Don't know	0.005***	0.004***	0.003**	0.003**
	(0.001)	(0.001)	(0.001)	(0.001)
No answer	0.009***	0.008***	0.007**	0.007**
	(0.003)	(0.003)	(0.003)	(0.003)
Marital Status				
Civil partnership	-0.002	-0.002	-0.001	-0.002
	(0.002)	(0.002)	(0.002)	(0.002)
Separated	-0.002	-0.002	0.001	0.000
	(0.002)	(0.002)	(0.002)	(0.002)
Divorced	-0.001	-0.001	-0.000	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Widowed	0.000	0.000	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Never married/civil partnership	0.003**	0.002**	0.002**	0.002**
	(0.001)	(0.001)	(0.001)	(0.001)
Not applicable	0.000	0.000	-0.000	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Refusal	0.003	0.002	-0.002	-0.002
	(0.004)	(0.004)	(0.003)	(0.003)
Don't know	-0.002	-0.001	-0.003	-0.003
	(0.003)	(0.003)	(0.003)	(0.003)
No answer	0.003	0.003	0.002	0.002
	(0.002)	(0.002)	(0.002)	(0.002)
Education Status				
Lower secondary	0.003***	0.003***	0.002***	0.002***
	(0.001)	(0.001)	(0.001)	(0.001)
Upper secondary	0.008***	0.007***	0.005***	0.005***
	(0.001)	(0.001)	(0.001)	(0.001)
Post secondary non-tertiary	0.015***	0.013***	0.009***	0.009***
	(0.002)	(0.002)	(0.002)	(0.002)
Tertiary	0.029***	0.023***	0.015***	0.015***
	(0.003)	(0.002)	(0.002)	(0.002)
Other	0.015***	0.013***	0.013***	0.013***
	(0.003)	(0.003)	(0.005)	(0.005)
Refusal	0.023***	0.023***	0.020**	0.020**
	(0.006)	(0.006)	(0.009)	(0.009)
Don't know	0.008*	0.008	0.002	0.003
	(0.005)	(0.005)	(0.004)	(0.004)

No answer	0.007*	0.005	0.001	0.002
	(0.003)	(0.003)	(0.003)	(0.003)
Job Status				
Personal Service Worker		-0.003***	-0.002***	-0.002***
		(0.001)	(0.001)	(0.001)
Agricultural Worker		-0.005***	-0.003***	-0.003***
		(0.001)	(0.001)	(0.001)
Other Manual Worker		-0.007***	-0.005***	-0.005***
		(0.001)	(0.001)	(0.001)
Low Skill Occupation		-0.005***	-0.004***	-0.004***
		(0.001)	(0.001)	(0.001)
Operator		-0.007***	-0.006***	-0.006***
		(0.001)	(0.001)	(0.001)
Senior or Manager		0.005***	0.003***	0.004***
		(0.001)	(0.001)	(0.001)
Armed Force		-0.004*	-0.003	-0.002
		(0.002)	(0.003)	(0.003)
Professional		0.004***	0.003***	0.003***
		(0.001)	(0.001)	(0.001)
Not applicable		0.001	0.002*	0.002*
		(0.001)	(0.001)	(0.001)
Refusal		-0.004	-0.005	-0.005
		(0.003)	(0.003)	(0.003)
Don't know		0.002	0.001	0.001
		(0.002)	(0.002)	(0.002)
No answer		0.000	-0.000	-0.000
		(0.002)	(0.002)	(0.002)
Left Right Scale				
1			0.003	0.003
			(0.002)	(0.002)
2			0.006***	0.006***
			(0.002)	(0.002)
3			0.006**	0.006**
			(0.003)	(0.003)
4			0.004	0.004
			(0.003)	(0.003)
5			-0.003	-0.002
			(0.003)	(0.003)
6			0.001	0.001
			(0.004)	(0.004)
7			-0.001	-0.000
			(0.004)	(0.004)
8			-0.002	-0.002
			(0.004)	(0.004)
9			-0.005	-0.004
			(0.004)	(0.004)
10(Extreme Right)			-0.009**	-0.008**
			(0.004)	(0.004)
Refusal			-0.005	-0.005
			(0.003)	(0.003)
Don't know			-0.005	-0.005
			(0.003)	(0.003)
No answer			-0.008*	-0.007*
			(0.004)	(0.004)
Foreigner			0.028***	0.028***
			(0.004)	(0.005)
Safe at night				

Safe	-0.006***	-0.006***
	(0.001)	(0.001)
Unsafe	-0.012***	-0.012***
	(0.001)	(0.001)
Very unsafe	-0.018***	-0.018***
	(0.002)	(0.002)
Refusal	-0.018***	-0.018***
	(0.005)	(0.005)
Don't know	-0.011***	-0.011***
	(0.002)	(0.002)
No answer	-0.005	-0.006
	(0.007)	(0.007)
Internet		
Never use	-0.000	-0.000
	(0.001)	(0.001)
Less than once a month	0.003**	0.003**
	(0.001)	(0.001)
Once a month	0.001	0.001
	(0.001)	(0.001)
Several times a month	0.004***	0.004***
	(0.001)	(0.001)
Once a week	0.004***	0.004***
	(0.001)	(0.001)
Several times a week	0.005***	0.005***
	(0.001)	(0.001)
Every day	0.009***	0.009***
	(0.001)	(0.001)
Refusal	-0.009	-0.009
	(0.009)	(0.009)
Don't know	0.000	0.000
	(0.003)	(0.003)
No answer	-0.001	-0.001
	(0.006)	(0.005)
Listening Radio		
Less than 0.5 hour	0.001**	0.001**
	(0.001)	(0.001)
0.5 hour to 1 hour	0.002***	0.002***
	(0.001)	(0.001)
More than 1 hour. up to 1.5 hours	0.002**	0.002**
	(0.001)	(0.001)
More than 1.5 hours. up to 2 hours	0.003***	0.003***
	(0.001)	(0.001)
More than 2 hours. up to 2.5 hours	0.002**	0.002**
	(0.001)	(0.001)
More than 2.5 hours. up to 3 hours	0.001	0.001
	(0.001)	(0.001)
More than 3 hours	-0.001	-0.001
	(0.001)	(0.001)
Refusal	0.017	0.017
	(0.014)	(0.014)

Don't know			0.002	0.002
			(0.003)	(0.003)
No answer			0.000	0.001
			(0.005)	(0.005)
Reading newspapers				
Less than 0.5 hour			0.001*	0.001**
			(0.001)	(0.001)
0.5 hour to 1 hour			0.004***	0.004***
			(0.001)	(0.001)
More than 1 hour. up to 1.5 hours			0.006***	0.006***
			(0.001)	(0.001)
More than 1.5 hours. up to 2 hours			0.005***	0.005***
			(0.001)	(0.001)
More than 2 hours. up to 2.5 hours			0.006***	0.006***
			(0.002)	(0.002)
More than 2.5 hours. up to 3 hours			0.005***	0.005***
			(0.001)	(0.001)
More than 3 hours			0.008***	0.008***
			(0.002)	(0.002)
Refusal			0.029	0.030
			(0.020)	(0.020)
Don't know			0.004*	0.004
			(0.002)	(0.002)
No answer			0.002	0.002
			(0.003)	(0.004)
Traditions				
Important				0.001**
				(0.001)
Somewhat important				0.003***
				(0.001)
A little important				0.004***
				(0.001)
Not important				0.004***
				(0.001)
Not important at all				0.004***
				(0.001)
Refusal				0.004
				(0.003)
Don't know				0.002
				(0.003)
No answer				-0.002
				(0.001)
Countries				
Albania	0.008***	0.006***		
	(0.002)	(0.002)		
Austria	-0.005***	-0.005***	-0.014***	-0.014***
	(0.001)	(0.001)	(0.001)	(0.001)
Belgium	-0.021***	-0.022***	0.020***	0.021***
	(0.002)	(0.002)	(0.003)	(0.003)
Bulgaria	-0.005***	-0.004***	0.015***	0.015***
	(0.001)	(0.001)	(0.001)	(0.001)
Switzerland	0.022***	0.021***	-0.018***	-0.018***
	(0.002)	(0.002)	(0.002)	(0.002)
Cyprus	-0.031***	-0.031***	-0.017***	-0.017***
	(0.003)	(0.003)	(0.002)	(0.002)

Czechia	-0.028***	-0.028***	-0.007***	-0.007***
	(0.003)	(0.002)	(0.001)	(0.001)
Germany	-0.007***	-0.007***	-0.006***	-0.006***
	(0.001)	(0.001)	(0.001)	(0.001)
Denmark	-0.011***	-0.011***	-0.015***	-0.015***
	(0.001)	(0.001)	(0.002)	(0.002)
Estonia	-0.020***	-0.019***	0.005***	0.005***
	(0.002)	(0.002)	(0.001)	(0.001)
Spain	-0.003***	-0.003***	0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Finland	-0.004***	-0.004***	-0.011***	-0.011***
	(0.000)	(0.000)	(0.001)	(0.001)
France	-0.017***	-0.018***	-0.013***	-0.013***
	(0.001)	(0.001)	(0.001)	(0.001)
United Kingdom	-0.020***	-0.020***	-0.023***	-0.023***
	(0.002)	(0.002)	(0.002)	(0.002)
Greece	-0.034***	-0.034***	-0.014***	-0.014***
	(0.003)	(0.003)	(0.002)	(0.001)
Croatia	-0.023***	-0.023***	-0.019***	-0.019***
	(0.002)	(0.002)	(0.002)	(0.002)
Hungary	-0.030***	-0.029***	-0.005***	-0.005***
	(0.003)	(0.003)	(0.001)	(0.001)
Ireland	-0.010***	-0.011***	-0.009***	-0.009***
	(0.001)	(0.001)	(0.001)	(0.001)
Israel	-0.018***	-0.018***		
	(0.002)	(0.001)		
Iceland	0.012***	0.011***		
	(0.002)	(0.002)		
Italy	-0.003*	-0.003**	-0.007***	-0.007***
	(0.001)	(0.001)	(0.001)	(0.001)
Lithuania	-0.015***	-0.013***	-0.018***	-0.017***
	(0.001)	(0.001)	(0.002)	(0.002)
Latvia	-0.027***	-0.026***	-0.003***	-0.003***
	(0.003)	(0.003)	(0.001)	(0.001)
Netherlands	-0.008***	-0.009***	-0.002***	-0.001***
	(0.001)	(0.001)	(0.001)	(0.001)
Norway	0.001**	0.001***	0.012***	0.013***
	(0.000)	(0.000)	(0.001)	(0.001)
Poland	-0.002***	-0.002***	0.004***	0.004***
	(0.001)	(0.001)	(0.001)	(0.001)
Portugal	-0.008***	-0.008***	0.015***	0.016***
	(0.001)	(0.001)	(0.002)	(0.002)
Romania	0.001	0.000	-0.019***	-0.018***
	(0.002)	(0.002)	(0.002)	(0.002)
Russia	-0.032***	-0.031***	0.000	0.000
	(0.003)	(0.003)	(0.001)	(0.001)
Slovenia	-0.025***	-0.025***	-0.017***	-0.017***
	(0.002)	(0.002)	(0.002)	(0.002)
Slovakia	-0.025***	-0.025***	-0.013***	-0.012***
	(0.002)	(0.002)	(0.001)	(0.001)
Turkey	-0.029***	-0.030***	-0.019***	-0.019***
	(0.003)	(0.003)	(0.002)	(0.002)
Ukraine	-0.024***	-0.023***	-0.010***	-0.010***
	(0.002)	(0.002)	(0.001)	(0.001)

	Kosova	-0.023***	-0.024***		
		(0.002)	(0.002)		
Rounds					
	4	-0.000	-0.000	-0.001	-0.001
		(0.002)	(0.002)	(0.002)	(0.002)
	5	-0.003	-0.003	-0.004*	-0.004*
		(0.002)	(0.002)	(0.002)	(0.002)
	6	-0.001	-0.001		
		(0.003)	(0.003)		
	7	-0.003	-0.003		
		(0.003)	(0.003)		
Pseudo R^2 of Ordered logit		0.0273	0.0285	0.0369	0.0372
Observations		225,360	225,360	136,746	136,746

Clustered (for country) standard errors in parentheses. *** p<0.01. ** p<0.05. * p<0.1

Table 3 The effect of TV watching on the opinion of immigrants' effects on the local economy – sample splits

In this table we report coefficients measuring the impact (calculated in marginal probabilities) of the TV watch categorical variables in determining the highest (10) positive answer to the (0-10) question about how immigrants are good for the economy for different sample splits: male, female, low educated, high educated, right-wing and left-wing individuals. No time at all for watching TV is the omitted benchmark. We include in all the estimations the controls for the respondent characteristics (gender, income, marital status, education, job status, political location on right-left scale, nativity, believing safe to walk at night), ESS round fixed effects, and country fixed effects.

VARIABLES	(1) Male	(2) Female	(3) Low Educ	(4) High Educ	(5) lrscale>5	(6) lrscale<6
TV Watch						
Less than 0.5 hour	-0.006***	-0.004***	-0.003**	-0.009***	-0.002	-0.008***
	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)
0.5 hour to 1 hour	-0.007***	-0.004***	-0.003*	-0.012***	0.000	-0.010***
	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)
More than 1 hour, up to 1.5 hours	-0.008***	-0.004***	-0.002	-0.012***	-0.000	-0.010***
	(0.003)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)
More than 1.5 hours, up to 2 hours	-0.008***	-0.004**	-0.002	-0.013***	-0.000	-0.009***
	(0.003)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)
More than 2 hours, up to 2.5 hours	-0.010***	-0.005***	-0.003	-0.016***	-0.001	-0.011***
	(0.003)	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)
More than 2.5 hours, up to 3 hours	-0.010***	-0.005***	-0.003*	-0.018***	-0.002	-0.012***
	(0.003)	(0.002)	(0.002)	(0.003)	(0.001)	(0.002)
More than 3 hours	-0.011***	-0.007***	-0.004**	-0.018***	-0.003	-0.013***
	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)
Refusal	-0.030***	-0.017**	-0.018***	-0.038***	-0.017***	-0.027***
	(0.006)	(0.008)	(0.006)	(0.005)	(0.004)	(0.009)
Don't know	-0.015**	-0.009**	-0.006	-0.025***	-0.005	-0.016***
	(0.007)	(0.004)	(0.006)	(0.004)	(0.007)	(0.005)
No answer	0.002	0.016	0.003	0.062	0.008	0.008
	(0.016)	(0.020)	(0.012)	(0.044)	(0.008)	(0.023)
Pseudo R^2 of Ordered logit	0.0379	0.0363	0.0286	0.0431	0.034	0.0411
Observations	63,564	73,182	93,878	42,359	60,527	76,219

Clustered (for country) standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 4 Non fully augmented estimates

In this table we report coefficients to measure the impact (calculated in marginal probabilities) of the TV watch categorical variables in determining the highest (10) positive answer to the (0-10) question about how immigrants are good for the economy for non-fully augmented models including information from additional ESS rounds. The estimated models are the same models of the third and fourth columns in Table 2 respectively, with the only difference here that we do not have controls for internet, listening radio and reading newspaper in these models which provides us to use also the data of sixth and seventh rounds. No time at all for watching TV is the omitted benchmark.

VARIABLES	(1)	(2)
TV Watch		
Less than 0.5 hour	-0.004***	-0.004***
	(0.001)	(0.001)
0.5 hour to 1 hour	-0.006***	-0.006***
	(0.001)	(0.001)
More than 1 hour, up to 1.5 hours	-0.006***	-0.006***
	(0.002)	(0.001)
More than 1.5 hours, up to 2 hours	-0.006***	-0.006***
	(0.002)	(0.001)
More than 2 hours, up to 2.5 hours	-0.007***	-0.007***
	(0.002)	(0.002)
More than 2.5 hours, up to 3 hours	-0.008***	-0.008***
	(0.002)	(0.002)
More than 3 hours	-0.010***	-0.010***
	(0.002)	(0.002)
Refusal	-0.018***	-0.019***
	(0.004)	(0.004)
Don't know	-0.009*	-0.009*
	(0.005)	(0.005)
No answer	0.012	0.012
	(0.011)	(0.011)
Pseudo R^2 of Ordered logit	0.0343	0.0347
Observations	225,242	225,222

Clustered (for country) standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Table 5 Estimates for each round

In this table we report coefficients measuring the impact (calculated in marginal probabilities) of the TV watch categorical variables in determining the highest (10) positive answer to the (0-10) question about how immigrants are good for the economy in estimates considering only one ESS round at a time. No time at all for watching TV is the omitted benchmark. We include in all the estimations the controls for the respondent characteristics (gender, income, marital status, education, job status, political location on right-left scale, foreignness, and believing safe to walk at night), round fixed effects, and country fixed effects.

VARIABLES	(1) Round 3	(2) Round 4	(3) Round 5	(4) Round 6	(5) Round 7
TV Watch					
Less than 0.5 hour	-0.006**	-0.003	-0.005***	-0.005*	-0.002
	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)
0.5 hour to 1 hour	-0.006**	-0.004**	-0.005***	-0.007**	-0.005**
	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)
More than 1 hour, up to 1.5 hours	-0.005**	-0.005***	-0.004*	-0.008**	-0.006***
	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)
More than 1.5 hours, up to 2 hours	-0.005**	-0.005**	-0.005**	-0.009***	-0.007***
	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)
More than 2 hours, up to 2.5 hours	-0.007***	-0.006***	-0.005**	-0.008**	-0.007***
	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)
More than 2.5 hours, up to 3 hours	-0.007**	-0.007***	-0.006***	-0.009**	-0.007***
	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)
More than 3 hours	-0.010***	-0.008***	-0.008***	-0.012***	-0.008***
	(0.003)	(0.002)	(0.002)	(0.004)	(0.003)
Refusal	-0.010	-0.020*	-0.023***	0.016	-0.031***
	(0.007)	(0.011)	(0.005)	(0.027)	(0.005)
Don't know	-0.007	-0.010	-0.012**	-0.011	0.001
	(0.006)	(0.009)	(0.006)	(0.008)	(0.006)
No answer	0.007	0.019	0.009	0.012	0.017
	(0.029)	(0.016)	(0.008)	(0.021)	(0.093)
Pseudo R^2 of Ordered logit	0.0369	0.0363	0.038	0.0323	0.0422
Observations	37,636	51,101	48,009	51,724	36,772

Clustered (for country) standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 6. The effect of TV watching on the opinion of immigrants effects on the local economy
(Instrumental Variable estimates)

In this table, we report coefficients and standard errors in the third column for our main variable of interest (TV watching dummy variable) from an instrumental variable (IV) regression using as dependent variable the highest modality of the (0-10) question about how immigrants are good for the economy and as instrument the annual number of frost days in the region where the respondent lives. In the first column, we report the linear first-stage regression results and statistics to show that our instrument is relevant, while in the second and the third columns we respectively report the probit index of the number of frost days for TV watching and marginal effect of TV watching in determining the highest (10) positive answer to the (0-10) question about how immigrants are good for the economy which is found by simultaneously estimating the probit and the ordered probit regression through the conditional mixed process estimator. In the last column we also report the marginal effect of TV watching obtained from ordered logit regression without using an instrument for endogeneity. We include in all the estimations the controls for the respondent characteristics (gender, income, marital status, education, job status, political location on right-left scale, foreignness, and believing safe to walk at night), round fixed effects, and country fixed effects.

	(1)	(2)	(3)	(4)
	Linear First Stage	Probit First Stage	Oprobit Second Stage	OLogit (no IV)
VARIABLES	TV watching dummy	TV watching dummy	Immigration Good	Immigration Good
Number of frost days	0.000084 ***	0.000885***		
	(0.000024)	(0.000301)		
TV watching dummy			-0.008431***	-0.00794***
			(0.0016585)	(0.000718)
Kleibergen-Paap rk LM statistic	12.692			
(p-value)	(0.000)			
F-statistics	12.687			
(p-value)	(0.000)			
Observations	160396	167,175	167,175	160,396

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

Table 7 The effect of TV watching on the opinions about immigrants' contribution to tax and services and whether they take create jobs instead of taking away the jobs of the natives.

In this table we report coefficients measuring the impact (calculated in marginal probabilities) of the TV watch categorical variables in determining the highest positive answer in the (0-10) questions about whether they put in more than what they take out in terms of tax and services (answering 10 means that the respondents believe that the immigrants put in more than they take out, 0 is the opposite) and whether they create jobs instead of taking away the jobs of the natives (answering 10 indicates the opinion that they create jobs, while 0 that they take way jobs.) We include in all the estimations the controls for the respondent characteristics (gender, income, marital status, education, job status, political location on right-left scale, nativity, believing safe to walk at night, ESS round fixed effects, and country fixed effects. In addition, we add the Traditions variable for the second and the fourth columns. No time at all watching TV is the omitted benchmark.

VARIABLES	(1) Contribute to tax and services	(2) Contribute to tax and services	(3) Create new jobs	(4) Create new jobs
TV Watch				
Less than 0.5 hour	-0.003**	-0.003*	-0.002	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)
0.5 hour to 1 hour	-0.003***	-0.002***	-0.002**	-0.002*
	(0.001)	(0.001)	(0.001)	(0.001)
More than 1 hour. up to 1.5 hours	-0.003***	-0.003***	-0.004***	-0.004***
	(0.001)	(0.001)	(0.001)	(0.001)
More than 1.5 hours. up to 2 hours	-0.004***	-0.003***	-0.004***	-0.004***
	(0.001)	(0.001)	(0.001)	(0.001)
More than 2 hours. up to 2.5 hours	-0.005***	-0.004***	-0.005***	-0.005***
	(0.001)	(0.001)	(0.001)	(0.001)
More than 2.5 hours. up to 3 hours	-0.004***	-0.004***	-0.006***	-0.005***
	(0.001)	(0.001)	(0.001)	(0.001)
More than 3 hours	-0.006***	-0.006***	-0.008***	-0.007***
	(0.001)	(0.001)	(0.001)	(0.001)
Refusal	0.001	0.001	-0.009	-0.009
	(0.027)	(0.026)	(0.025)	(0.026)
Don't know	0.002	0.003	0.003	0.003
	(0.004)	(0.004)	(0.003)	(0.003)
No answer	-0.011*	-0.011*	0.028	0.028
	(0.006)	(0.006)	(0.139)	(0.139)
Pseudo R^2 of Ordered logit	0.027	0.0272	0.0418	0.042
Observations	35,902	35,883	36,727	36,707

Clustered (for country) standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1