Economic Determinants of Attitudes Toward Migration: Firm-level Evidence from Europe

Leonardo Baccini,[a]* Magnus Lodefalk,[b] and Radka Sabolová[b]

[a]Department of Political Science, McGill University, Montreal, Québec, Canada
[b]Department of Economics, Örebro University, Sweden
*Corresponding author. Email: leonardo.baccini@mcgill.ca

Abstract What are the distributional consequences of migration, and how do they affect attitudes toward migration? In this paper we leverage a natural experiment generated by the ousting of former Libyan dictator Muammar Gaddafi, which created an unprecedented influx of economic migrants from African countries to Europe. This surge of low-skilled labor benefited low-productivity firms by lowering their production costs and expanding their labor supply. Employing a triple difference-in-differences design, we document that attitudes toward migration became more positive in Western European regions with large shares of migrants and low-productivity firms. Evidence from Sweden, which provides finely grained geographical data, confirms these findings. We then test the economic microfoundations of this attitudinal shift. We show that the surge in the supply of low-skilled labor increased the profitability of low-productivity firms more in areas that experienced larger migration flows. We find no evidence that migration worsened natives' labor market conditions.

Migration has defining political consequences. The recent surge of populism in general, and radical-right populism in particular, has been attributed to migration flows from developing to developed economies.[1] While prior studies agree that the effects of migration vary among individuals and geographical areas, they disagree over why.[2] Some studies find that attitudes toward migration are a function of migrants' skill level,[3] whereas other research stresses the importance of socio-economic factors among natives.[4] There is also contradictory evidence regarding

1. Dancygier and Margalit 2020; Margalit 2019. The debate on the determinants of populism is still unsettled. For argument and evidence about the economic determinants of populism, see Baccini and Weymouth 2021; Ballard-Rosa, Jensen, and Scheve 2021; Ballard-Rosa et al. 2021; Colantone and Stanig 2018.
2. Hainmueller and Hopkins 2014; Maxwell 2019.
3. Hainmueller and Hiscox 2010.
4. Mayda 2006.

International Organization, 2024, page 1 of 36
 doi:10.1017/S0020818323000255

whether exposure to migrants makes attitudes toward migration more negative or more positive; it appears to depend on how superficial or meaningful the interactions between natives and migrants are.[5]

We investigate the distributional consequences of migration and how they influence attitudes toward migration. More specifically, we explore whether influxes of migrants shape such attitudes differently depending on how they affect firms' performance. The paper's key contribution is to show that some of the variation in attitudes toward migration is explained by how migrants affect different firms, and therefore the various markets in which these firms operate.

We exploit the collapse of Muammar Gaddafi's regime in Libya as a natural experiment to circumvent some of the identification flaws associated with migrants' self-selection into economically attractive areas. In 2011, after Gaddafi was deposed and the Benghazi Treaty, which he signed with Italy in 2008, was no longer in force, a political vacuum in Libya generated an unprecedented influx of economic migrants from African countries to Europe. Given the well-documented *skill downgrading* effect experienced by migrants from developing countries,[6] we assume the receiving European labor markets treated them as low-skilled workers. Thus, we equate this large influx of migrants to a surge of low-skilled labor, which we expect to benefit low-productivity firms more than high-productivity firms, since the former tend to hire more low-skilled workers than the latter.[7] To gauge variation across geographical areas in Europe, we make the key identification assumption that network effects make economic migrants more likely to settle in areas that are already home to many migrants.[8] We use 2001 census data to measure the baseline presence of migrants across Europe.

Armed with this identification strategy and employing a triple difference-in-differences (DiD) design, we test the effect of this large migration flow on individual attitudes toward migration using European Social Survey (ESS) data. Gauging variation across almost 60,000 respondents, we provide evidence that individuals in areas with large shares of African migrants and low-productivity firms are more likely to believe that migrants have a positive effect on the economy than those in areas with large shares of migrants but small shares of low-productivity firms. We also provide suggestive evidence that the socialization channel, which has been convincingly shown to impact anti-immigration voting behavior,[9] cannot explain this finding on its own. We confirm the results of this analysis with a quantitative case study of Sweden, which allows us to use more finely grained geographic data than is possible using the ESS data.

Individual-level attitudes toward migration are consistent with the economic gains at the firm level: anti-immigration stances weaken in the most economically

5. Andersson and Dehdari 2021; Hangartner et al. 2019.
6. Docquier, Ozden, and Peri 2014.
7. Helpman, Itshoki, and Redding 2010.
8. Biavaschi et al. 2018; Fouka, Mazumder, and Tabellini 2020; Munshi 2003.
9. Andersson and Dehdari 2021.

vulnerable areas, which tend to host low-productivity firms, which gain the most from a surge in foreign low-skilled labor supply. To test the economic microfoundations of our argument, we rely on a data set of more than half a million geolocated manufacturing firms in Western Europe from the Amadeus database, covering 2008 through 2016.[10] We find that the surge in low-skilled labor migrants from Africa increased the profitability of low-productivity firms more in areas with large migration flows. We demonstrate that the mechanism works by reducing labor costs and increasing employment in low-productivity firms. While the results of the individual-level and firm-level analyses are consistent, we find that the attitudinal shift observed at the individual level lasts longer than the economic gains observed at the firm level.

To further explore the mechanism at play, we complement the analysis with evidence from Sweden that allows us to observe the universe of firms' and workers' characteristics. The Swedish data indicate that after 2011 areas with a larger share of African migrants experienced a greater increase in the employment of unskilled workers in general, and of African workers in particular, in low-productivity firms. We find no evidence that native-born workers were displaced from their jobs in low-productivity firms or experienced a reduction in income due to competition with African workers. If anything, after the surge of migration, the working conditions of natives employed in low-productivity firms improved due to their better economic performance.

Since staggered (triple) DiDs are problematic with continuous treatments,[11] we perform a large number of tests in both the individual- and firm-level analyses. Importantly, our results are robust to the inclusion of a battery of fixed effects and region-specific trends. In addition, a two-period analysis, which reduces concerns about negative weights, confirms the results of the multiple periods. We also show that the 2008 global financial crisis does not explain our findings. Moreover, a series of placebo tests with migrants from other geographical areas have no effect on firms' profitability, indicating that the increase in the supply of low-skilled labor is specific to economic migrants from Africa. In sum, our main findings hold when employing four different data sets, four different data-generating processes, and a battery of model specifications: attitudes toward migration become more positive in areas with a large share of African migrants and low-productivity firms, since economic migrants help make these firms more profitable.

Our paper contributes to four streams in the literature. First, our results add to research claiming that economic considerations motivate anti-migration attitudes.[12] We present evidence that opinions on the economic benefits of migrants vary

10. Information on Amadeus is available at <https://www.bvdinfo.com/en-gb/our-products/data/international/amadeus>.

11. Callaway, Goodman-Bacon, and Sant'Anna 2021.

12. Dancygier and Donnelly 2013; Gaikwad and Nellis 2017; Hainmueller, Hiscox, and Margalit 2015; Malhotra, Margalit, and Mo 2013; Maxwell 2019; Mayda 2006; Moriconi, Peri, and Turati 2019; Pardos-Prado and Xena 2018; Peters and Shin 2023.

among individuals, depending on their level of exposure to migration and the industrial composition of the labor market in which they live.

Second, our paper speaks to the literature on contact theory, which claims that extensive and cooperative exposure to migrants may make attitudes toward migration more favorable through a socialization effect.[13] Our results complement the findings of this body of research by highlighting an economic channel through which exposure to migration improves attitudes toward migrants, whose impact on the labor market helps low-productivity firms. In this regard, our results are in line with recent studies showing that migration brings economic benefits to areas that are lagging economically.[14]

Third, our paper points to the microfoundations of firms' political involvement in designing migration policies and migration agreements.[15] Our findings are consistent with Peters's work: large, productive firms have little to gain from inflows of unskilled workers, since these firms already have access to cheap labor through offshoring activities. However, small, low-productivity firms, which benefit from a surplus of unskilled workers, are less likely to have their voices heard politically. And because of that limited political influence, migration policies are likely to remain more restrictive than trade policies.

Regarding the fourth contribution, empirical articles have documented the selection and market-share reallocation effects of trade liberalization.[16] Recent studies have concluded that a few large, productive firms enjoy the lion's share of the benefits of trade liberalization at the expense of smaller, less productive firms.[17] Our paper suggests that the gains from migration may be the opposite of the gains from trade: low-productivity firms may benefit more than high-productivity firms from a surge of unskilled labor. Thus, the free movement of people partially compensates for the winner-takes-all effect of the free movement of goods.

Background

There are five main routes for migrants who aim to reach Europe: Western Mediterranean, Central Mediterranean, Western Balkans, Eastern Balkans, and the Eastern Borders.[18] The Central Mediterranean and Eastern Balkan routes have the most migrants. Most migrants coming to Europe via the former route originate in African countries, especially Tunisia, Eritrea, and Guinea; they are overwhelmingly

13. Andersson and Dehdari 2021; Dustmann, Vasiljeva, and Damm 2019; Finseraas and Kotsdam 2017; McLaren 2003; Simonovits, Gabor, and Kardos 2018; Steinmayr 2020; Vertier, Viskanic, and Gamalerio 2018.

14. Clemens 2022; Richard and Callahan 2020; Taylor et al. 2016.

15. Peters 2014, 2015, 2017, 2019.

16. Amiti and Konings 2007; Bernard, Jensen, and Schott 2021; Khandelwal and Topalova 2011; Pavcnik 2002.

17. Baccini, Pinto, and Weymouth 2017; Baccini et al. 2021; Osgood 2019.

18. For details, see the migratory map at <https://frontex.europa.eu/we-know/migratory-map/>.

economic migrants.[19] Most migrants coming through the Eastern Balkans are from Syria and Afghanistan, and most have refugee status.[20]

Following an increase in the number of migrants from Africa, on 30 August 2008 then-president of Italy Silvio Berlusconi signed the Treaty on Friendship, Partnership and Cooperation (also known as the Benghazi Treaty) with Libya. Article 19 of the treaty committed both parties to collaborate through bilateral and regional initiatives to prevent illegal immigration. This entailed implementing previous agreements and protocols on immigration as well as joint patrols of the approximately 2,000 kilometers of Libyan coast on patrol boats provided by Italy.[21] Libyan land borders were also to be controlled by a satellite detection system jointly financed by Italy and the European Union.

The Benghazi Treaty was suspended in February 2011, after the start of the Libyan uprising, which was part of a series of revolutions in North African and Middle Eastern countries referred to as the Arab Spring.[22] In August of that year rebel forces launched an offensive on the government-held coast of Libya, backed by a wide-reaching NATO bombing campaign, and captured the capital city of Tripoli. On 16 September the UN recognized the National Transitional Council as the legal representative of Libya, replacing the Gaddafi government. Gaddafi was captured and killed in Sirte on 20 October.

Although the National Transitional Council declared the liberation of Libya and the official end of the war on 23 October 2011, the political situation has remained unstable since the collapse of Gaddafi's regime, and in 2014 the transition to democracy evolved into a new civil war. As a result of this political vacuum, migration flows from Libya through the Mediterranean intensified and reached unprecedented levels after 2011 (Figure 1). In the empirical analysis, we leverage the variation over time depicted in the figure to explore the effect of the surge in migration on firms' profitability.[23]

Conceptual Framework

Our framework is based on two assumptions. First, African migrants face a substantial risk of job–skill mismatch. Several recent studies have found that educated

19. Fargues 2017; Flahaux and Hass 2016.

20. Fargues 2017.

21. Under the treaty, Italy committed to spend USD 250 million per year for twenty years on building basic infrastructure. Six patrol boats entered into operation on 15 May 2009.

22. While a full description of this wave of revolutions is beyond the scope of this study, it is generally accepted that they were motivated by political, economic, demographic, and cultural conditions. The exact causes varied by country (Anderson 2011), though food prices were undoubtedly a trigger, especially in Tunisia and Egypt (Lagi, Bertrand, and Bar-Yam 2011). According to Bamert, Gilardi, and Wasserfallen 2015, a diffusion effect of successful protests through learning is particularly important to explain the later uprisings, including in Libya.

23. We acknowledge that we are unable to tease out the considerable heterogeneity among African countries in the empirical analysis. Despite this simplification, our argument is valid as long as most migrants from Libya are economic migrants, which seems largely true (Fargues 2017; Flahaux and Hass 2016.)

immigrants are often forced to accept jobs that require a lower educational/skill attainment, indicating *skill downgrading* in occupations.[24] For the purposes of our argument, the skill-downgrading effect implies that African migrants are, on average, treated as low-skilled workers in the receiving European labor markets even though they may be more skilled than natives. In other words, if natives and migrants have the same skill level, migrant workers face higher labor market friction.[25]

Source: Frontex 2019.

FIGURE 1. *Number of migrants from the Central Mediterranean route (level and growth), 2008–2016*

Our second assumption is that many European countries have a shortage of low-skilled workers. This assumption is in line with the logic of the comparative-advantage model, which maintains that developed economies are rich in capital and poor in labor. It also squares with evidence that there is a limited demand for low-paid jobs among European workers, who sort into higher-paid and generally more attractive occupations.[26]

24. Cohen-Goldner and Paserman 2011; Docquier, Ozden, and Peri 2014; Dustmann, Frattini, and Preston 2013; Mattoo, Neagu, and Ozden 2008; Muysken, Vallizadeh, and Ziesemer 2015.

25. While the determinants of this skill-downgrading effect are beyond the scope of this paper, they typically involve language barriers, the lack of a social network, and discrimination. Here we use the general term "labor market frictions" to encompass all the possible determinants of the skill-downgrading effect.

26. Constant 2014; Foged and Peri 2016; McGrath 2021.

Armed with these two assumptions, we posit that low-productivity firms are more likely than productive firms to hire migrants for two main reasons. The first reason is in line with the logic of Helpman, Itshoki, and Redding.[27] Because firms cannot directly observe workers' ability, they screen applicants in an attempt to select more able employees. As more productive firms realize higher returns from screening, they can screen more intensively and hire more skilled employees than less productive firms. Remember that migrants are typically *perceived* as low-skilled regardless of their actual skill levels because they face higher labor market friction than natives. Since higher-ability workers (whether perceived or actual) are more costly to replace, more productive firms pay higher wages.

Second, low-productivity firms are more likely to hire migrants due to the shortage of low-skilled workers in some occupations. Regardless of their level of education, migrants are less competitive for higher-paid jobs than natives due to the labor market frictions discussed earlier. Thus, migrants sort into low-paid jobs for which the competition with natives is lighter. Put differently, since low-productivity firms face labor shortages significantly more often than productive firms, low-productivity firms are more likely than high-productivity firms to take advantage of the surge of low-skilled migrants. Recent findings in economics lend empirical support to this claim.[28]

How exactly do migration flows from Africa affect firms' performance in the EU? The sudden increase in low-skilled labor from Africa affects them in two ways. First, it reduces the cost of labor. Since low-productivity firms are more likely than high-productivity firms to hire unskilled workers, the former experience a larger reduction in the average cost per worker than the latter (*labor cost channel*). Moreover, low-productivity firms, which experienced a labor shortage due to the low supply of unskilled workers before the migration flow, have the opportunity to expand their economic activities by employing migrants, who are willing to accept low-wage jobs (*employment channel*). Thus, low-productivity firms benefit disproportionally more than high-productivity firms from a surge of unskilled workers, which reduces their costs and increases economic activities by expanding the labor pool. In turn, lower production costs and an expansion of labor increase profits more for low-productivity firms than for high-productivity firms in areas with a large presence of migrants (and low-productivity firms in areas with a small presence of migrants).[29]

We link these firm-level dynamics to attitudes toward migration, leveraging variation in the geographical distribution of low-productivity firms. We expect that after the migration flow, areas with a large share of migrants *and* low-productivity firms will develop more positive attitudes toward migrants compared to areas with a large share of migrants and few low-productivity firms. Put differently, we hypothesize that areas with a large share of low-productivity firms (and a large share of migrants)

27. Helpman, Itshoki, and Redding 2010.

28. Battisti et al. 2018; Docquier, Ozden, and Peri 2014.

29. A growing literature explores the effect of migration on firms' performance. Bamert, Gilardi, and Wasserfallen 2015; Beerli et al. 2021; Brunow, Trax, and Suedekum 2013; Mitaritonna, Orefice, and Peri 2017; Ottaviano, Peri, and Wright 2018; Passerman 2013.

perform better than those with a small share of low-productivity firms (and a large share of migrants) after the migration flow. In turn, people in areas made better-off by migrants will update their beliefs that migrants have a positive impact on the economy.

Our main hypothesis is that migration flows improve economic conditions in areas with a large share of migrants and low-productivity firms (because those firms can more easily employ cheap labor), which generates more favorable attitudes toward migration.

Since our argument hinges on migrants' differential effects on firms' performance, we explore the economic microfoundations of this attitudinal shift using firm-level evidence. In particular, we anticipate that after the migration flow (1) low-productivity firms in areas with a large share of migrants perform better than those in areas with a small share of migrants (*overall effect*); (2) the cost of labor for low-productivity firms in areas with a large share of migrants decreases compared to those in areas with a small share of migrants (*labor cost channel*); and (3) workers' employment in low-productivity firms in areas with a large share of migrants increases compared to workers' employment in low-productivity firms in areas with a small share of migrants (*employment channel*). On the other hand, we expect that productive firms are not significantly affected by the migration flow, since their labor market does not depend on African migrants. This is a second set of hypotheses that we will test in the empirical analysis.

Data

We test our argument using a reduced-form approach. In this section we describe the sample and main variables.

Sample. We use ESS data covering the same fifteen Western EU countries in four waves from 2008 to 2016 to test the effect of the surge in migration on individual attitudes toward migrants.[30] These data include the geographic location of each respondent at the NUTS 2 region level.[31]

Dependent variable. Our outcome variable, ECONOMIC MIGRATION, is based on responses to the question, "Is immigration bad or good for the country's economy?" It is scored on an eleven-point scale from 0 (very bad) to 10 (very good). Focusing on this question has three advantages. First, it explicitly links migration to economic conditions, which is the key mechanism highlighted by our theory. Second, it captures a sociotropic (rather than individual) effect of migration, in line with our argument. Third, the question was asked in each wave of the ESS.[32]

30. ESS round 4 was run from the end of August 2008, which is why we keep this wave in the sample.

31. The countries included in the analysis are Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Spain, Sweden, and the UK. We include these countries because they are the ones typically affected by the migration route from Libya.

32. The responses to this question correlate very highly with the responses to "Do immigrants take jobs away in the country or create new jobs?" which was asked in only two waves (2002 and 2012). The results

Independent variables. To test our argument, we rely on three main independent variables. The first measures the baseline presence of migrants across Europe in 2001. We collect data on the number of migrants from Africa in each NUTS 2 region in 2001 and divide it by the region's population that year. The key identification assumption is that economic migrants settle proportionally more in areas in which many migrants are already present due to a network effect.[33] For all countries except Germany, we use Eurostat census data for 2001. For Germany, the data come from the German Federal Statistical Office for 2001.

The second variable is a dummy coded 0 from 2008 to 2010 and 1 after 2010. This represents a pre-and-post-Gaddafi effect, which coincides with a surge of migrants from Libya (Figure 1).

To build our third variable, we use firm-level data from the Amadeus database provided commercially by the Bureau van Dijk. The downloading and cleaning procedures used in the data-gathering process followed best practices.[34] Our baseline sample includes more than half a million manufacturing firms in fifteen EU countries. To gauge geographical variation, we geocoded all the firms used in the analysis at the NUTS 2 region level.[35]

The key advantage of the Amadeus database is that it includes firms from all EU countries, so it contains areas that were affected differently by migration flows. Moreover, it includes many firm-level characteristics, which allows us to test the firm-heterogeneity argument and related mechanisms. The database also contains many firms of different sizes and levels of productivity, which operate in several industries at the NAICS four-digit level. This heterogeneity allows us to exploit variation across firms, regions, and industries.

The Amadeus database also has at least three shortcomings. First, there are significant changes in coverage over time and across countries.[36] Second, it does not include the universe of firms in each EU country. Large, productive firms are overrepresented at the expense of small, low-productivity firms. We return to these two points later. Third, the database does not systematically collect longitudinal firm-level data. Because the sample does not include the universe of firms, a given firm may be present in 2008 but not in 2009, either because it exited the market or because it was not surveyed. Hence, our data are a repeated cross-section.[37]

We use these data to build our third variable. (1) We geocode all the firms in Amadeus at the NUTS 2 region level. (2) We sum the number of workers employed in firms belonging to the five lowest deciles of the total factor productivity (TFPR)

are similar if we use "Do immigrants make the country a better or worse place to live?" which solicits a more general assessment of migration and was also asked in all waves.

33. Biavaschi et al. 2018; Fouka, Mazumder, and Tabellini 2020; Munshi 2003.
34. Kalemli-Ozcan et al. 2017.
35. Appendix A describes thegeocoding procedure.
36. Kalemli-Ozcan et al. 2017.
37. Financial data for companies in Amadeus are retained for a rolling period of eight years. When a new year of data is added, the oldest year is dropped, meaning only the most recent data for each company are available.

distribution in each region, in each NAICS four-digit industry, and for each wave. (3) We sum the number of workers employed in firms in each region and for each wave. Finally, we take the ratio of the sum in (2) and the sum in (3). This variable, which we label SHARE OF LOW-PRODUCTIVITY FIRMS, is an industry-specific proxy for the presence of low-productivity firms in a particular labor market (region).

The key independent variable is the triple interaction between the share of migrants in 2001, the post-2010 dummy, and the share of low-productivity firms. As is customary, we also include the double interaction terms and each variable individually in our model specification, unless these terms are absorbed by the fixed effects. The correlation between the share of migrants in 2001 and the share of low-productivity firms is very low ($\rho = -0.07$; see Figure A4 in Appendix B).[38]

Empirical Strategy

Our approach to identification is a triple DiD.[39] We compare the evolution of attitudes toward migration across individuals and NUTS 2 regions before and after 2011 for different levels of migrants' stock and different shares of low-productivity firms.

Since the stock of African migrants in each NUTS 2 region was measured at baseline in 2001, it varies across only geographical units. In our setting, the treatment varies by intensity, since each NUTS 2 region has a different (always positive) number of migrants from Africa. The dummy variable, which scores 1 after the collapse of Gaddafi's regime, captures the pre-and-post effects of migration flow, and it is responsible for much of the variation over time. The variable capturing the share of low-productivity firms mediates the effect of the pre-and-post-migration flow on attitudes toward migration. More formally, we estimate this baseline model:

$$\begin{aligned} Y_{irt} = {} & \alpha + \gamma_t + \gamma_r + \gamma_r * \text{wave} + \beta_1 \,\text{SHARE OF LOW-PRODUCTIVITY FIRMS}_{i(r)} \\ & + \beta_2 \,\text{SHARE OF LOW-PRODUCTIVITY FIRMS}_{i(r)} \times \text{AFRICAN MIGRANTS' STOCK}_r \\ & + \beta_3 \,\text{SHARE OF LOW-PRODUCTIVITY FIRMS}_{i(r)} \times \text{POST-2011}_t \\ & + \beta_4 \,\text{AFRICAN MIGRANTS' STOCK}_r \times \text{POST-2011}_t \\ & + \beta_5 \,\text{SHARE OF LOW-PRODUCTIVITY FIRMS}_{i(r)} \times \text{AFRICAN MIGRANTS' STOCK}_r \\ & \times \text{POST-2011}_t + \epsilon_{irt} \end{aligned} \tag{1}$$

where Y_{irt} is the dependent variable, capturing individual attitudes toward migration. SHARE OF LOW-PRODUCTIVITY FIRMS, AFRICAN MIGRANTS' STOCK, POST-2011, and their interactions are the main independent variables. The function $i(r)$ maps each

38. Figures A1, A2, and A3 in Appendix B display the geographical distribution of ECONOMIC MIGRATION, AFRICAN MIGRANTS' STOCK, and SHARE OF LOW-PRODUCTIVITY FIRMS by NUTS 2 region in Europe.

39. Berck and Villas-Boas 2016.

individual to its NUTS 2 region, the level at which we observe both SHARE OF LOW-PRODUCTIVITY FIRMS and AFRICAN MIGRANTS' STOCK. β_1 to β_5 are the coefficients. The key coefficient of interest is β_5, which we expect to be positive after 2011 since attitudes in favor of economic migrants increase more in areas with a large share of migrants and low-productivity firms. γ_t and γ_r are wave and NUTS 2 region fixed effects, respectively. Wave fixed effects capture and control for overall trends in individuals' attitudes toward migration and absorb the coefficient of POST-2011, which cannot be estimated alone. NUTS 2 region fixed effects net out time-invariant differences across regions; these absorb AFRICAN MIGRANTS' STOCK, which does not vary over time. $\gamma_r * \text{wave}$ are region-specific trends, which are included to validate the parallel-trends assumption. α is the constant, and ϵ_{irt} accounts for all residual determinants of the dependent variable.

Our augmented models include age, education, and gender.[40] These controls are interacted with POST-2011, SHARE OF LOW-PRODUCTIVITY FIRMS, and AFRICAN MIGRANTS' STOCK (including triple interactions). We also include the growth of the native population at the NUTS 2 level to account for internal migration.[41] We interact this variable with SHARE OF LOW-PRODUCTIVITY FIRMS and POST-2011. We run ordinary least squares (OLS) regressions with standard errors clustered at the NUTS 2 region level.

There are at least four concerns about our identification strategy. First we must consider a possible violation of the parallel-trends assumption. Figure A28 in Appendix B displays individual attitudes toward migration for regions with low and high levels of African migrant stock (below and above the median). There is no evidence of violation of the parallel-trends assumption. Importantly, our estimates include region-specific time trends. In some model specifications, we report the coefficient of each wave before and after Gaddafi's fall in 2011. This is the most transparent way to detect pre-trends.

Second, regions with a small share of migrants at baseline could be different from those with a large share. We demonstrate that they are balanced with respect to individual-level characteristics such as age, education, gender, and ideology, as well as shares of natives, and unemployment. Importantly, they are also balanced with respect to shares of low-productivity firms (see Table B1 in Appendix B). Moreover, we rerun our main models on a balanced sample, using the weights obtained by entropy balancing.[42]

Third, we implement a two-period analysis to reduce concerns about the negative-weights problem in the staggered DiD with multiple periods.[43] Fourth, we may be concerned about two macro confounders: the role of the 2008 global financial crisis, which affects the period prior to the migration flow; and the role of refugees from the Middle East, and especially from Syria, who arrived in Europe at about the same time as the collapse of Gaddafi's regime. To sharpen the identification

40. Education measures years of full-time education completed.
41. Data are from Eurostat.
42. Hainmueller 2012.
43. de Chaisemartin and D'Haultfœuille 2020.

strategy, we look at a longer pre-treatment period and break down the stock of migrants by nationality to make sure that migrants from Africa are driving the results.

Results

Main Findings

Table 1 reports the main results of our analysis. The key coefficient is AFRICAN MIGRANTS' STOCK × POST-2011 × SHARE OF LOW-PRODUCTIVITY FIRMS, which is always positive and significant. After 2011, areas with a large share of African migrants and low-productivity firms are more likely to have positive attitudes toward economic migrants than areas with a large share of migrants and a small share of low-productivity firms. These results remain the same (and in fact improve) when we include NUTS 2 region-specific trend effects (model 2), individual-level controls and their interactions (model 3), and natives' internal migration and its interactions (model 4).

Figure 2 displays the effect of the triple-interaction term. It illustrates the marginal effect of POST-2011 for areas with a small share of African migrants (AFRICAN MIGRANTS' STOCK = mean − one standard deviation) and a large share of African migrants (AFRICAN MIGRANTS' STOCK = mean + one standard deviation) and for different shares of low-productivity firms. In areas with a large share of African migrants, the marginal effect of POST-2011 increases, as does the share of low-productivity firms. Thus, in areas with a large share of migrants and a large share of low-productivity firms, attitudes toward migration improve more after 2011 than before 2011. Yet in areas with a small share of African migrants, the marginal effect of POST-2011 is flat (or negative); it does not vary for different shares of low-productivity firms. Put differently, in areas that did not receive migration flows after 2011, attitudes toward migration did not improve in regions with a large share of low-productivity firms.

While these effects include region-specific trends, there may still be concerns about the validity of the parallel-trends assumption. Thus, we conduct a very transparent test to demonstrate that this key assumption is not violated. In Figure 3 we show the marginal effect of AFRICAN MIGRANTS' STOCK for each survey wave of our analysis in areas with a large share of low-productivity firms (above the mean) and a small share of low-productivity firms (below the mean).[44]

The upper panel reports the effect for areas with a large share of low-productivity firms. The effect is near zero and not significant in 2010, but positive and significant in 2012 and 2014, which coincides with the largest increase in migrants from Libya. The effect is slightly smaller in 2016, though it remains significant and is six times as large as it was in 2010.[45] Thus, the attitudinal shift is not only large but also long

44. We omit the first wave because the coefficient cannot be estimated.

45. Since low-productivity firms in areas with large shares of African migrants improve their productivity due to a surplus of (perceived) unskilled workers, these areas see a reduction of low-productivity

term. The lower panel, which reports the effects for areas with a small share of low-productivity firms, shows no increase in the marginal effects after 2011, and these effects are never significant.

TABLE 1. *Main results*

	(1)	(2)	(3)	(4)
	OLS			
	"Migrants are good for the economy"			
SHARE OF LOW-PRODUCTIVITY FIRMS	1.815**	−0.596*	0.116	0.362
	(0.778)	(0.351)	(0.534)	(0.578)
AFRICAN MIGRANTS' STOCK × SHARE OF LOW-PRODUCTIVITY FIRMS	−36.424**	7.046	10.685	11.723
	(16.902)	(8.320)	(9.020)	(16.184)
AFRICAN MIGRANTS' STOCK × POST 2011	−0.693*	−2.526*	−2.504	−5.907**
	(0.407)	(1.442)	(1.816)	(2.791)
SHARE OF LOW-PRODUCTIVITY FIRMS × POST 2011	−1.490***	−1.826*	−3.756**	−4.268***
	(0.370)	(0.952)	(1.482)	(1.599)
AFRICAN MIGRANTS' STOCK × POST 2011 × SHARE OF LOW-PRODUCTIVITY FIRMS	24.013***	44.191***	42.195***	54.786***
	(5.521)	(10.468)	(10.306)	(12.593)
CONSTANT	5.111***	5.348***	4.977***	5.772***
	(0.031)	(0.064)	(0.117)	(0.263)
NUTS-2 fixed effects	Yes	Yes	Yes	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
NUTS-2 specific trends	No	Yes	Yes	Yes
Controls (individual level)	No	No	Yes	Yes
Controls (natives' internal migration)	No	No	No	Yes
Observations	57,171	57,171	56,957	56,957
Number of regions	199	199	199	199
R-squared	0.054	0.064	0.095	0.096

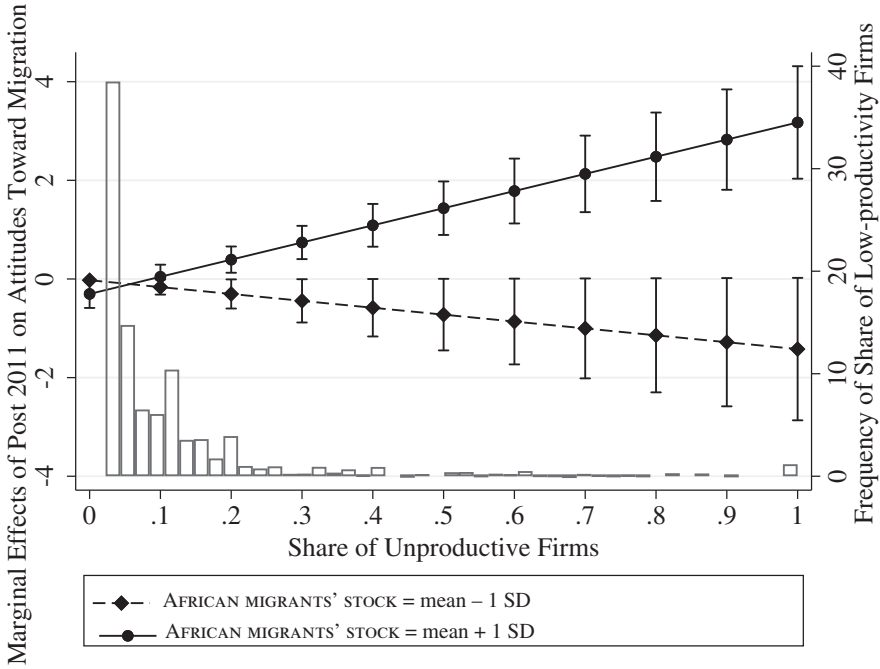
Notes: OLS with standard errors clustered at the NUTS 2 region level in parentheses. The unit of observation is individual-region-wave. The outcome variable in all models is attitudes in favor of economic migration. Sources: Amadeus data set, ESS, Eurostat, German Federal Statistical Office. Robust standard errors in parentheses * $p < .10$; ** $p < .05$; *** $p < .01$.

We conduct four further tests to identify the effects of interest. First, we perform a two-period analysis: before and after 2011. In these models, respondents are observed in either the pre-2011 or post-2011 period but not in multiple waves. The results (Table 2) are similar to the results with multiple periods (Table 1).

Second, we explore the role of the 2008 global financial crisis to address the concern that our pre-treatment period is the years 2009 and 2010, when the financial crisis hit the hardest in Europe. We rerun the main analysis with a longer pre-treatment period that includes the ESS waves in 2002, 2004, and 2006. This forces us to relax the assumption that the Benghazi agreement prevented the flow of migrants

firms over time. In turn, the positive economic effect of migration flows in regions with large shares of low-productivity firms declines over time and aligns with the economic performance of areas with small shares of low-productivity firms. This general equilibrium effect provides a possible explanation for why the effect is weaker in 2016 than in previous post-treatment periods.

to Europe. Luckily, the flow of migrants from 2002 to 2008 was relatively low compared to after 2011. Our results are unchanged even if we include a longer pre-treatment (Table 3).



Note: The predictions are plotted from model 2 in Table1, with 95% confidence intervals.

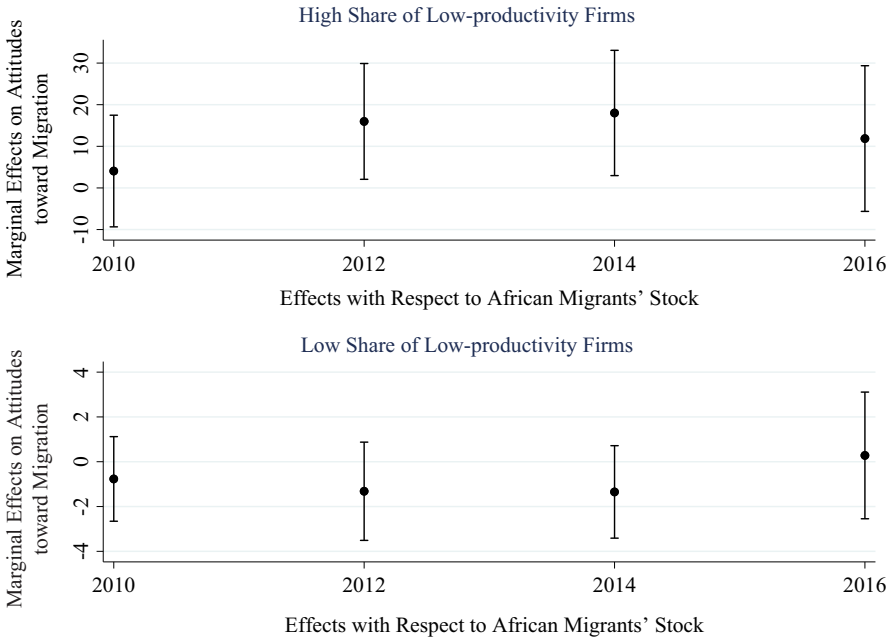
FIGURE 2. *Effect of migrants on attitudes toward migration for different shares of low-productivity firms in NUTS 2 regions*

Third, we balance regions with small and large shares of African migrants (below and above the median) with respect to shares of low-productivity firms (pre-treatment values at the NUTS 2 level), attitudes toward migration (pre-treatment values at the NUTS 2 level), and the following individual-level characteristics: age, level of education, employment status, gender, and ideology. Using the weights obtained by entropy balancing,[46] we rerun our main models. The results are are similar to the results without weights (see Table C1 in Appendix C).

Fourth, after the collapse of the Libyan government, the Syrian crisis drove a large number of refugees to Europe. Thus, our results could be driven by Syrian refugees

46. Hainmueller 2012.

rather than economic migrants from Africa. While this mechanism would be in line with our conceptual framework, it is implausible for three reasons. First, refugees are not allowed to integrate into labor markets in the short term. Second, refugees are typically allocated evenly across geographical areas in most European countries. If so, their allocation is likely orthogonal to AFRICAN MIGRANTS' STOCK and thus does not pose a threat to our identification. Third, the flow of Syrian migrants comes overwhelmingly more from the Balkan and Eastern Mediterranean routes than from the Central Mediterranean route and was quite limited before 2014, according to Frontex (see A8 and A9 in Appendix B).



Note: The predictions are plotted by interacting AFRICAN MIGRANTS' STOCK with a dummy for each year of the analysis, with 95% confidence intervals.

FIGURE 3. *Effect of AFRICAN MIGRANTS' STOCK on attitudes toward migration in different survey waves*

To further rule out the possibility that the Syrian crisis affects our estimates, we rerun the main models including triple interactions with SUB-SAHARAN MIGRANTS' STOCK, NORTH AFRICA MIGRANTS' STOCK, and MIDDLE EAST MIGRANTS' STOCK.[47] The identification assumption is the same as for African migrants as a whole—that is,

47. Data from Moriconi, Peri, and Turati 2019. We are unable to include both SUB-SAHARAN MIGRANTS' STOCK and NORTH AFRICA MIGRANTS' STOCK in the same models because of their high collinearity.

TABLE 2. *Two-period analysis*

	(1)	*(2)*	*(3)*
	OLS		
	"*Migrants are good for the economy*"		
SHARE OF LOW-PRODUCTIVITY FIRMS	2.793***	2.631***	2.631***
	(0.489)	(0.465)	(0.465)
AFRICAN MIGRANTS' STOCK × SHARE OF LOW-PRODUCTIVITY FIRMS	−57.121***	−55.795***	−55.795***
	(10.735)	(14.797)	(14.797)
AFRICAN MIGRANTS' STOCK × POST 2011	−2.927***	−0.938	−0.938
	(0.782)	(1.502)	(1.502)
SHARE OF LOW-PRODUCTIVITY FIRMS × POST 2011	−1.717***	−1.541***	−1.541***
	(0.496)	(0.555)	(0.555)
AFRICAN MIGRANTS' STOCK × POST 2011 × SHARE OF LOW-PRODUCTIVITY FIRMS	29.377***	28.196***	28.196***
	(5.276)	(4.947)	(4.947)
CONSTANT	5.021***	4.662***	4.662***
	(0.031)	(0.076)	(0.076)
NUTS-2 fixed effects	Yes	Yes	Yes
Wave fixed effects	Yes	Yes	Yes
Controls (individual level)	No	Yes	Yes
Controls (natives' internal migration)	No	No	Yes
Observations	52,678	52,541	52,541
Number of regions	198	198	198
R-squared	0.064	0.095	0.095

Notes: OLS, with standard errors clustered at the NUTS 2 region level in parentheses. The unit of observation is individual-region-wave. The outcome variable in all models is attitudes in favor of economic migration. Sources: Amadeus data set, ESS, Eurostat, German Federal Statistical Office. Robust standard errors in parentheses * $p < .10$; ** $p < .05$; *** $p < .01$.

Syrian refugees relocate more in areas where Syrian migrants have previously settled, due to a network effect. We expect sub-Saharan and North African migrants to drive our results, since these are the economic migrants coming from Libya. We expect MIDDLE EAST MIGRANTS' STOCK to have no effect, since these are the refugees from Syria. This is confirmed by models 1–4 (Table 4). Moreover, when we include a dummy for the post-2014 period (after the Syrian refugee crisis in the EU), we find that the triple interactions (with both AFRICAN MIGRANTS' STOCK and MIDDLE EAST MIGRANTS' STOCK) are not significant (models 5 and 6, respectively), whereas our key coefficient of interest remains positive, of the same magnitude, and significant.[48]

Additional evidence. We perform six additional robustness checks, and report the results in Appendix C. First, we show that productivity, *not size*, is driving our results (Table C3). When we include the share of *small* low-productivity firms with SHARE OF LOW-PRODUCTIVITY FIRMS, the coefficient of the triple interaction with the former

48. Table C2 in Appendix C reports all the coefficients of the triple interactions.

variable is not significant, whereas our main triple interaction remains positive and significant. The same is true when we include the share of *large* low-productivity firms.[49] The finding that small firms are not driving our results is important to unveil the mechanism at play. Indeed, Andersson and Dehdari show that socialization between natives and migrants is more likely in smaller firms.[50] If so, our results suggest that improved attitudes toward migration cannot be attributed uniquely to socialization; they are also a function of better economic conditions.

TABLE 3. *The role of the 2008 economic crisis*

	(1)	*(2)*	*(3)*	*(4)*
	OLS			
	"Migrants are good for the economy"			
SHARE OF LOW-PRODUCTIVITY FIRMS	−0.180	0.053	−0.258	−0.309
	(0.154)	(0.166)	(0.273)	(0.264)
AFRICAN MIGRANTS' STOCK × SHARE OF LOW-PRODUCTIVITY FIRMS	1.635	7.821**	7.635**	11.233***
	(2.252)	(3.097)	(3.274)	(3.183)
AFRICAN MIGRANTS' STOCK × POST 2011	−0.543	−2.622*	−1.663	−4.028*
	(0.457)	(1.391)	(1.806)	(2.303)
SHARE OF LOW-PRODUCTIVITY FIRMS × POST 2011	−1.063***	−2.110**	−2.885**	−3.214**
	(0.366)	(0.962)	(1.402)	(1.523)
AFRICAN MIGRANTS' STOCK × POST 2011 × SHARE OF LOW-PRODUCTIVITY FIRMS	14.883***	46.211***	43.598***	51.958***
	(4.639)	(10.795)	(10.450)	(12.506)
CONSTANT	5.121***	4.780***	4.672***	5.277***
	(0.038)	(0.063)	(0.097)	(0.197)
NUTS-2 fixed effects	Yes	Yes	Yes	Yes
Wave fixed effects	Yes	Yes	Yes	Yes
NUTS-2 specific trends	No	Yes	Yes	Yes
Controls (individual level)	No	No	Yes	Yes
Controls (natives' internal migration)	No	No	No	Yes
Observations	86,752	86,752	86,526	86,526
Number of regions	201	201	201	201
R-squared	0.046	0.057	0.080	0.081

Notes: OLS, with standard errors clustered at the NUTS 2 region level in parentheses. The unit of observation is individual-region-wave. The outcome variable in all models is attitudes in favor of economic migration. Sources: Amadeus data set, ESS, Eurostat, German Federal Statistical Office. Robust standard errors in parentheses * $p < .10$; ** $p < .05$; *** $p < .01$.

Second, we show that the lack of support we observe for the mediating variable is not a concern (Figure A13). When we use a dichotomous measure of the share of low-productivity firms, the results remain the same.[51] Third, we find that improved

49. The share of small (large) low-productivity firms is measured in the same way as SHARE OF LOW-PRODUCTIVITY FIRMS, but it includes only small and middle-sized (large) firms. Firm size comes from the variable COMPCAT in Amadeus.

50. Andersson and Dehdari 2021.

51. This dummy variable scores 1 for values of SHARE OF LOW-PRODUCTIVITY FIRMS above the mean, and 0 otherwise.

https://doi.org/10.1017/S0020818323000255 Published online by Cambridge University Press

TABLE 4. *Migrants and refugees*

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS					
	"*Migrants are good for the economy*"					
Sub-Saharian migrants' stock × post 2011 × share of low-productivity firms	96.804***		163.510***			
	(25.239)		(30.659)			
North African migrants' stock × post 2011 × share of low-productivity firms		44.306***		57.670***		
		(10.200)		(13.272)		
Middle East migrants' stock × post 2011 × share of low-productivity firms			−619.348***	−321.446		
			(205.117)	(202.846)		
African migrants' stock × post 2011 × share of low-productivity firms					45.962***	49.088***
					(10.116)	(11.050)
African migrants' stock × post 2014 × share of low-productivity firms					−1.014	
					(9.303)	
Middle East migrants' stock × post 2014 × share of low-productivity firms						88.758
						(237.367)
constant	5.240***	5.335***	3.032	7.792***	5.432***	5.074***
	(0.089)	(0.095)	(3.338)	(2.450)	(0.081)	(0.388)
NUTS-2 fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Wave fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
NUTS-2 specific trends	Yes	Yes	Yes	Yes	Yes	Yes
Controls (individual level)	No	No	No	No	No	No
Controls (natives' internal migration)	No	No	No	No	No	No
Observations	57,171	45,822	57,171	45,822	57,171	57,171
Number of regions	199	162	199	162	199	199
R-squared	0.064	0.068	0.064	0.068	0.064	0.064

Notes: OLS, with standard errors clustered at the NUTS 2 region level in parentheses. The unit of observation is individual-region-wave. The outcome variable in all models is attitudes in favor of economic migration. Sources: Amadeus data set, ESS, Eurostat, German Federal Statistical Office. Robust standard errors in parentheses * $p < .10$; ** $p < .05$; *** $p < .01$.

attitudes toward migration hold among both economically vulnerable and non-vulnerable respondents in areas with large shares of African migrants and low-productivity firms after 2011 (Table C4).[52] Fourth, excluding ESS round 4 (from 2008) does not affect our results (Table C5). Fifth, since NUTS 2 regions are large administrative units, relying on them as the unit of analysis raises concerns about within-region heterogeneity. Reassuringly, our results are similar if we rely on the subsample of countries for which we were able to geocode firms at the NUTS 3 level, which are significantly smaller areas (Table C6).[53] Sixth, our results are similar if we use other cutoff points for firm productivity in the variable SHARE OF LOW-PRODUCTIVITY FIRMS (Table C7).

Case Study: Sweden

We complete our individual-level analysis by focusing on Sweden.[54] Using Swedish firm-level data, which are geographically more finely grained than ESS data, we explore in greater detail how migrant inflows affect attitudes toward migration. We first describe the data and empirical strategy and then report the results of this analysis.

Data. The Swedish survey data are from the National SOM Survey Cumulative Dataset, which is administered by the University of Gothenburg's SOM Institute and provides individual-level data on the opinions of Swedish residents aged sixteen to eighty-five on a variety of social and policy-related issues. The survey was administered annually from 1986 to 2020 and covers all 290 of Sweden's municipalities (*kommuns*). It was conducted in multiple waves of outreach via systematic probability sampling based on the Swedish population and the Swedish State Personal Address Register. The survey maintained a net response rate over 50 percent in all years. The sample size grew from 2,500 residents to a peak of 22,500 in 2020. Importantly, respondents are geocoded at the municipality level, which is significantly more finely grained than the NUTS 2 region level. SOM survey data have been used in previous economics and political science studies.[55]

The main independent variables are the same as in the analysis using ESS data. However, AFRICAN MIGRANTS' STOCK is measured at the municipality level rather than the NUTS 2 region level. The data are from Statistics Sweden, which oversees all national demographic statistics. The data are generated from registered persons supplied annually by the Swedish Tax Agency to Statistics Sweden. We build the 2001 municipal migrant stock, which is the ratio of migrants from African countries

52. We operationalize "vulnerable" respondents as those with no college degree and working in occupations exposed to automation. For details, see Appendix C.

53. The countries included in this test are Ireland, Netherlands, and Sweden.

54. The analysis implemented using ESS data indicates that the results for Sweden are in line with the results of the entire sample. In short, Sweden is a case "on the line" (correctly predicted by our statistical model), to use the terminology of Lieberman 2005.

55. Andersson and Dehdari 2021; Bo' et al. 2022.

over the total number of people in each municipality. SHARE OF LOW-PRODUCTIVITY FIRMS, based on Amadeus data, is at the NUTS 3 rather than the NUTS 2 region level. In short, the SOM data allow a more precise measurement of both the migration flow and the industrial composition of Swedish administrative units.

The outcome variable is based on answers to the question, "Would you consider joining an international organization that wants to stop migration to Sweden?" (yes = 1; no = 0). We rely on this variable because it is the only question related to attitudes toward migration that was asked both before and after 2011, a necessary condition given our research design.[56]

Empirical strategy. The model specification is similar to the one described in Equation (1). The key independent variable is a triple interaction between the share of African migrants in each municipality in 2001, the share of low-productivity firms in each NUTS 3 region, and a dummy coded 1 after 2011. Note that in this case we expect the coefficient of the triple interaction to be negative, since the outcome captures attitudes *against* migrants. We include wave and NUTS 3 (or municipality) fixed effects. We also include age, education, and gender as controls, as well as their interactions with AFRICAN MIGRANTS' STOCK and POST-2011. In line with the previous analysis, we also run a two-period analysis. We rerun our main models using the 2010 and 2012 waves and the 2010 and 2016 waves. We estimate OLS regressions with robust standard errors clustered at the NUTS 3 region level.

Results. Table 5 reports the results of this analysis, which confirm the findings using the ESS data. Recall that in this analysis negative effects imply more positive attitudes toward migration. In the multiple-period analysis (models 1 and 2), the coefficient of the triple interactions is negative and significant. The results hold even when we include municipality fixed effects (model 2), which is a more demanding model specification than when we include NUTS 3 fixed effects. The coefficient of AFRICAN MIGRANTS' STOCK, which is at the 2001 baseline, gets absorbed by municipality fixed effects. The results of the two-period models are much stronger for the 2010–2012 waves than they are for the 2010–2016 waves. This finding is in line with the previous analysis, in which the effects are larger in the 2011–2014 period than in the 2015–2016 period.

We report the effect of the triple-interaction term graphically. Figure 4 plots the results of the multiple-period analysis, and Figure 5 displays the results of the 2010–2014 waves.[57] In line with the previous analysis, we report the marginal effect of POST-2011 for areas with a small share of African migrants (AFRICAN MIGRANTS' STOCK = mean − one standard deviation) versus a large share of African migrants (AFRICAN MIGRANTS' STOCK = mean + one standard deviation) and for different shares of low-productivity firms. The results of the multiple-period and two-

56. This outcome correlates with other SOM survey questions that capture attitudes toward migration, but they were not asked both before and after 2011.

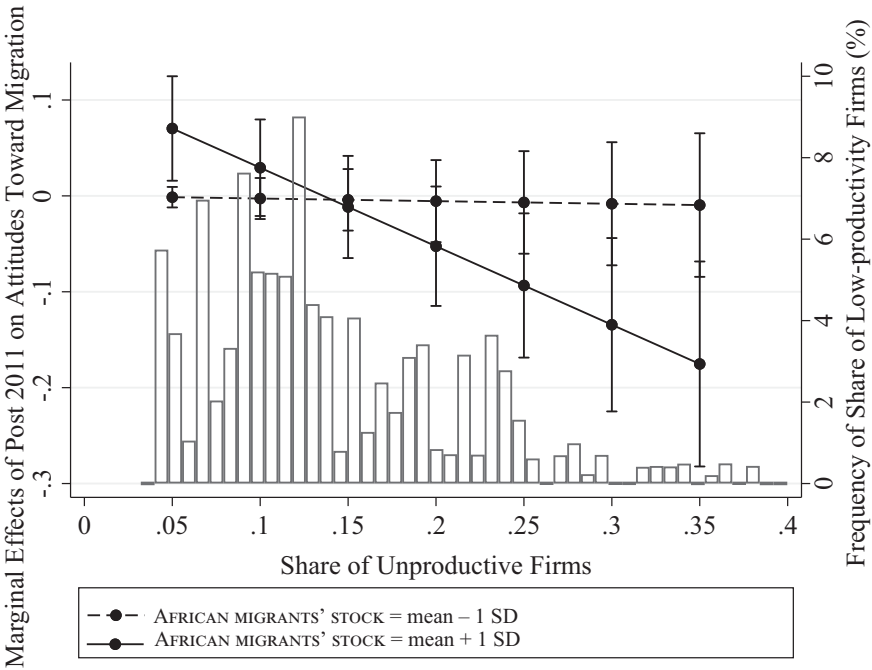
57. Figure 1 in Appendix C covers the 2010–2016 waves.

https://doi.org/10.1017/S0020818323000255 Published online by Cambridge University Press

TABLE 5. *The case of Sweden*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	OLS								
	"Considering joining an organization that wants to stop immigration to Sweden"								
	Multiple period			2010 vs 2012 waves			2010 vs 2016 waves		
African migrants' stock	2.214	9.858**		0.762	8.448**		1.290	9.591**	
	(2.033)	(3.921)		(1.730)	(3.665)		(1.846)	(4.111)	
share of low-productivity firms	−0.119	−0.069	−0.018	−0.089	−0.049	0.117	−0.403*	−0.310	−0.204
	(0.152)	(0.142)	(0.157)	(0.174)	(0.168)	(0.225)	(0.215)	(0.210)	(0.250)
African migrants' stock × share of low-productivity firms	22.851	15.251	−12.702	29.050*	20.678	−23.634	34.302*	22.282	−7.793
	(17.033)	(17.131)	(23.938)	(15.326)	(14.894)	(30.919)	(17.150)	(17.900)	(38.851)
African migrants' stock × post 2011	5.561**	5.312	2.675	12.774***	4.279	2.236	1.752	8.880	7.520
	(1.956)	(3.871)	(4.413)	(2.467)	(4.354)	(4.220)	(2.689)	(5.287)	(6.571)
share of low-productivity firms × post 2011	−0.027	−0.066	−0.092	0.161	0.101	0.218	−0.017	−0.053	−0.103
	(0.130)	(0.119)	(0.130)	(0.235)	(0.235)	(0.243)	(0.171)	(0.168)	(0.185)
African migrants' stock × share of low-productivity firms × post 2011	−39.566***	−35.937**	−25.725*	−82.554***	−74.109***-	−63.549***	−27.813**	−30.544*	−23.000
	(13.839)	(15.007)	(13.778)	(17.041)	(15.452)	(20.491)	(12.283)	(15.325)	(21.048)
constant	0.170***	0.329***	0.408***	0.131***	0.274***	0.329***	0.232***	0.378***	0.442***
	(0.014)	(0.028)	(0.026)	(0.027)	(0.042)	(0.035)	(0.024)	(0.044)	(0.040)
NUTS-3 fixed effects	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No
Municipality fixed effects	No	No	Yes	No	No	Yes	No	No	Yes
Period fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Observations	4,783	4,783	4,770	3,099	3,099	3,080	3,253	3,253	3,234
Number of municipalities	284	284	271	278	278	259	272	272	253
R-squared	0.018	0.038	0.089	0.018	0.033	0.103	0.023	0.047	0.122

Notes: OLS, with standard errors clustered at the NUTS 3 region level in parentheses. The unit of observation is individual-municipality-wave. The outcome variable in all models is the question, "Would you consider joining an international organization that wants to stop migration into Sweden?" Sources: Amadeus data set, SOM Institute, Eurostat, German Federal Statistical Office. Robust standard errors in parentheses * $p < .10$, ** $p < .05$, *** $p < .01$.



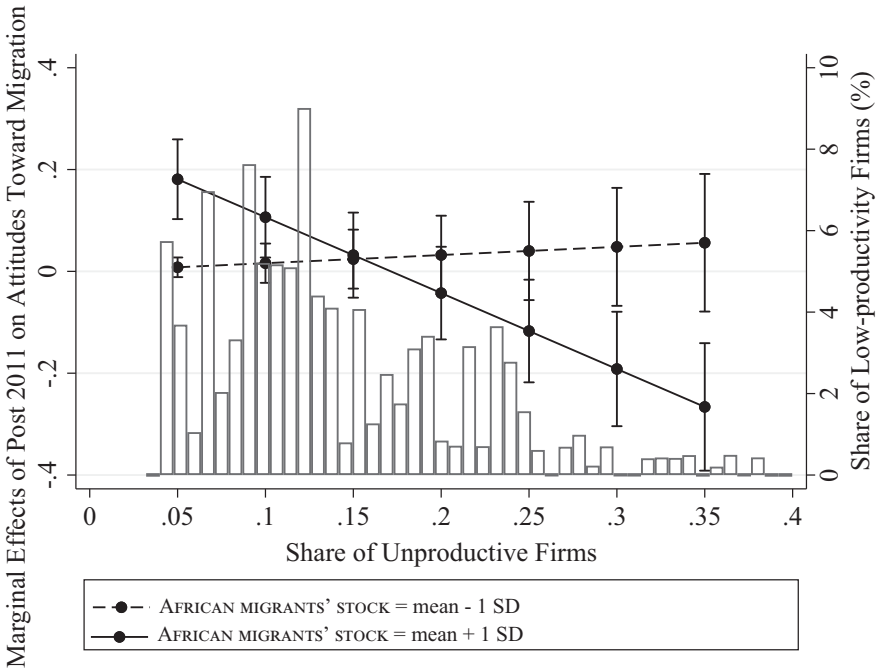
Note: The predictions are plotted from model 1 in Table 5, with 95% condifence intervals.

FIGURE 4. *Effect of migrants on attitudes toward migration for different shares of low-productivity firms in NUTS 2 regions, multiple periods*

period analyses are similar, though they are stronger for the latter (the 2010–2012 waves). In areas with a large share of African migrants, the marginal effect of POST-2011 decreases with the share of low-productivity firms. Thus, in areas with a large share of migrants and a large share of low-productivity firms, attitudes toward migration improve more after 2011 than before 2011. Yet in areas with a small share of African migrants, the marginal effect of POST-2011 is flat: it does not vary for different shares of low-productivity firms. In other words, in areas that did not receive migration flows after 2011, attitudes toward migration *do not* improve with large shares of low-productivity firms. In sum, the Swedish case confirms the results of the analysis using the ESS data.

Firm-Level Evidence

In this section, we test the economic microfoundations of the attitudinal shift related to migration that we observed at the individual level. We explore whether after 2011,



Note: The predictions are plotted from model 4 in Table 5, with 95% confidence intervals.

FIGURE 5. *Effect of migrants on attitudes toward migration for different shares of low-productivity firms in NUTS 2 regions, 2010–2012*

the performance of low-productivity firms in areas with large shares of African migrants increases more than that of low-productivity firms in areas with small shares of African migrants.

Data

We test the economic microfoundations of our argument on a large number of manufacturing firms from the same fifteen Western European countries used in the individual-level analysis. The firm-level data for 2009 through 2016 are from the Amadeus database.

Dependent variable. Our main dependent variable is the profit margin of firm *f* in industry *i* in region *r* in year *t*. Profit margin, the ratio between profit and revenue, is a

widely used proxy for firm profitability.[58] Note that profit values refer to *the end of the calendar year*. Other proxies could be used to assess the distributional consequences of migration at the firm level. An obvious candidate would be firm exit, which captures the selection effect; that is, low-productivity firms operating in areas with large inflows of migrants should exit less frequently than low-productivity firms operating in areas with limited inflows of migrants. However, the repeated cross-sectional data are not suitable to measure firm exit. Another option would be to rely on revenue rather than profit. However, we chose profit because revenue includes the cost of production, which is affected by the surge of migration.

Independent variables. To test our argument, we rely on three main independent variables. AFRICAN MIGRANTS' STOCK and POST-2011 were described in the previous section. The third variable measures firm productivity, to test the heterogeneity effect among firms. Measuring productivity is particularly challenging; the economics literature disagrees over the best way to do so. We employ a standard measure of TFPR, using the Solow residuals in the main analysis.[59] To ease the interpretation of the triple-interaction term, we use a dichotomous measure of productivity: below and above the median (scoring 1 and 2, respectively).

The key independent variable is the triple interaction between share of migrants in 2001, the post-2010 dummy, and firm productivity. As is customary, we also include the double interaction terms and each variable alone in our model specification, unless these terms are absorbed by the fixed effects. The correlation between the three terms of the interaction is very low. For instance, the correlation between AFRICAN MIGRANTS' STOCK and firm productivity is roughly zero (see Figures A5–A7 in Appendix B).

Empirical strategy

Our triple-DiD approach to identification is in line with the individual-level analysis. We compare the evolution of profit margin across NUTS 2 regions and firms before and after 2011 for different levels of migrant stock and firm productivity. Firm productivity varies across firms but not with time. In other words, firms enter the data set with a given productivity level, which is assumed to be exogenous and remains constant.[60]

58. Draca, Machin, and Van Reenen 2011.

59. TFPR is calculated using simple firm-level Solow residuals. We calculate TFPR for each firm-year by regressing firm-level log of revenue on firm-level physical assets, employment, year, four-digit industry, and country fixed effects. The residuals of this regression, which can be negative, are our measures of firm productivity. Since we are concerned that migration affects firms' productivity, we do not let this covariate change over time. Firms enter the data set with a productivity value that does not change over time: we use the baseline value. Our results are robust to alternative measures of productivity, such as the adaptations of Olley and Pakes 1996 or Levinsohn and Petrin 2003 (results available on request).

60. To avoid post-treatment bias, we dropped all firms that entered after 2010 from the analysis.

Recall that the stock of African migrants in each NUTS 2 region is at the baseline 2001 value, so they only vary across geographical units. In our setting, the treatment intensity varies, since NUTS 2 regions have a different and always positive number of migrants from Africa. The only time-varying variable in the triple-interaction term is the dummy coded 1 after the collapse of Gaddafi's regime. More formally, we estimate this baseline model:

$$\begin{aligned}\text{PROFIT MARGIN}_{firt} = {} & \alpha + \gamma_t + \gamma_r + \gamma_i + \gamma_r * \text{year} + \beta_1 \text{TFPR}_{fi(r)} \\ & + \beta_2 \text{ TFPR}_{fi(r)} \times \text{AFRICAN MIGRANTS' STOCK}_r \\ & + \beta_3 \text{ TFPR}_{fi(r)} \times \text{POST-2011}_t \\ & + \beta_4 \text{ AFRICAN MIGRANTS' STOCK}_r \times \text{POST-2011}_t \\ & + \beta_5 \text{ TFPR}_{fi(r)} \times \text{AFRICAN MIGRANTS' STOCK}_r \times \text{POST-2011}_t \\ & + \epsilon_{firt}\end{aligned} \tag{2}$$

where the log of the profit margin is the dependent variable, and TFPR, AFRICAN MIGRANTS' STOCK, POST-2011, and their interactions are the main independent variables. The function $fi(r)$ maps each firm to its NUTS 2 region. β_1 through β_5 are the coefficients. The key coefficient of interest is β_5, which we expect to be negative. γ_t, γ_r, and γ_i are year, NUTS 2 region, and industry fixed effects, respectively. Year fixed effects capture and control for overall trends in firms' profits and absorb the coefficient of POST-2011, which cannot be estimated alone. Industry and NUTS 2 region fixed effects net out time-invariant differences across industries and regions; the latter set of fixed effects absorbs AFRICAN MIGRANTS' STOCK, which does not vary over time. $\gamma_r * \text{year}$ are region-specific trends, which are included to validate the parallel-trends assumption. α is the constant, and ϵ_{firt} accounts for all residual determinants of the dependent variable.

Our augmented models include standard firm-level and industry controls: size proxied by the number of employees and asset value, as well as firm age and its squared value (AGE^2). We also include industry-level controls: preferential tariff cuts (import and export), the labor–capital ratio, and market concentration (measured using the Herfindahl–Hirschman index of revenue). In some estimates, we include regional controls such as the amount of foreign direct investment (inflow and outflow), the share of unskilled workers, export growth, and the growth of the native population. All of these controls are interacted with POST-2011; the industry- and region-level controls are also interacted with TFPR.

We run OLS regressions with standard errors clustered at the NUTS 2 region level. Because our data set includes more than half a million private and public manufacturing firms for a period of eight years, we have more than a million observations in our baseline models. Note that the Amadeus database reports only the main industry in which firms operate. Thus, each firm compares only once in each year.

Concerns about possible violations of the parallel-trends assumption are similar to those discussed before. Importantly, our results are robust to the inclusion of region-specific time trends. In some model specifications, we report the coefficient for each year before and after Gaddafi's fall in 2011 to transparently rule out the presence of pre-trends.[61]

Results

Main findings. Table 6 reports the main results of our analysis.[62] The key coefficient is African migrants' stock × post-2011 × tfpr, which is always negative and significant. Simply put, as a result of the surge of migration from Africa after 2011, low-productivity firms increase their profit margin more than high-productivity firms. Or, more precisely, low-productivity firms in regions with a large share of African migrants increase their profit margin more than low-productivity firms in regions with a small share of African migrants. African migrants' stock × post-2011 does not affect high-productivity firms. These results are virtually unchanged when we include country-year fixed effects (model 2), industry- and firm-level controls (model 3), a first set of region-level controls (model 4), or a second set of region-level controls (model 5).[63]

Figure 6 plots the effect of the triple-interaction term. It reports the marginal effect of African migrants' stock × post-2011 for different levels of firm productivity. After 2011, the profit margins of low-productivity firms in regions with a large influx of African migrants are twice those of low-productivity firms in regions with a small stock of African migrants. Productive firms' profit margins are unchanged by the surge of migration from African countries, which is in line with the argument that such firms are unlikely to employ low-skilled workers.

Although all of our estimates control for region-specific trends, there may still be concerns about the validity of the parallel-trends assumption. As we did for the individual-level analysis, we interact African migrants' stock with a dummy for each year of our analysis. Figure 7 depicts the marginal effect of each interaction on the profit margin for low- and high-productivity firms.

The upper panel displays the effects for low-productivity firms. The effect is near zero and not significant in 2009 or 2010, but it is positive and significant between 2011 and 2014, which coincides with the largest increase in the number of migrants

61. Figure 11 in Appendix D displays the profit margins for regions with low and high levels of African migrant stock. A visual inspection of these trends reveals no violation of the parallel-trends assumption.

62. Except where stated otherwise, we use a 50 percent random sample for computational reasons. Given the large number of observations and fixed effects, our models would take days to run even on a fast computer.

63. We include the controls sequentially, since their coverage is limited and therefore they reduce the number of observations.

TABLE 6. *Main results: the economic microfoundations of attitudes toward migration*

	(1)	(2)	(3)	(4)
	OLS			
	Profit Margin			
TFPR	2.536***	2.514***	2.219***	2.240***
	(0.163)	(0.143)	(0.161)	(0.166)
African migrants' stock × post 2011	4.093***	3.913***	4.172***	4.171***
	(1.392)	(1.388)	(1.435)	(1.438)
TFPR × post 2011	−1.004***	−0.982***	−0.971***	−0.972***
	(0.143)	(0.134)	(0.139)	(0.143)
African migrants' stock × TFPR	0.009	0.087	0.066	0.067
	(0.245)	(0.235)	(0.219)	(0.217)
African migrants' stock × post 2011 × TFPR	−1.815**	−1.883**	−2.014**	−2.019**
	(0.797)	(0.787)	(0.798)	(0.795)
CONSTANT	−668.827*	−891.750***	−951.378***	−14.855
	(345.963)	(15.574)	(16.578)	(22.047)
Industry Controls	No	No	Yes	Yes
Firm Controls	No	No	Yes	Yes
Region Controls	No	No	No	Yes
NUTS-2 fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	No	No	No
Country-year fixed effects	No	Yes	Yes	Yes
Region specific trends	Yes	Yes	Yes	Yes
Observations	1,012,796	1,012,795	989,315	957,122
Number of regions	183	183	183	133
R-squared	0.042	0.043	0.055	0.055

Notes: OLS, with bootstrapped standard errors clustered by NUTS 2 region in parentheses. The unit of observation is firm-region-year. The outcome variable in all models is profit margin. Sources: Amadeus data set, Eurostat, German Federal Statistical Office. Robust standard errors in parentheses * $p < .10$; ** $p < .05$; *** $p < .01$.

from Libya. The effects fade away in 2015 and 2016.[64] We note that the economic effect lasts a shorter time than the attitudinal effect found in the individual-level analysis. The lower panel shows no significant effect on high-productivity firms during the sample period.

Mechanisms. To shed light on the mechanisms, we run two auxiliary tests: the *labor cost channel* and the *employment channel*. For both, we rely on the model formalized in Equation (2), replacing profit margins with the log of the average cost of employees and the log of the number of employees, respectively.

First, after 2011 the average cost per employee of low-productivity (but not high-productivity) firms decreases more in areas with a high concentration of African migrants than in those with a low concentration (Figure 8).[65]

64. Recall that profit marginis measured at the end of the calendar year and that the flux of African migrants was very large already in the spring of 2011. Fargues 2017.

65. Table D1 in Appendix D presents the full results.

Note: The predictions are plotted from model 1 in Table 1. 95% C.I.

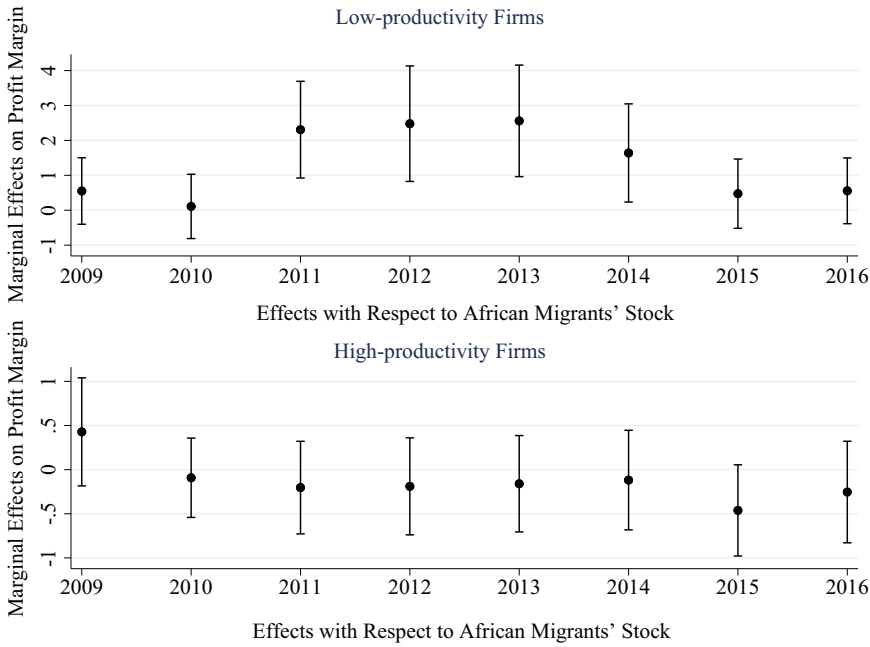
FIGURE 6. *Effect of migrants on firms' profit margins for different levels of productivity*

This result is in line with the argument that the flow of African migrants, who are treated as low-skilled workers in European labor markets, increases the supply of labor available to low-productivity firms and thus reduces their labor costs. In short, the rise in profits is driven by a reduction of labor costs experienced by low-productivity firms operating in regions with large shares of migrants.

Second, after 2011, the (log of) employment increases more in areas with a high concentration of African migrants than in those with a low concentration for low-productivity firms (Figure 9). There is no differential effect for high-productivity firms.[66]

This result is also in line with the argument that the flow of African migrants reduces the shortage of low-skilled workers, giving low-productivity firms the opportunity to hire more employees. Thus, part of the increase in profit is driven by expanding the production of low-productivity firms operating in regions with a large share of migrants due to labor becoming more available.

66. Table D2 in Appendix D reports the full results.



Note: The predictions are plotted by interacting AFRICAN MIGRANTS' STOCK with a dummy for each year of our analysis, with 90% confidence intervals.

FIGURE 7. *Effect of migrants on firms' profit margins for different levels of productivity and different years*

Additional evidence. We perform further tests to rule out some potential confounding factors in our analysis (see Appendix D for details). We explore the role of the 2008 global financial crisis, and we account for the role of Syrian refugees, who are not economic migrants, arriving in Europe. Our main results remain unchanged when considering these potential confounders (Tables D3, D4, and D5).

We also check that firm size *does not* drive our results (Table D6). When we interact AFRICAN MIGRANTS' STOCK and POST-2011 with a dummy for small firms (defined by the variable COMPCAT in Amadeus), our main results remain unchanged. However, there is evidence that after 2011 small firms in areas with a large share of African migrants increase their profits more than small firms in areas with a small share of African migrants. Our results are similar if we use a two-period analysis (pre- and post-2011) rather than a multiple-year analysis, as we did for the individual-level models (Table D7). We also test another implication of our argument: we show that after 2011 total assets per employee in low-productivity firms decrease more in areas with a high concentration of African migrants than in areas with a low concentration (Appendix D). This suggests a capital–labor substitution effect

Note: The predictions are plotted from model 1 in Table D1, with 95% confidence intervals.

FIGURE 8. *Effect of migrants on firms' labor costs for different levels of productivity*

among low-productivity firms in areas with a large share of African migrants (Table D8).

The case of Sweden. We complete our analysis by concentrating again on Sweden. Using Swedish firm-level data, which are uniquely rich, we explore what happens to the employment of African migrants and native workers, as well as that of skilled and unskilled workers, in less productive and more productive firms, after 2011. We describe the data, discuss our empirical strategy, and report the results of this analysis in Appendix E. The fine-grained analysis allows us to pin down a key mechanism highlighted by our conceptual framework: after the migration flow, cheap African and unskilled workers are more likely to be employed in low-productivity firms in areas with a large share of African migrants than in high-productivity firms in areas with a large share of African migrants. Furthermore, we find no evidence of a displacement effect—that is, that African workers are being hired in low-productivity firms at the expense of native workers. If anything, migrants have an indirect positive effect on native employment and income by directly increasing firms' profitability. All these results shed light on why attitudes toward migration improve in areas with a large share of both African migrants and

Note: The predictions are plotted from model 1 in Table D2, with 95% confidence intervals.

FIGURE 9. *Effect of migrants on firms' employment for different levels of productivity*

low-productivity firms. These areas, and the natives living in them, are better-off as a result of the migration flow.

Conclusion

Studies have convincingly showed that migration affects political attitudes.[67] What remains unclear are the mechanisms at play. While some studies argue that migration affects political attitudes through economic channels, such as competition between low-skilled natives and foreign workers,[68] others stress the importance of cultural factors, such as perceived cultural threats from migrants and refugees.[69] In this paper, we rely on a firm-based theory to understand how the distributional consequences of migration change individuals' attitudes toward migrants.

Our key contribution is to show that some of the variation in attitudes toward migration which we observe across time and space is a function of how migrants

67. Dancygier and Margalit 2020; Margalit 2019.
68. Mayda 2006.
69. Margalit 2019.

affect different firms, and therefore the different geographical areas in which these firms operate. We argue that the surge of low-skilled economic migrants benefits low-productivity firms by lowering their production costs and expanding their labor supply. In turn, economic conditions in regions with large shares of low-productivity firms improve after the flow of (perceived) low-skilled migrants. And as a result of the better economic conditions, individuals in areas benefiting from migration flows develop more positive attitudes toward migrants.

To overcome some of the identification challenges, we exploit the collapse of Muammar Gaddafi's regime in Libya as a natural experiment. Using four different data sets and a large number of empirical tests, our analysis yields two main results. Our main findings indicate that people who live in areas with a large share of both African migrants and low-productivity firms develop a positive view of migrants' impact on the economy after the migration flow. This finding implies that opposition to migration depends on an area's industrial composition, since this helps determine firms' gains or losses from migration. This positive attitudinal shift is long lasting: we observe it seven years after the beginning of the migration flow.

We complement the individual-level analysis with firm-level analyses, which investigate the economic microfoundations of the attitudinal shift. We find that after the collapse of Gaddafi's regime firms' profitability increases more in areas with a larger presence of African migrants. However, this increase applies to only low-productivity firms, which benefit from a surge in the supply of low-skilled labor. We show that the mechanism works by reducing labor costs and increasing low-productivity firms' employment. A case study of Sweden shows no evidence that migrants replace native workers or reduce their wages.

Our results indicate that migration may bring economic benefits to economic actors and areas that are lagging economically. Moreover, they show that the distributional effect of migration may offset some of the distributional effect of trade liberalization, which tends to favor productive firms at the expense of less productive ones. An important implication of this study is that removing barriers to people's movement could mitigate some of the uneven gains generated by removing tariffs on goods at the firm level and re-energize markets that experience fewer benefits from globalization. Since these positive effects improve how citizens view migration, closed-border policies may exacerbate the globalization backlash.

We conclude by highlighting two directions in which the findings of this piece could be pushed further. First, while our analysis focuses on the manufacturing sector, the effects are likely to be even more pronounced in the services sector, which typically absorbs a large share of (perceived) low-skilled migrants who end up working in food and retail industries. Replicating the analysis there may produce less conservative estimates than the ones presented here. Second, future studies may investigate whether a positive shift in attitudes toward migration tempers the support for radical-right parties in regions benefiting from the surplus of (perceived) low-skilled workers, a pressing question given the rise of right-wing populism in Europe.

Data Availability Statement

Replication files for this article may be found at <https://doi.org/10.7910/DVN/MVVF5X>.

Supplementary Material

Supplementary material for this article is available at <https://doi.org/10.1017/S0020818323000255>.

References

Amiti, Mary, and Jozef Konings. 2007. Trade Liberalization, Intermediate Inputs and Productivity: Evidence from Indonesia. *American Economic Review* 97 (5):1611–38.

Anderson, Lisa. 2011. Demystifying the Arab Spring: Parsing the Differences Between Tunisia, Egypt, and Libya. *Foreign Affairs*, May/June, 2–7.

Andersson, Henrik, and Sirus H. Dehdari. 2021. Workplace Contact and Support for Anti-immigration Parties. *American Political Science Review* 115 (4):1159–74.

Baccini, Leonardo, Mattia Guidi, Arlo Poletti, and Aydim Yildirim. 2021. Trade Liberalization and Labor Market Institutions. *International Organization* 76 (1):70–104.

Baccini, Leonardo, Pablo Pinto, and Stephen Weymouth. 2017. The Distributional Consequences of Preferential Trade Liberalization: Firm-Level Evidence. *International Organization* 71 (2):373–95.

Baccini, Leonardo, and Stephen Weymouth. 2021. Gone for Good: Deindustrialization, White Voter Backlash, and US Presidential Voting. *American Political Science Review* 115 (2):550–67.

Ballard-Rosa, Cameron, Amalie Jensen, and Kenneth Scheve. 2021. Economic Decline, Social Identity, and Authoritarian Values in the United States. *International Studies Quarterly* 66 (1):1–33.

Ballard-Rosa, Cameron, Mashail Malik, Stephanie Rickard, and Kenneth Scheve. 2021. The Economic Origins of Authoritarian Values: Evidence from Local Trade Shocks in the United Kingdom. *Comparative Political Studies* 54 (13):1–33.

Bamert, Justus, Fabrizio Gilardi, and Fabio Wasserfallen. 2015. Learning and the Diffusion of Regime Contention in the Arab Spring. *Research and Politics* 2 (3):70–104.

Battisti, Michele, Gabriel Felbermayr, Giovanni Peri, and Panu Felbermayr. 2018. Immigration, Search and Redistribution: A Quantitative Assessment of Native Welfare. *Journal of the European Economic Association* 16 (4):1137–88.

Beerli, Andreas, Jan Ruffner, Michael Siegenthaler, and Giovanni Peri. 2021. The Abolition of Immigration Restrictions and the Performance of Firms and Workers: Evidence from Switzerland. *American Economic Review* 111 (3):976–1012.

Berck, Peter, and Sofia B. Villas-Boas. 2016. A Note on the Triple Difference in Economic Models. *Applied Economics Letters* 23 (4):239–42.

Bernard, Andrew, J. Bradford Jensen, and Peter K. Schott. 2021. Trade Costs, Firms and Productivity. *American Economic Review* 53 (5):917–37.

Biavaschi, Costanza, Giovanni Facchini, Anna Maria Mayda, and Mariapia Mendola. 2018. South-South Migration and the Labor Market: Evidence from South Africa. *Journal of Economic Geography* 23 (4): 823–53.

Bo', Ernesto Dal, Frederico Finan, Olle Folke, Torsten Persson, and Johanna Rickne. 2022. Economic and Social Outsiders but Political Insiders: Sweden's Populist Radical Right. *Review of Economic Studies* 90 (2):675–706.

Brunow, Stephan, Michaela Trax, and Jens Suedekum. 2013. Cultural Diversity and Plant-Level Productivity. NORFACE Discussion Paper 28.
Callaway, Brantly, Andrew Goodman-Bacon, and Pedro H.C. Sant'Anna. 2021. Difference-in-Differences with a Continuous Treatment. Paper 2107.02637, arXiv.org, revised July 2021.
Clemens, Michael A. 2022. The Economic and Fiscal Effects on the United States from Reduced Numbers of Refugees and Asylum Seekers. *Oxford Review of Economic Policy* 38 (3):449–86.
Cohen-Goldner, Sarit, and M. Daniele Paserman. 2011. The Dynamic Impact of Immigration on Natives' Labour-Market Outcomes: Evidence from Israel. *European Economics Review* 55 (8):1027–45.
Colantone, Italo, and Piero Stanig. 2018. The Trade Origins of Economic Nationalism: Import Competition and Voting Behavior in Western Europe. *American Journal of Political Science* 62 (4):936–53.
Constant, Amalie F. 2014. Do Migrants Take the Jobs of Native Workers? *IZA World of Labor* 10 (10).
Dancygier, Rafaela M., and Michael J. Donnelly. 2013. Sectoral Economies, Economic Contexts, and Attitudes Toward Immigration. *Journal of Politics* 75 (1):17–35.
Dancygier, Rafaela M., and Yotam Margalit. 2020. The Evolution of the Immigration Debate: A Study of Party Positions over the Last Half-Century. *Comparative Political Studies* 53 (5):734–74.
de Chaisemartin, Clément, and Xavier D'Haultfœuille. 2020. Two-Way Fixed Effects Estimators with Heterogeneous Treatment Effects. *American Economic Review* 110 (9):2964–96.
Docquier, Frédéric, Çağlar Ozden, and Giovanni Peri. 2014. The Labour Market Effects of Immigration and Emigration in OECD Countries. *Economic Journal* 124 (579):1106–45.
Draca, Mirco, Stephen Machin, and John Van Reenen. 2011. Minimum Wages and Firm Profitability. *American Economic Journal: Applied Economics* 3 (1):121–51.
Dustmann, Christian, Thomas Frattini, and Ian P. Preston. 2013. The Effect of Immigration Along the Distribution of Wages. *Review of Economic Studies* 80 (1):145–73.
Dustmann, Christian, Kristine Vasiljeva, and Anna Piil Damm. 2019. Refugee Migration and Electoral Outcomes. *Review of Economic Studies* 86 (5):2035–91.
Fargues, Phillipe. 2017. Four Decades of Cross-Mediterranean Undocumented Migration to Europe: A Review of the Evidence. International Organization for Migration. Available at <https://publications.iom.int/system/files/pdf/four_decades_of_cross_mediterranean.pdf>.
Finseraas, Henning, and Andreas Kotsdam. 2017. Does Personal Contact with Ethnic Minorities Affect Anti-immigrant Sentiments? *European Journal of Political Research* 56 (3):703–22.
Flahaux, Marie-Laurence, and Hein De Hass. 2016. African Migration: Trends, Patterns, Drivers. *Comparative Migration Studies* 4 (1):703–22.
Foged, Mette, and Giovanni Peri. 2016. Immigrants' Effect on Native Workers: New Analysis on Longitudinal Data. *American Economic Journal: Applied Economics* 8 (2):1–34.
Fouka, Vasiliki, Soumyajit Mazumder, and Marco Tabellini. 2020. From Immigrants to Americans: Race and Assimilation During the Great Migration. *Review of Economic Studies* 89 (2):811–42.
Frontex. 2019. Accessed 30 September 2019. Available at <https://www.frontex.europa.eu/>.
Gaikwad, Nikhar, and Gareth Nellis. 2017. The Majority-Minority Divide in Attitudes Toward Internal Migration: Evidence from Mumbai. *American Journal of Political Science* 61 (2):456–72.
Hainmueller, Jens. 2012. Entropy Balancing: A Multivariate Reweighting Method to Produce Balanced Samples in Observational Studies. *Political Analysis* 20 (1):25–46.
Hainmueller, Jens, and Michael J. Hiscox. 2010. Attitudes Toward Highly Skilled and Low-Skilled Immigration: Evidence from a Survey Experiment. *American Political Science Review* 104 (1):61–84.
Hainmueller, Jens, Michael J. Hiscox, and Yotam Margalit. 2015. Do Concerns About Labor Market Competition Shape Attitudes Toward Immigration? New Evidence. *Journal of International Economics* 97 (1):193–207.
Hainmueller, Jens, and Daniel J. Hopkins. 2014. Public Attitudes Toward Immigration. *Annual Review of Political Science* 17 (1):225–49.
Hangartner, Dominik, Elias Dinas, Moritz Marbach, Konstantinos Matakos, Dimitrios Xefter, and Yotam Margalit. 2019. Does Exposure to the Refugee Crisis Make Natives More Hostile? *American Political Science Review* 113 (2):442–55.
Helpman, Elhanan, Oleg Itshoki, and Stephen Redding. 2010. Inequality and Unemployment in a Global Economy. *Econometrica* 78 (4):1239–83.

Kalemli-Ozcan, Sebnem, Bent Sorensen, Carolina Villegas-Sanchez, Vadym Volosovych, and Sevcan Yesiltas. 2017. How to Construct Nationally Representative Firm Level Data from the ORBIS Global Database. Working paper no. 2155, National Bureau of Economic Research.

Khandelwal, Amit, and Petia Topalova. 2011. Trade Liberalization and Firm Productivity: The Case of India. *Review of Economics and Statistics* 93 (3):995–1009.

Lagi, Marco, Karla Z. Bertrand, and Yaneer Bar-Yam. 2011. The Food Crises and Political Instability in North Africa and the Middle East. ArXiv:1108.2455 [physics.soc-ph].

Levinsohn, James, and Amil Petrin. 2003. Estimating Production Functions Using Inputs to Control for Unobservables. *Review of Economic Studies* 70 (2):317–41.

Malhotra, Neil, Yotam Margalit, and Cecilia Hyunjung Mo. 2013. Economic Explanations for Opposition to Immigration: Distinguishing Between Prevalence and Conditional Impact. *World Economy* 57 (2): 391–410.

Margalit, Yotam. 2019. Economic Insecurity and the Causes of Populism, Reconsidered. *World Economy* 33 (4):152–70.

Mattoo, Aaditya, Ileana Cristina Neagu, and Caglar Ozden. 2008. Brain Waste? Educated Immigrants in the US Labour Market. *Journal of Development Economics* 87 (2):255–69.

Maxwell, Rahsaan. 2019. Cosmopolitan Immigration Attitudes in Large European Cities: Contextual or Compositional Effects? *American Political Science Review* 113 (2):456–74.

Mayda, Anna Maria. 2006. Who Is Against Immigration? A Cross-Country Investigation of Individual Attitudes Toward Immigrants. *Review of Economics and Statistics* 88 (3):510–30.

McGrath, John. 2021. Report on Labour Shortages and Surpluses. Publications Office of the European Union, European Labour Authority.

McLaren, Lauren M. 2003. Anti-immigrant Prejudice in Europe: Contact, Threat Perception, and Preferences for the Exclusion of Migrants. *Social Forces* 81 (3):909–36.

Mitaritonna, Christina, Gianluca Orefice, and Giovanni Peri. 2017. Immigrants and Firms' Productivity: Evidence from France. *European Economic Review* 96 (1):62–82.

Moriconi, Simone, Giovanni Peri, and Riccardo Turati. 2019. Immigration and Voting for Redistribution: Evidence from European Elections. *Labour Economics* 61:1017–65.

Munshi, Kaivan. 2003. Networks in the Modern Economy: Mexican Migrants in the US Labor Market. *Quarterly Journal of Economics* 118 (2):549–97.

Muysken, Joan, Ehsan Vallizadeh, and Thomas Ziesemer. 2015. Migration, Unemployment, and Skill Downgrading. *Scandinavian Journal of Economics* 117 (2):403–51.

Olley, G. Steven, and Ariel Pakes. 1996. The Dynamics of Productivity in the Telecommunications Equipment Industry. *Econometrica* 64 (6):1263–97.

Osgood, Iain. 2019. The Charmed Life of Superstar Exporters: Survey Evidence on Firms and Trade Policy. *Journal of Politics* 79 (1):133–52.

Ottaviano, Gianmarco I.P., Giovanni Peri, and Greg C. Wright. 2018. Immigration, Trade and Productivity in Services: Evidence from UK Firms. *Journal of International Economics* 112 (1):88–108.

Pardos-Prado, Sergi, and Carla Xena. 2018. Skill Specificity and Attitudes Towards Immigration. *American Journal of Political Science* 63 (2):286–304.

Passerman, M. Daniele. 2013. Do High-Skill Immigrants Raise Productivity? Evidence from Israeli Manufacturing Firms, 1990–1999. *IZA Journal of Migration* 2 (6).

Pavcnik, Nina. 2002. Trade Liberalization, Exit, and Productivity Improvements: Evidence from Chilean Plants. *Review of Economic Studies* 69 (1):245–76.

Peters, Margaret E. 2014. Trade, Foreign Direct Investment and Immigration Policy Making in the US. *International Organization* 68 (4):811–44.

Peters, Margaret E. 2015. Open Trade, Closed Borders: Immigration Policy in the Era of Globalization. *International Organization* 67 (1):114–54.

Peters, Margaret E. 2017. *Trading Barriers: Immigration and the Remaking of Globalization*. Princeton University Press.

Peters, Margaret E. 2019. Immigration and International Law. *International Studies Quarterly* 63 (2): 281–95.

Peters, Margaret E., and Adrian J. Shin. 2023. Inequality and Immigration Policy. *Studies in Comparative International Development* 58 (2):224–51.
Richard, Anne C., and Shelly Callahan. 2020. Making Sense of US Refugee Resettlement: Utica as a Model for the Nation. *Annals of the American Academy of Political and Social Science* 690 (1):176–83.
Simonovits, Gábor, Kezdi Gabor, and Peter Kardos. 2018. Seeing the World Through the Other's Eye: An Online Intervention Reducing Ethnic Prejudice. *American Political Science Review* 112 (1):186–93.
Steinmayr, Andreas. 2020. Contact Versus Exposure: Refugee Presence and Voting for the Far Right. *Review of Economics and Statistics* 103 (2):1–47.
Taylor, J. Edward, Mateusz J. Filipski, Mohamad Alloush, Anubhab Gupta, Ruben Irvin Rojas Valdes, and Ernesto Gonzalez-Estrada. 2016. Economic Impact of Refugees. *Proceedings of the National Academy of Sciences* 113 (27):7449–53.
Vertier, Paul, Max Viskanic, and Matteo Gamalerio. 2018. Dismantling the "Jungle": Migrant Relocation and Extreme Voting in France. *Political Science Research and Methods* 34 (2):1–15.

Authors

Leonardo Baccini is Associate Professor of International Political Economy in the Department of Political Science at McGill University, Montreal, Quebec, Canada. He can be reached at leonardo.baccini@mcgill.ca. Information on his research can be found at <https://sites.google.com/site/leonardobaccini/home>.

Magnus Lodefalk is Associate Professor in the Department of Economics at Örebro University, Sweden. He can be reached at magnus.lodefalk@oru.se. Information on his research can be found at <https://www.magnuslodefalk.com>.

Radka Sabolová is Research Affiliate at the AI-Econ Lab in the Department of Economics at Örebro University, Sweden. She can be reached at radka.sabolova@gmail.com.

Acknowledgments

A previous version of this paper was circulated with the title "Firms' (In)Equality and Attitudes toward Migration." We thank two referees and former *IO* associate editor Ken Scheve for detailed comments on the paper. Francesco Amodio, Peter Buisseret, Abel Brodeur, Nikhar Gaikwad, Yotam Margalit, Giovanni Peri, Maggie Peters, Adrian Shin, and the participants at IPES 2020 and at the Hoover Institution (Stanford University) seminar series offered valuable comments on previous drafts. John Hicks and Jan Oledan provided excellent research assistance. Kelley Friel provided outstanding copy-editing. The usual disclaimers apply.

Funding

Funding for this research was provided by the Fonds de Recherche du Québec-Société et Culture (grant agreement 2017-NP-198967).

Key Words

Migration; attitudes toward migration; firm profitability; Western Europe

Date received: September 16, 2021; Date accepted: October 6, 2023