Departament d´Economia Aplicada

Document de treball

The Impact of Immigration on Workers Protection

Adam Levai / Riccardo Turati

Universitat Autònoma de Barcelona

Facultat d´Economia i Empresa

21.02

Aquest document pertany al Departament d´Economia Aplicada

Data de publicació: **Gener 2021**

Departament d´Economia Aplicada

Edifici B

Campus de Bellaterra

08193 Bellaterra

Telèfon: 00 34 935 811 680

E.mail: d.econ.aplicada@uab.cat

https://www.uab.cat/departament/economia-aplicada/

The Impact of Immigration on Workers Protection*

Adam Levai[a] and Riccardo Turati[a,b]

[a] *IRES/LIDAM, UCLouvain*
[b] *Universitat Autonoma de Barcelona*

January 2021

Abstract

Even though the current literature investigating the labor market impact of immigration assumes implicitly or explicitly labor market regulation as exogenous to immigration (both in terms of size and composition), this is not necessarily the case. This paper shows that the composition of the immigrant population affects, in the medium and long-run, the labor market regulation. We build a new workers protection index based on 36 labor law variables over a sample of 70 developed and developing countries from 1970 to 2010. Exploiting a dynamic panel setting using both internal and external instruments, we find that migrants impact the destination countries' workers protection mainly through the degree of workers protection experienced in their origin countries, captured by an "epidemiological" effect. On the other hand, the size of the immigrant population has a small and rather insignificant effect. The results are robust to alternative and competing immigration effects such as diversity, polarization and skill-selection. The effects are particularly strong across two dimensions of the workers protection index: worker representation laws and employment forms laws. This paper provides suggestive evidence that immigrants' participation to unions and its implications for the political actors is one of the potential mechanisms through which the epidemiological effect could materialize. Finally, calculations based on the estimated coefficients suggest that immigration contributes to a reduction of the degree of workers protection, particularly in OECD high-income countries.

Keywords: Migration, Labor Market Institutions, Labor Regulation, Workers Protection.

JEL codes: J61, K31, F22.

*The authors are grateful to Frédéric Docquier and Bruno Van der Linden for their useful comments. This paper has benefited from discussions at the IELM Seminar (Université Paris 1 Panthéon Sorbonne) Workshop on Labour Markets and Migration (IAAEU), Junior Migration Seminar, Workshop on Empirical and Political Economics (KULeuven), European Association of Law and Economics Conference, Labor Market Transitions: Challenges for Public Policies and Research Conference, EBES Conference, Warsaw International Economic Meeting Conference, European Doctoral Programme Jamboree and Doctoral Workshops (UCLouvain). Adam Levai, adam.levai@uclouvain.be, UCLouvain, Place Montesquieu, 3 - 01348 Louvain-la-Neuve, Belgium. Riccardo Turati, riccardo.turati@uab.cat, UAB, Department of Applied Economics, Edificio B2, Campus de la Universidad Autónoma de Barcelona, 08193 Bellaterra, Spain. Adam Levai acknowledges financial support from the EOS programme of the Flemish (FWO) and French-speaking (FRS-FNRS) communities of Belgium (convention 30784531 on "Winners and Losers from Globalization and Market Integration: Insights from Micro-Data".

I Introduction

In recent decades the population of international migrants increased substantially. Looking at the most recent figures, in 2019 the stock of international migrants reached 272 millions globally which accounts for 3.5% of the world population (United Nations, 2019), whereas in the 1960 the size of the international migrant population was around 77 millions. Not only the size of the population changed significantly over years, but also its composition in terms of countries of origins. In the 1960, among the top 10 countries with the highest stock of international emigrants there were 3 developed countries: Germany, Italy and the United Kingdom (Artuç et al., 2014); whereas in 2010, there was only 1 developed country (United Kingdom) while other origin countries like Mexico and Bangladesh have now the largest diaspora abroad (World Bank, 2010). Such rise in the size of the international migrants' population increased not only the attention from local governments and international institutions, but also, thanks to the availability of novel datasets, increased the effort of the academic community to better understand the implications of immigration (Borjas, 1994, 2015). In terms of receiving countries, there is evidence on the implications of immigration on different spheres of the society such as the welfare system (Borjas and Trejo, 1991; Borjas, 1999; Dustmann and Frattini, 2014), innovation and firms capital adjustment (Lewis, 2011; Clemens et al., 2018; Bahar et al., 2020a), productivity (Peri, 2012) and natives' voting preferences (Halla et al., 2017; Moriconi et al., 2018; Steinmayr, 2020). A particular focus is related to the impact of immigrants on natives' labor market outcomes, where the literature provides a set of mixed evidence concerning the effect of immigration on natives' wages and employment depending on the methodological approach, periods of analysis and geographical areas (see Edo (2019) for a recent review of the literature). The literature also shows that, once explicitly included in the analysis, labor market regulations (like the presence of minimum wages or the rigidity of labor contracts) have relevant implications for the reaction of natives' labor market outcomes after new inflows of immigrants (Angrist and Kugler, 2003; D'Amuri and Peri, 2014; Edo, 2016, 2019; Bächli and Tsankova, 2020). However, one systematic feature of the literature is that labor market regulation is assumed to be, either implicitly or explicitly, exogenous to the presence of immigration. Such an assumption has never been tested out. Nevertheless, concerns related to the implication of immigration on countries' institutions have been raised, due to the growing inflows of immigrants coming from a broader set of institutionally and economically different countries, and with different cultural backgrounds. If the presence of immigrants with specific institutional background influences labor market regulation, then the *true* labor market effect of immigration is still not completely unveiled.

This paper fills that gap by studying the impact of immigration (both in terms of size and composition) on labor market regulation, using a dataset on 36 labor laws for 70 countries over a period of 40 years. Our analysis combines three innovative features compared to the existing literature. *First*, we build a new labor regulation measure which focuses on workers protection, which we call *workers protection index*. This measure captures how much the regulation is protecting employees against employers. Our sample covers 70 countries over the 1970-2010 period in 5-years intervals. This new index allows us to track the evolution of labor regulation for 36 different features of workers protection. We show that our measure is highly correlated with alternative available measures of workers protection and is related to economic and labor market outcomes. *Second*, we investigate the impact of immigration, both in terms of size and composition, on workers protection. We believe that both aspects of immigration (size and composition) are important to be considered due to their implications for the labor market. The size of immigrant population influences mechanically the labor supply and the skill-composition of the workforce, which could have implications for the labor regulation. As for the composition of immigration, we follow the literature on the epidemiological approach (Spilimbergo, 2009; Collier, 2013; Docquier et al., 2016; Valette, 2018), since migrants

arrive in destination countries with a set of experience, norms and habits from their country of origin. The past experience of regulation and institutions can affect migrants' behavior in the destination country, which can have implications for the labor market functioning in general, as well as workers protection regulation. In our analysis we account for alternative complementary or competing immigration effects, such as immigrant population diversity, polarization and skill-selection. *Third*, we perform an exploratory analysis on the mechanisms through which labor regulation could be affected. To do so, we first test the effect of immigration on the specific subcomponents of the workers protection index as new outcomes. Afterwards, we investigate the relationship between immigrants, unions participation and political parties' position towards labor groups.

Our paper provides three main findings. We *firstly* find a strong and positive effect of migrants' experience of the degree of workers protection in their origin countries – measured by an epidemiological term *à la* Spilimbergo (2009) – on workers protection in destination countries. Namely, welcoming immigrants from countries with high protective labor regulation (such as France) increases the degree of workers protection in destination countries; the same holds for the opposite, having more immigrants from countries with low workers protection (such as the United Kingdom) decreases the level of workers protection in the destination countries. An increase of one standard deviation of the epidemiological term leads to an increase of the workers protection index of 7.8% of WPI standard deviations. The effect is robust to our demanding specification, battery of robustness checks, falsification tests, and alternative competing effects like diversity, polarization or skill-selection. We also find a small negative or null effect associated to the size of immigrant population. *Second*, concerning the mechanisms we find evidence that two areas of the labor regulation are particularly affected by immigration: worker representation laws and employment forms laws. Furthermore, we find that immigrants' experience of these specific areas of labor regulation in the countries of origin are particularly relevant to explain these effects. To understand these results, the paper provides suggestive evidence that immigrants' experience of labor regulation in the origin countries is associated to immigrants' workers rate of unionization: immigrants from countries with more protective workers protection are less inclined to seek protection by unions, reducing the size of unionized workers population. We then show that parties' favorable position towards labor groups are negatively related with the size of the unionized workforce, suggesting an attempt of political actors to potentially counterbalance the bargaining power loss of unions due to a smaller unionized rate. *Finally*, taking the baseline coefficients as the "true" ones and actual variation of immigrant population in terms of size and composition over the period 1970-2010, we provide back-of-the-envelope computations to evaluate the magnitude of the effect of immigration on countries' labor regulation. On average, the computations predict that immigration reduces the workers protection index of 4.2% standard deviations in the analyzed period. Although the effect is highly heterogeneous across countries, depending on both the size and composition of the immigrants' population, the average negative affect for OECD high-income countries is 72% stronger compared to non-OECD countries.

Assessing the effect of immigration on countries' workers protection rises a number of identification challenges that need to be properly addressed to avoid biased estimates. Time-varying omitted factors can influence simultaneously the evolution of workers protection and immigrants' location. The workers protection is a persistent or path-dependent variable, which can be explained to a large extent by its own history. Reverse causality plays a role as workers protection can influence the size and composition of immigrants. In this paper we address these challenges by using a dynamic panel specification and estimating it with system-GMM with both internal and external instruments. We create external instruments based on two complementary IV strategies: a shift-share approach (Card, 2001; Moriconi et al., 2018) and a gravity-model approach (Alesina et al., 2016; Docquier et al., 2020).

The shift-share approach predicts bilateral migration stocks based on the preexisting distribution of immigrants by country of origin across our sample of destination countries in the 1960s; in that way, the predicted stocks are defined by preexisting networks of immigrants and not by recent economic or social countries outcomes. The gravity-model approach, instead, borrows from the trade literature that countries geographical distance influence peoples' movements. We predict the bilateral migration stocks with a very parsimonious model including origin-destination distances interacted with year dummies to capture the evolution of transport technology (Feyrer, 2019). We follow Bahar et al. (2020b) and use both methodologies simultaneously to build predicted measures of the size and composition of the immigrant population. Although being widely used, the two IV approaches are open to criticisms; the critiques to the shift-share approach indicate there could be a threat of persistent local conditions (Jaeger et al., 2018; Goldsmith-Pinkham et al., 2020) and potential correlations in the error terms due to similar initial distributions of immigrants by country of origin across destination countries (Adao et al., 2019). These concerns are less worrisome in our specific case due to the wide set of historical events that undermine persistent local factors (e.g. the fall of Soviet Union in 1989, the 1965 amendments to the Immigration and Nationality act in the US, the constitution of the European Union and the activation of the Schengen area in 1995, etc.). Moreover, we find no correlations between our predicted measures and pre-period economic and social trends, as well as no significant variations in the error terms after clustering countries by similar distribution of immigrants' origin countries in the 1960s. Concerning the gravity-model approach, concerns would rise if the included gravity controls would affect the evolution of the labor regulation through other channels, like trade or foreign direct investment. However, due to the highly parsimonious estimated gravity model we are more likely to satisfy the exclusion restriction that can reasonably support a careful causal interpretation of the results once the predicted stocks are used.

This paper contributes to two broad strands of literature. The first strand is looking at the overall impact of migration on destination countries' labor market and more specifically on natives' labor market outcomes. There is an overall consensus coming from a broad set of evidences using different assumptions and methodological approaches that, on average, immigration has a small or null effect on natives wage and employment (Borjas, 2003; Peri and Sparber, 2009; Ottaviano and Peri, 2012; Manacorda et al., 2012; Edo, 2019); although it can have some relevant redistributional effects depending on immigrants location and education level (Card, 2009; Borjas, 2016). More closely related to our work, part of the literature investigates the labor market effect of immigration exploring the heterogeneity of the effects across labor market institutions and regulations. Angrist and Kugler (2003) and D'Amuri and Peri (2014) reveal that in more rigid labor markets natives take more time to adjust to the immigration supply shock by moving towards more complex and less manual tasks, compared to natives in less rigid labor markets. Using France data Edo (2016) shows that an immigration shock reduces wages of natives covered by fixed-term contracts and employment of natives covered by indefinite-term contracts. However, exploiting the non-linear distribution of minimum wages across 51 US states, Edo and Rapoport (2019) provide evidence that higher minimum wages can reduce the negative effect of low-skilled immigration on low educated natives' workers. Moreover, when protected by labor regulations, natives hold more mild attitudes towards immigrants, which also influences their voting preferences (Bächli and Tsankova, 2020). Even though the literature recognizes the importance of labor regulation for various outcomes, to the best of our knowledge none of the previous works looked at the effect of immigration on workers' protection, or more broadly on labor regulation. Our paper aims to fill this gap on the implications of immigration on labor regulation, where regulation was always treated, up until now, as fixed over time and "absorbed" by eventual geographic time-invariant fixed effects.

The second broad strand of literature we contribute to investigates the impact of migration on destination coun-

tries institutions (broadly defined) and the implications of a potential epidemiological effect. Concerns are raised about the potential disruptive effect of norms, habits and institutions brought by immigrants coming from distant countries on well-functioning western institutions (Collier, 2013; Borjas, 2015). However, the available set of evidence shows that immigrants have small positive or no effect on market-functioning institutions and economic freedom (Clark et al., 2015; Powell et al., 2017). Nevertheless, few authors provide evidence that immigrants' experience of institutions and productive capacity in destination countries has an effect on origin countries institutions (Spilimbergo, 2009; Docquier et al., 2016; Valette, 2018). Our paper contributes to this literature by providing novel evidence on the effect of immigration on a distinct and important part of institutions, namely labor regulation, on a sample of 70 destination countries over a long time span (1970-2010).

The rest of the paper is organized as follows. Section II presents the data, the construction of our workers protection index and immigration variables. Section III shows our empirical approach, the identification strategies and potential alternative effects driven by immigration. Section IV shows the main results of the analysis, the robustness checks and the falsification tests. Section V explores the potential mechanism on the different subcomponents of the workers protection index and on immigrants participation to unions. Section VI discusses the magnitude of the effect after back-of-the-envelope computations of the effects. Finally, Section VII concludes.

II Data and Stylized Facts

This paper combines different data sources over a long time span from 1970 to 2010 for 70 countries. Section II.A describes the data associated to workers protection, the construction of the workers protection index and shows relevant correlations with alternative measures of workers protection and economic outcomes. In Section II.B we present the immigration data, the construction of the epidemiological term based on level of workers protection experienced by immigrants in their origin countries and the evolution over time of the immigrant population.

II.A Workers Protection Index

To construct our workers protection index we use the Leximetric dataset developed by legal scholars (Adams et al., 2017). This dataset quantifies the level and the evolution of labor law based on the "law-in-the-books". Their focus is on the protection of three different economic actors in the society: creditors, shareholders and workers. Being aware of the discussion about the relevance of shareholders and creditors protection on countries' economic and financial development (La Porta et al., 1997, 2008; Pagano and Volpin, 2006; Armour et al., 2009), we focus on the specific part dedicated to workers protection (Adams et al., 2017). The Leximetric data on workers protection covers 117 countries, over the 1970-2013 period. For few post-socialist countries, the data are available only after 1990.[1] The dataset documents the degree of protection associated to indeterminate/permanent workers that is written in the law. However, when the law sets different standards across different groups of workers (e.g. blue-collar and white-collar workers), the dataset enlists the degree of protection associated to the least protected group. This aspect implies that the dataset is capturing either the average or the minimum degree of protection guaranteed to the least protected workers.

The dataset includes thirty-six relevant variables associated to different aspects of workers' protection.[2] To each of those variables, a value between zero and one is assigned, where zero stands for no protection/lowest protection

[1] To have a more balanced sample, we keep in our final sample only countries that have a data coverage starting from 1970.

[2] List of all workers' protection variables is available in Table A-1.

possible, while one stands for the maximum protection available in that area. All the variables are categorized into five broad areas related to workers' protection: employment forms laws ($EmptForm$), working time laws ($WorkTime$), worker dismissal laws ($WkrDismis$), worker representation laws ($WkrRepr$), industrial action laws ($IndAction$). The first area is the law governing the definition of the employment relationship and employment forms, which accounts for the legal difference across different employment forms and their maximum duration. It has maximum value when workers that have temporary/fixed-term contracts are protected, or when the law has more power than the contracting parties. $WorkTime$ covers issues related to holidays, extra compensation in case of overtime working hours and the duration of working weeks. The variables take value of one when holidays and overtime activities are well compensated and when workers have a reasonable amount of working hours per week/day. The third area ($WkrDismis$) is related to the length of notice before dismissal, the constraints that employers have to face before firing an employee and eventual compensations after dismissal. The maximum value appears when workers are compensated after dismissal or when employers have to face constraints to avoid unfair layoffs. The fourth area ($WkrRepr$) provides information related to workers' right of unionization and collective bargaining and on unions' right to nominate representative in companies' board. Variables take value of one when the workers have rights to be represented and voice their concerns through unions. The last area ($IndAction$) is related to rights of industrial actions and striking. This area covers the part of legislation which grants workers' rights to strike and reduces employers' rights to lockout. These five broad areas approximately correspond to the categories analysed by Botero et al. (2004), which later provided the methodological basis for the World Bank's Doing Business Reports.

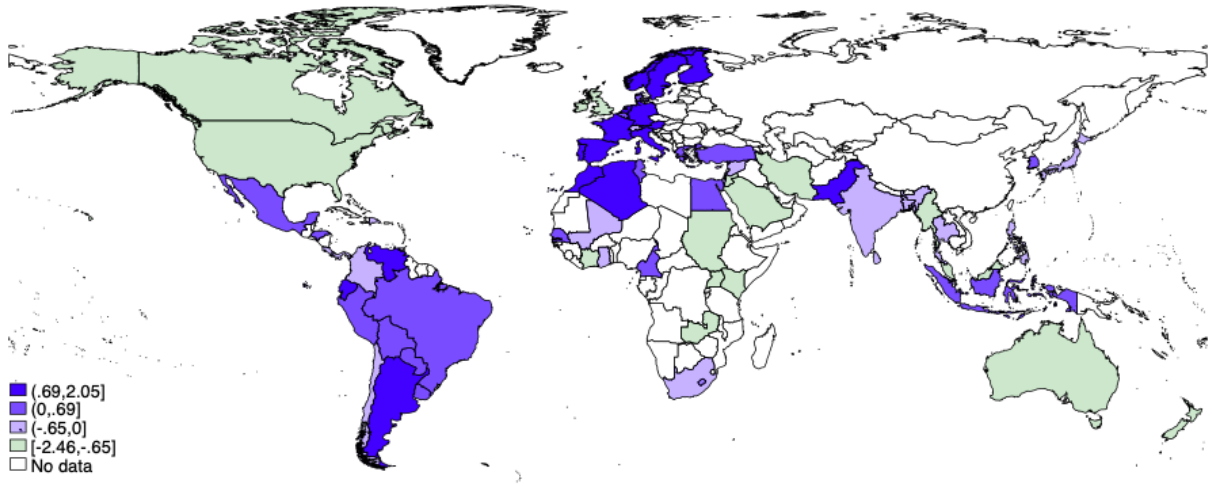
The wide range of legal issues covered by the Leximetric data gives a comprehensive measurement of different aspects related to workers' protection. However, performing an analysis on each variable would imply too many outcome variables and very little variation over time that would, in some cases, be fully captured with country fixed effects. For this reason, we perform the following steps to construct a synthetic measure of workers protection at the country level. First, following the structure of the data, we build five indicators associated to the five areas of working protection measured by the CBR researchers. Following Preacher and MacCallum (2003) guidelines, we aggregate the variables associated to each area through a factor analysis and we standardize them with mean zero and standard deviation equal to one.[3] Second, we perform a second factor analysis over the five aggregated indicators associated to the five legislative areas of workers' protection to build one synthetic indicator. We define the first standardized component of this latter factor analysis as our *workers protection index* (WPI).

Figure 1 shows the geographical distribution of the average workers protection index at the country level. European countries (excluding United Kingdom) are characterized by a high level of WPI, with Portugal having the highest average WPI (2.05). Pakistan is the only country in Asia with a comparable WPI to Continental Europe, with WPI of 1.12. Among high-income developed societies, countries with a common law legal system (e.g. the United States, United Kingdom, Australia and New Zealand) are characterized by a systematically lower level of workers protection. The United States in particular is characterized by the lowest WPI level in our sample (-2.46). This is not surprising, since common law legal systems are on average less codified and more protective on the side of investors (La Porta et al., 1997, 2008).[4] Concerning developing countries, Latin American countries are charac-

[3]The results of the factor analysis are available in Appendix B. Since the structure of the data and the relation among variables is already theoretically well-defined by the CBR researchers, we follow Preacher and MacCallum (2003) that suggest to implement in these cases factor analysis to identify the sources of common variation rather than a principal component analysis, which aims to explain as much variance as possible. The indexes are the first standardized component from each legislative specific area of the factor analysis.

[4]In Table C-6 we look at the possible determinants of the values shown in Figure 1 using a simple OLS. We confirm a strong negative and highly significant relationship between common law legal origin and WPI. Depending on the set of controls, we find positive correlations of WPI

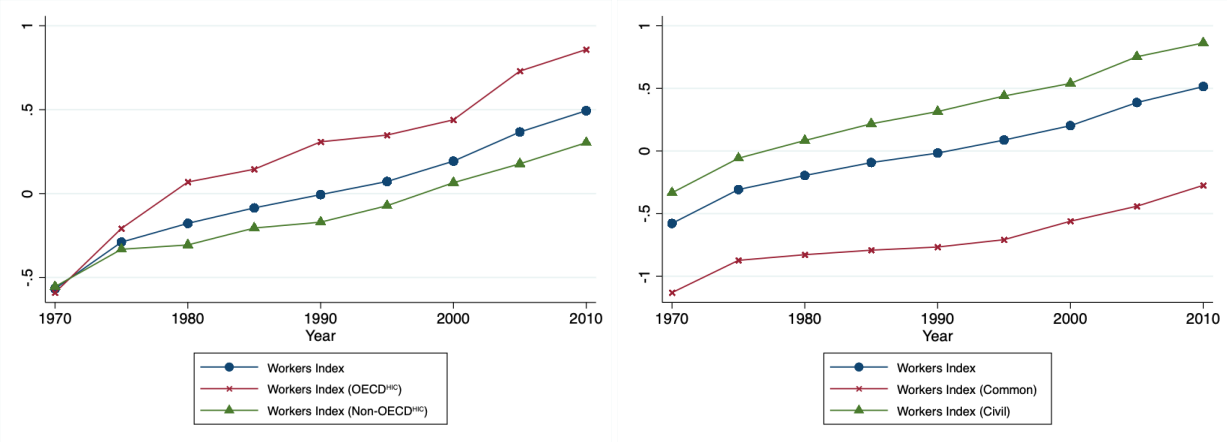
Figure 1: Workers Protection Index - Geographical Distribution



Note: authors' calculations on CBR Leximetric Data. The figure plots the average standardized workers protection index by quartile at country level over the 1970 to 2010 period.

terized by an overall high level of workers protection. The only exception is Chile (-0.35), which is characterized by a lower level of WPI compared to its neighboring countries, due to the changes in law and institutions under the Pinochet regime (Borzutzky, 2005). Large heterogeneity in WPI is reported in African and Middle East countries, from countries with a reasonably high degree of WPI like Algeria (1.59) and Morocco (0.76) to countries with low level of WPI like Saudi Arabia (-1.06) and Kenya (-1.2).

Figure 2: Workers Protection Index - Evolution Over Time



(a) OECD^{HIC} vs. Non-OECD^{HIC} (b) Civil Law vs. Common Law

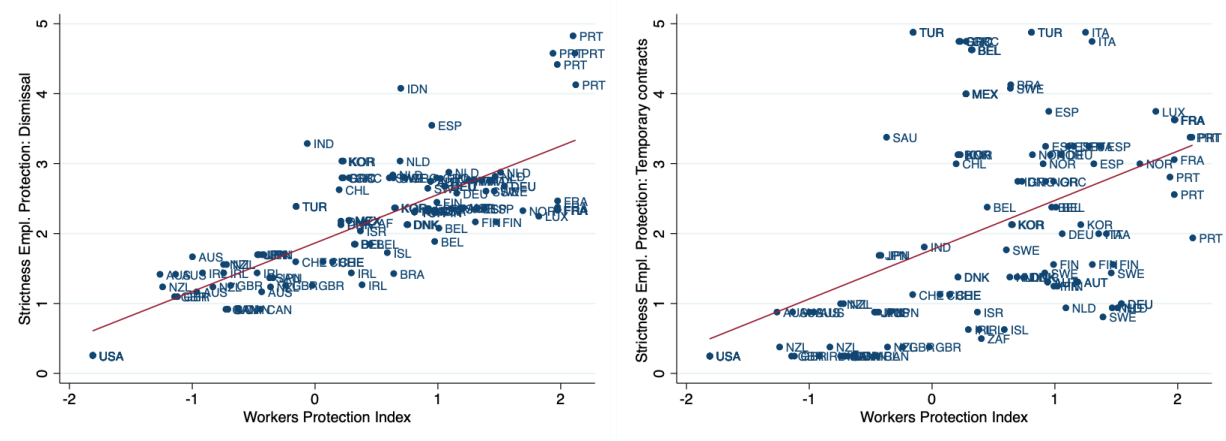
Note: authors' calculations on CBR Leximetric Data. Figures (a) and (b) plots the average standardized workers protection index by destination countries level of development (Figure (a)) and legal origin (Figure (b)).

The historical evolution of the workers protection index is available in Figure 2. The blue-dotted line both in Figure 2(a) and 2(b) shows that the degree of workers' protection is on an increasing trend from 1970 to 2010, moving

with the epidemiological term, GDP p.c. and democracy, whereas we find a negative correlation with the size of immigration.

from an average level of -0.6 to 0.5. However, there are some heterogeneous trends based on countries' development and legal origin. Figure 2(a) shows that OECD high-income and non-OECD countries were experiencing the same level of WPI until 1975. In 1980 a divergence started to emerge between them, with OECD high-income countries having a higher level of WPI. Figure 2(b) presents the relevance of the legal origin on countries' regulation on workers: even though the trends are parallel from 1970 to 2010, countries with a civil law legal system experienced a substantially higher degree of WPI compared to countries with a common law legal system. This evidence is in line with the literature which recognizes systematic difference in the level of regulation across countries (La Porta et al., 1997).

Figure 3: Workers Protection Index - Correlations with OECD Employment Protection Data



(a) Individual and Collective Dismissal

(b) Temporary Contracts

Note: authors' calculations on CBR Leximetric Data (x-axis) and OECD Employment Protection Database (y-axis). The figure plots the country-period level of the standardized workers protection index on: the country-period level of the index of the strictness of employment regulation on individual and collective dismissal (DI^{OE}) (Figure (a)) and the country-period level of the index of the strictness of employment regulation on temporary contracts (TC^{OE})(Figure (b)).

Covering several aspects of the legislation, the Leximetric data is able to tap on multiple aspects of the legislation associated to workers' rights. Moreover, as the authors of the database point out, the data aims to capture aspects of the labor relations between employers and employees that are protected by the legislator rather than the actual cost imposed on employers by the legislation.[5] However, the Leximetric data is not the only dataset available which encompasses the legal aspects related to workers protection. Over a smaller sample of countries and a reduced time span, the OECD Employment Protection database provides some indicators of employment protection (OECD, 2013). In particular we focus on two indicators which are available for 33 countries the 1990-2010 period. First, the index of the strictness of employment regulation on individual and collective dismissal (DI^{OE}). The OECD indicator over workers' dismissal captures procedures and costs involved in dismissing workers, like procedural inconveniences that employers have to face through the dismissal process, notice period and severance pay. Second, the index of the strictness of employment regulation on temporary contracts (TC^{OE}). This index measures the duration, regulation and conditions associated to temporary contract compared to permanent contracts. Both indicators

[5]The CBR researchers specify three main reasons for this: first, it is not possible to infer from the existence of a given legal rule any effect on behaviors which will affect firms costs. Second, the existence of a law-in-the-books does not imply the degree of its actual observation in practice. Third, an increase of workers protection can also have beneficial effects on firms' costs, like the reduction of transaction costs after introducing collective bargaining.

have high values when workers have a higher degree of protection, i.e. more hindrances for employers when they want to fire a worker and equal treatment of temporary workers compared to permanent workers. Figure 3 shows the correlations between the WPI and the two OECD indicators. In both Figures 3(a) and 3(b) the WPI is positively correlated with the OECD indicators, and the correlations are statistically significant at 1% level. Overall, this figure provides evidence of reassuring correlations across different data sources for our measure of workers protection.

On top of the main focus of the paper to explore the impact of immigration on workers protection, we recognize the relevance of workers protection per se, as we highlight in the following two aspects. First, the legislative apparatus which determines the level and evolution of the WPI can be a proxy on how much a given country or state tries to take care of workers well-being, which are usually depicted as the weakest in a society.[6] Understanding its evolution can give an intuitive picture on how countries become more regulated and attentive towards people who are the most vulnerable. Second, labor regulation and labor market institutions have a clear economic impact on the economy, in particular on workers wages, employment and ability to adapt to labor market shocks (see Botero et al. (2004); Arpaia and Mourre (2012); D'Amuri and Peri (2014); Nataraj et al. (2014)). To test the economic relevance of our workers protection index, Table 1 shows the partial correlation between WPI and several economic outcomes.

Table 1: Workers Protection and Labor Market Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Estimation:	FE	FE	FE	FE	FE	FE	FE	FE
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var:	Unemp rate	Labor produc	Hrs worked pc	Gini	Unemp rate	Labor produc	Hrs worked pc	Gini
WPI_t	2.052***	4.958***	-47.747**	-0.010**				
	(0.708)	(1.743)	(19.301)	(0.004)				
WPI_{t-1}					2.019***	3.840**	-37.270**	-0.007
					(0.740)	(1.596)	(16.159)	(0.004)
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Adj. R-Square	0.61	0.92	0.92	0.96	0.62	0.93	0.94	0.96
Countries	68	47	47	69	68	47	47	69
Observations	322	394	394	495	302	353	353	466

Note: standard errors are clustered at country level. * p<0.1, ** p<0.05, *** p<0.01. The dependent variables are: unemployment rate, labor productivity per hour worked, annual hours worked per worker and Gini after tax. See Appendix A for further information on the variables.

We use, as dependent variable, four different labor market outcomes: unemployment rate, labor productivity per hour worked, annual hours worked per worker and the Gini index after taxes and transfers. Since the change in legislation can have both a contemporaneous and lagged effect, we test for both specifications. We perform our analysis using the majority of countries depicted in Figure 1 with 5-year time periods from 1970 to 2010, and we investigate the relationship between WPI and economic outcomes in the same year and with one period lag. To avoid the issue of bad controls (see Angrist and Pischke (2008)), our specification includes only country and year fixed-effects, to capture time-invariant unobserved heterogeneity and common trends. Two conclusions can be drawn from Table 1. First, the WPI is indeed related with relevant labor market outcomes and the partial correlations are always statistically significant at a 5% level, excluding column (8). Second, the direction of the relationship is heterogeneous across labor market outcomes. The change in workers protection index is positively associated to

[6] Several reasons (historical, economic or political reasons) can determine countries behaviors towards workers. However, countries' attention on the status of workers and their just conditions is also a signal of the degree of fairness of a society (Hunt, 2003).

unemployment rate and labor productivity, whereas it is negatively associated to the total number of hours worked and inequality. We take these results as suggestive evidence on the possible economic importance of the degree of workers' protection.

II.B Immigration Data and the Epidemiological Term

We combine two different data sources to have a more comprehensive picture of the immigrant population in a broad sample of destination countries, both in terms of size and composition. First, we rely on the Global Migration data by Özden et al. (2011), which combines several censuses and population registers. This dataset provides decennial matrices of bilateral migration stocks between 1960 to 2000. Due to its long time span and a coverage of over 200 destination and origin countries, this dataset has been used in several cross-country and panel studies (e.g. Beine and Parsons (2015); Cattaneo and Peri (2016); Bove and Elia (2017)). We combine and harmonize it with the World Bank Bilateral Migration Matrix of 2010 (World Bank, 2010), such that we have a decennial coverage from 1960 to 2010 (in the analysis we use the data from 1970 given the Leximetric data availability). Finally, to increase the number of data points, we interpolate the decennial bilateral migration stocks to five year periods.[7]

Immigration can influence destination countries' economy and society through different aspects and forms. Using the available data, we first compute for each country of destination d at year t the share of immigrants in the total population of 2000 as follows:

$$ShareMig_{d,t} = \frac{MIG_{d,t}}{Pop_{d,2000}} \tag{1}$$

where $ShareMig_{d,t}$ is the share of immigrants and $MIG_{d,t}$ is the total stock of immigrants in the country of destination d at year t. Following Moriconi et al. (2018), we compute the share of immigrants using the population in a fixed year as denominator.[8] Such measure is a proxy of immigrant population size, which can have an impact on countries' economy and legislative aspects. For instance, a higher share of immigrants would imply a higher labor supply, which can have direct effect on wages and employment (see Borjas (2003); Edo (2019)). To avoid a potential detrimental effect on workers in case of negative externalities, institutions could react by changing labor market institutions and laws.

Figure 4 shows the geographical distribution of the average share of immigrants as computed in equation (1) over the period 1970 to 2010. OECD high-income countries are characterized by a sizeable migration share. However, Qatar has the highest value in our sample (74.78), followed by Israel (30.15), Luxembourg (26.05) and Singapore (24.59).[9] Not surprisingly, developing countries like some Latin American, African and Asian countries are characterized by a lower share of immigrants, which is confirmed in Figure 5. Looking at the time variation of the share of immigrants by level of development, Figure 5(a) shows that developed countries are characterized by a higher share of immigrants compared to developing countries. However, the average share of immigrants evolves with a similar trend both across countries level of development (Figure 5(a)) and countries legal origin (Figure 5(b)).

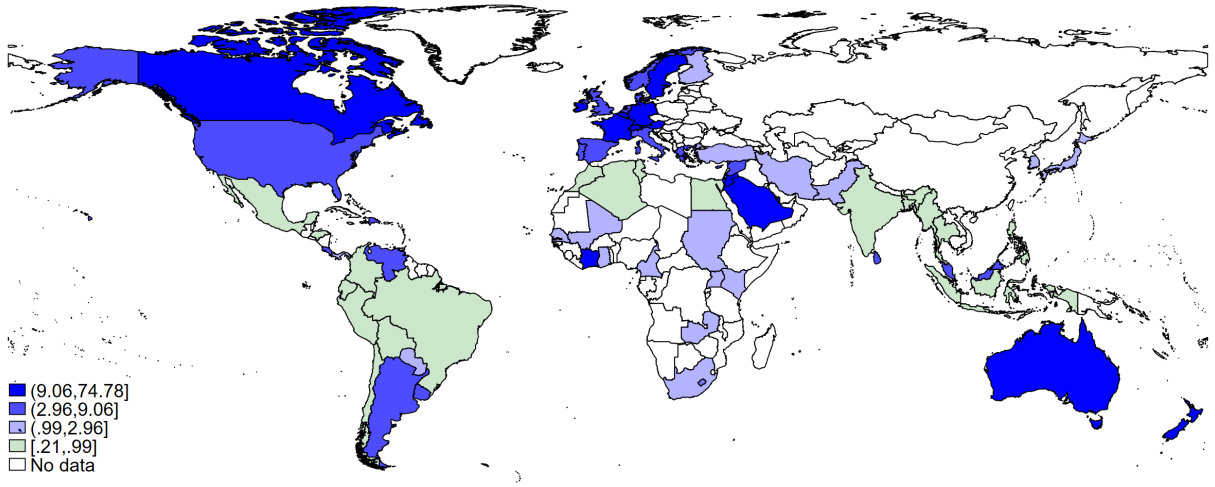
Migration can influence destination countries not only due to its size, but also due to its composition. Aspects

[7] We perform such interpolation to have more data points, which will be relevant for the strength of our estimation strategy. Nevertheless, when we remove interpolated observations (i.e. 1975, 1985, 1995 and 2005), the main results remain unchanged, as Table 3 column (4) shows.

[8] We test our main results using the share of immigrants over the current population rather than the share of immigrants over a fixed population as shown in equation (1). The main results remain unchanged. Results available upon request.

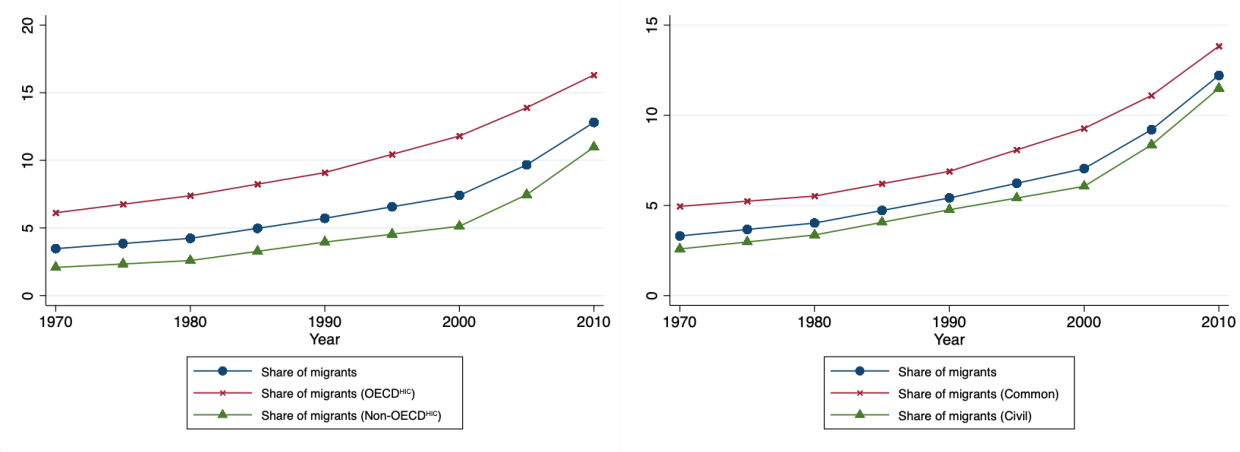
[9] Those countries are characterized by a large immigrant population due to the structure of the labor market and institutions (see De Bel-Air (2014) for Qatar). The large size of immigrant population, for example in Israel, is related to historical reasons, like the exodus of soviet Jews from Russia to Israel in the 90s' after the collapse of the USSR (Smooha (2008)).

Figure 4: Share of Immigrants - Geographical Distribution



Note: authors' calculations on Özden et al. (2011) and World Bank Data. The figure plots the average share of immigrants over the 2000 population by quartile at country level over the 1970 to 2010 period.

Figure 5: Share of Immigrants - Evolution over Time



(a) OECD^{HIC} vs. Non-OECD^{HIC} (b) Civil Law vs. Common Law

Note: authors' calculations on Özden et al. (2011) and World Bank Data. Figures (a) and (b) plots the country average share of immigrants over the 2000 population by destination countries level of development (Figure (a)) and legal origin (Figure (b)).

like immigrants' education and their capacity to expand the knowledge set of a given country due to novel competences and skills are just examples on how immigrants' characteristics could affect natives' behavior and countries' economies (e.g. Borjas (2019); Bahar et al. (2020b); Moriconi et al. (2019); Docquier et al. (2020)).[10] In this paper we want to focus on the fact that immigrants may bring with themselves their experience, norms, habits or, more broadly, institutions from their country of origin. As Collier (2013) points out, immigrants can be a source of an *epidemiological effect*, if immigrants convey the institutions and social norms of their country of origin. We follow Spilimbergo (2009) and Valette (2018) to account for potential origin-specific and epidemiological effect, by

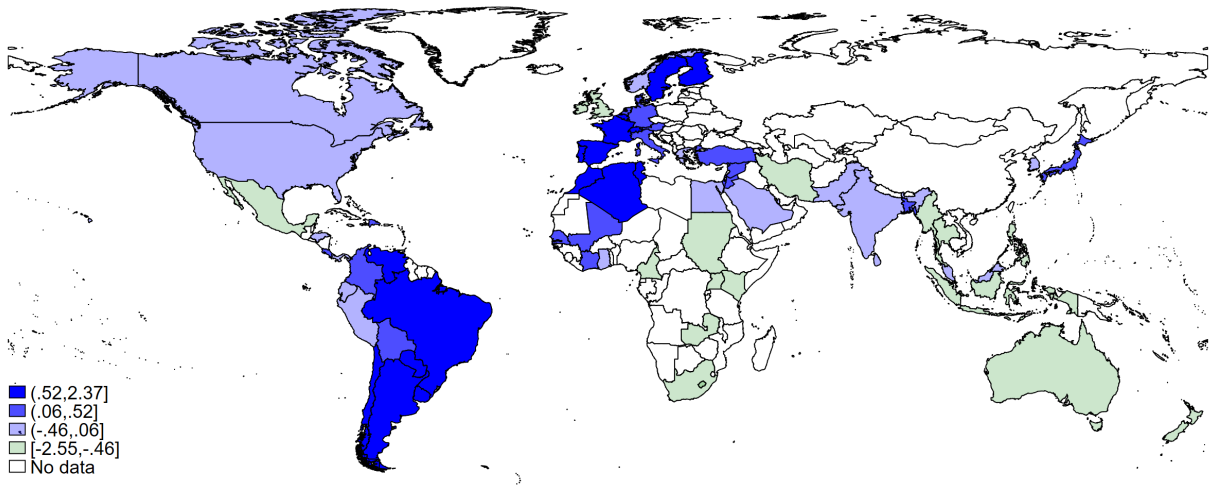
[10]Even though aspects like diversity, polarization and skill-selection are not the main focus of our paper, we test for them in Table 4.

computing the following index:

$$Epid_{d,t} = \sum_{o} \frac{MIG_{o,d,t}}{\sum_{o}^{O} MIG_{o,d,t}} * WPI_{o,2000} = \sum_{o} \overline{mig}_{o,d,t} * WPI_{o,2000} \quad (2)$$

The index $Epid_{d,t}$ captures for a country of destination d at year t the degree of workers protection experienced by its immigrant population in their origin country. It is measured as a weighted average of the WPI in the origin countries in year 2000, using as weights the share of immigrants coming from country of origin o and living in country d over the total immigrant population in country d.[11] We proxy the degree of workers protection in the country of origin with the WPI in the year 2000 for two reasons. First, the WPI is a persistent variable, which has small variations through time. Second, a lot of countries enter in the Leximetric data only from 1990. To have the broadest geographical coverage in terms of WPI for origin countries, we take as reference the year 2000. For such year we are able to compute the WPI for 116 countries of origin. Although we cover the majority of the countries in terms of size and population, there are still few countries of origin on which we do not know the level of WPI. We then impute the missing countries with the average level of WPI in 2000 based on their legal origin.[12]

Figure 6: Epidemiological Term - Geographical Distribution



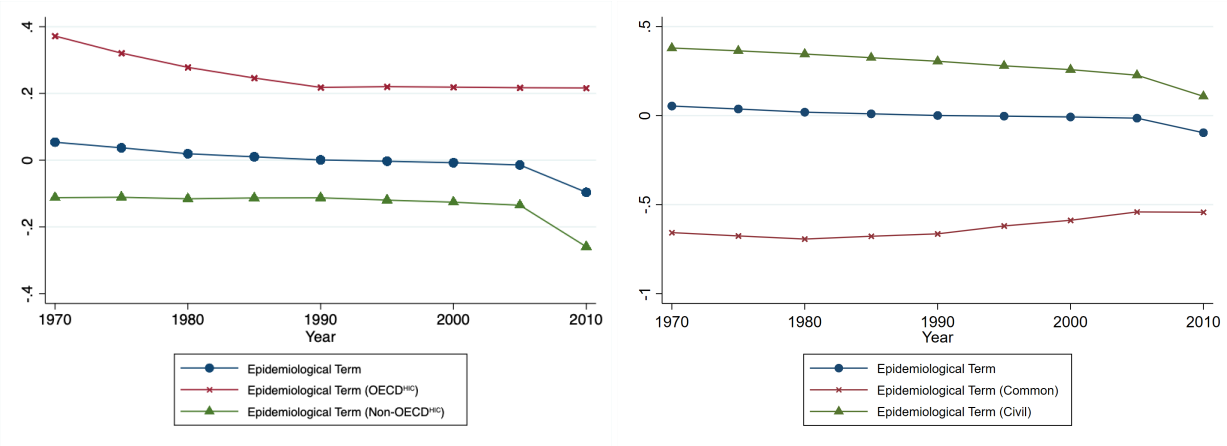
Note: authors' calculations on Özden et al. (2011), World Bank Data and CBR Leximetric Data. The figure plots the the country average Epidemiological term (as we compute in equation (2)) by quartile at country level over the 1970 to 2010 period.

Figure 6 presents the geographical distribution of the average epidemiological term over the period 1970-2010. The distribution is rather heterogeneous across continents. The country characterized by the highest epidemiological term is Morocco (2.37), followed by Luxembourg (1.97) and Tunisia (1.76). On the other end, countries with the highest share of immigrants from countries with low WPI are Mexico (-2.55), Indonesia (-1.9) and Ireland (-1.89). Figure 7 provides some more clear evidence on the evolution and the average value of the epidemiological term

[11] Alternatively, Table 4 provides the results after computing the epidemiological effect using as weights the share of immigrants coming from country of origin o and living in country d over the total population in destination country d. The main results remain unchanged.

[12] As Figure 2(b) and Table C-6 show, the legal origin rather than the level of development is one of the best predictors of the level of workers protection. We are aware that this imputation procedure might affect our results. For this reason, we perform in Table 3 two robustness check. First, we drop from the sample countries characterized by a high percentage of imputed WPI within their epidemiological term (i.e. more than 30% of the immigrants' population coming from a country with an imputed WPI). Second, we compute the epidemiological term with different imputation methods: (i) not imputing the values of missing countries ($Epid\ strict$); (ii) imputing the missing countries with the minimum value by legal origin ($Epid\ min$) and (iii) imputing the missing countries with the maximum value by legal origin ($Epid\ max$). The results remain unchanged across those different robustness tests.

Figure 7: Epidemiological Term - Evolution over Time



(a) OECD^{HIC} vs. Non-OECD^{HIC} (b) Civil Law vs. Common Law

Note: authors' calculations on Özden et al. (2011), World Bank Data and Leximetric Data. Figures (a) and (b) plots the country average epidemiological term (as we compute in equation (2)) by destination countries level of development (Figure (a)) and legal origin (Figure (b)).

across countries level of development and legal origin. First, as the blue-dotted line shows, the epidemiological term experienced a slow decline from the 1970 to 2010. This trend shows that, among our sample of countries, through time new immigrants were coming from countries with a lower level of workers protection compared to the ones already in the destination countries. Second, developed and civil law countries are characterized by a higher proportion of immigrants from countries with high WPI, compared to developing and common law countries.

Overall, combining all the immigration stylized facts, it seems that countries characterized by a higher degree of workers protection are also countries with a higher epidemiological term. However, to understand the causal link between those variables, a proper empirical analysis needs to be implemented. In the next sections we explore further the relationship between immigration and countries' workers protection.

III Empirical strategy

Our goal is to empirically examine the impact of immigrant population, both in terms of size and composition by countries of origin, on the degree of workers protection in the receiving countries. Section III.A describes our linear dynamic panel model specification and the system GMM estimation technique we employ. In Section III.B we present our shift-share approach and the gravity model, necessary to instrument our explanatory variables within the system GMM framework. Lastly, Section III.C discusses alternative and competing effects driven by immigration: diversity, polarization and skill-selection.

III.A Empirical model and estimation technique

Our estimation strategy uses 5-year periods of all variables (from 1970 to 2010) to address the medium-run perspective of law changes, to rule out short-run (e.g. annual frequency) fluctuations in the data and to better harmonize

the occurrence of gaps due to mixed frequency of the data.[13] All of our explanatory variables are lagged with a one 5-year period as it usually takes few years before the labor laws respond to changes induced by our explanatory variables. Since labor law is highly persistent over time, we use a linear dynamic specification.[14] Other studies used the same dynamic panel specification to measure the effect of migration on different institutional outcomes (Spilimbergo, 2009; Docquier et al., 2016). We estimate the following model:

$$WPI_{d,t} = \alpha + \beta WPI_{d,t-1} + \gamma ShareMig_{d,t-1} + \delta Epid_{d,t-1} + \theta \mathbf{X_{d,t-1}} + \eta_t + \zeta_d + \epsilon_{d,t} \tag{3}$$

where $WPI_{d,t}$ is the workers protection index in destination country d at year t. The $WPI_{d,t-1}$ is one period lag of the outcome variable allowing us to account for the persistence in the workers protection index. Our variables of interest are both $Epid_{d,t-1}$ and $ShareMig_{d,t-1}$, which are accordingly the epidemiological term and the share of immigrants at the destination country d in period $t-1$. $\mathbf{X_{d,t-1}}$ is a vector of controls (such as GDP, political regime and human capital) that can potentially impact simultaneously our variables of interest and the outcome. In addition, ζ_d denotes country fixed effect, η_t is a time fixed effect and $\epsilon_{d,t}$ is the error term.

The vector of controls that we include are borrowed from the economic growth literature and are ex-ante important for both the workers protection index and immigration: economic development level of a country, political regime and human capital level. More developed countries, on average, have higher values of WPI (recall Figure 2). The political regime is another relevant control because we observe that labor regulation may be influenced by political shocks, for instance as it was the case under the Pinochet regime (Borzutzky, 2005). Finally, we can reasonably argue that human capital, contributing to the overall development of a country and being correlated with countries institutions (Acemoglu et al., 2014; Faria et al., 2016), can contribute also to the development of labor market institutions.

Our analysis employs a system GMM estimator, to estimate Equation (3). This estimation technique accounts for the unobserved heterogeneity, persistence and potential endogeneity of other regressors. Blundell and Bond (1998) and Bond et al. (2001) suggest that system GMM is the most adequate estimator in a dynamic panel setting if the time series are highly persistent, as in our case. This estimation strategy allows us to circumvent the dynamic panel bias steaming from the inclusion of the lagged dependent variable in a within-group estimator with a short time period, also known as the Nickel bias (Nickell, 1981). We use two-step system GMM procedure which is asymptotically more efficient than the one-step procedure, but it has potentially downward biased standard errors in small samples (Bond et al., 2001). Consequently, we use Windmeijer (2005) finite sample correction which gives more accurate estimates in small samples. The validity of the estimator relies on crucial Arellano and Bover (1995) conditions, which are tested with Hansen's J and Difference-in-Hansen tests along with each regression. Furthermore, we follow Bazzi and Clemens (2013) by performing various weak instrument diagnostics to ensure that the estimated coefficients are unbiased.

Within the system GMM framework, we use both internal and external instruments to obtain consistent estimates. For the internal instruments part, the instruments used in the difference equation are lagged levels, whereas the instruments in the level equation are lagged differences of the corresponding variables; the regressions in both differences and levels are then combined into a single system. In order to avoid arbitrary exogeneity assumptions, we treat all right-hand side variables as endogenous, as its most common in the literature. However, this decision

[13] To further scrutinize the empirical analysis, we experiment with alternative specifications and different time periods (i.e. 10-year instead of 5-year periods) in Table 3.

[14] We can see the high persistency of the WPI in Figure 2, as well as in our main results in Table 2 where our autoregressive coefficient is always above 0.8.

leads a large number of instruments which can potentially overfit the instrumented variables. We handle this by collapsing the matrix of instruments and reducing the lag structure to have less instruments than countries, as suggested by Roodman (2009). We keep the same instrument set across all regressions to be transparent and to avoid "ad hoc" choice of internal instruments for each specification. More specifically, we instrument $WPI_{d,t-1}$ always with its third to seventh lag, and $X_{d,t-1}$ with its second to forth lag.[15] As for our variables of interest, $ShareMig_{d,t-1}$ and $Epid_{d,t-1}$, we instrument them using external instruments which we create using the shift-share and gravity approach. In the next subsection we explain in more detail the construction of our external instruments.

III.B Identification strategy: shift-share and gravity instruments

Estimating γ and δ from equation (3) allows us to retrieve the partial correlation between immigration (share of immigrants and the epidemiological term) and countries' workers protection, after accounting for other controls and the persistency of the dependent variable. However, the estimated partial correlations could be affected by two main sources of bias. First, unobserved time-varying country characteristics, captured by the error term, could influence at the same time country's labor law and immigrants' country of destination. The direction of such bias is unclear, since different unobserved factors could play a role. Second, the correlation between immigration and labor law could suffer from reverse causation. For instance, if immigrants are attracted by countries with higher or similar workers protection, compared to their origin country, then both γ and δ would suffer of an upward bias. Using a GMM estimator with internal instruments partially accounts for both sources of bias. However, if unobserved time-varying factors and reverse causation influence not only the current but also past immigrants' decisions, the source of bias could persist over time. To strongly mitigate these potential biases and estimate the true causal relationship of immigration on workers protection, we rely on two well-known instrumental variable approaches to build valid external instruments.

Our first instrumental variable approach is based on the shift-share methodology (Card, 2001; Ottaviano and Peri, 2006; Moriconi et al., 2019). The intuition of this methodology is to use past settlements of immigrants by country of origin as predictor of subsequent migration flows due to network effects.[16] We then allocate the aggregate immigration flows by country of origin, mainly driven by push-factors, to the sample of destination countries following an historical distribution of the population of immigrants by country of origin. If the historical distributions of immigrants are uncorrelated (or weakly correlated) with the current unobserved factors and country's labor law, then the predicted migration stocks are also uncorrelated (or at the very least, less correlated). To compute the predicted bilateral stocks, we first use Özden et al. (2011) data and compute the historical distribution of immigrants from country of origin o in destination country d in the year 1960 as follows:

$$sh_{o,d,1960} = \frac{MIG_{o,d,1960}}{\sum_{d}^{D} MIG_{o,d,1960}}. \tag{4}$$

Equation (4) computes the share of immigrants from country o in destination country d in year 1960 over the total stock of immigrants from the same country of origin. We then compute the total aggregate stocks of immigrants from country of origin o for the years $t \in \{1970, 1975, ..., 2010\}$ as follows:

$$TM_{o,t} = \sum_{d}^{D} MIG_{o,d,t}. \tag{5}$$

[15] In Table C-3 we test for different lag structures of the internal instruments and our main results remain robust to various lag structures.
[16] Bertoli and Ruyssen (2018) show that intending migrants are more likely to move to countries where they have peers and friends.

Finally, we can compute the predicted bilateral stocks of immigrants from country of origin o to destination country d in year t as follows:

$$\widetilde{MIG}^{SS}_{o,d,t} = TM_{o,t} * sh_{o,d,1960} \tag{6}$$

Taking into account the literature studying the effect of diversity in immigrant population on the countries' economic growth, the shift-share approach is a good predictor of the immigrant population composition rather than its size (Alesina et al., 2016; Bahar et al., 2020b; Docquier et al., 2020); we use the predicted bilateral stocks computed in equation (6) to compute a predicted measure of the epidemiological effect ($\widetilde{Epid}^{SS}_{d,t}$). We employ this variable as our external instrumental variable for the epidemiological effect.[17]

The second instrumental variable approach is based on Alesina et al. (2016) and Docquier et al. (2020), which estimate a gravity model to predict the bilateral stocks of immigrants. Following their methodology, we propose a parsimonious gravity model which (i) minimizes the potential violation of the exclusion restriction and (ii) includes year dummies interacted with the geographical distance between origin and destination country. As Feyrer (2019) suggests, these interactions should capture the declining cost of displacement due to a reduction in transportation costs. The gravity model is specified as follows:

$$MIG_{o,d,t} = \beta Dist_{o,d} * I_t + \theta_d + \gamma_t + \epsilon_{o,d,t} \tag{7}$$

where $MIG_{o,d,t}$ is the stock of immigrants from country of origin o to the country of destination d in year t. The set of controls includes interactions between bilateral distance (weighted by population size) and year dummies ($Dist_{o,d} * I_t$), year fixed-effects (γ_t) and destination country fixed-effects (θ_d).[18] Given the high number of zeros due to empty bilateral corridors, we estimate equation (7) using a Pseudo-Poisson Maximum Likelihood (PPML) estimator, as suggested by Silva and Tenreyro (2006), and we cluster the standard errors at country level. Table C-7 shows the estimated coefficients of the gravity model. We then use the predicted coefficients from the estimated gravity model to compute the predicted bilateral stocks ($\widehat{MIG}^{G}_{o,d,t}$). Since the estimated predicted bilateral stocks are less driven by reverse causation and unobserved factors, we use them to compute predicted immigration shares ($\widehat{ShareMig}^{G}_{d,t}$). We use this latter variable as external instrument for our GMM approach.

We follow Bahar et al. (2020b) and we use both IV strategies simultaneously to instrument our migration variables: shift-share approach to instrument the epidemiological effect and gravity-based approach to instrument the share of immigrants. Both instruments pass the Bazzi and Clemens (2013) test on weak instrument in a system GMM context.[19] Although being commonly used in the literature, both approaches have some drawbacks. Even though extremely parsimonious, our gravity model could violate the exclusion restriction if countries' geographical closeness has an effect not only on migration but on the degree of workers protection. However, if such effect is related to any kind of economic channels the inclusion of GDP per capita as control should account for it. Moreover, the average level of countries' workers protection index is uncorrelated with the number of neighboring countries, which is a proxy of geographical closeness. Concerning the shift-share approach, criticisms have been raised related to the role of persistent factors: if persistent local conditions influence immigrants location and workers protection,

[17] We compute also a predicted measure of the share of immigrants $\widetilde{ShareMig}^{SS}_{d,t}$, however it appears to be a weak instrument.

[18] The measure of bilateral weighted distance comes from Head et al. (2010), and it is based on distances among the biggest cities of the countries weighted by their share of population. Year fixed-effects captures common time trends, while country fixed-effects captures time-invariant unobserved heterogeneity of destination countries.

[19] Table C-1 in the Appendix provides the values of the F-test on weak instrument comparable to the values suggested by Stock et al. (2005).

then an omitted variable bias could arise (Jaeger et al., 2018; Goldsmith-Pinkham et al., 2020). We account for these criticisms as follows. Using historical data from the Maddison Project (Bolt et al., 2018) and following Moriconi et al. (2018), we check the correlations between the instrument and the pre-1960 economic trends. Table C-2 in the Appendix shows the coefficients from regressing the growth of the predicted epidemiological term on the pre-1960 growth of GDP per capita (Panel A) and population (Panel B) over different time period. All the correlations are not statistically significant. This is also the case when we regress the growth of our external IV on countries legal origin (Panel C). These evidences suggest that our predicted epidemiological effect is not correlated with pre-existing national trends, increasing the validity of the instrument.[20]

III.C Testing for alternative immigration effects

Our benchmark specification explores the effect of immigration on countries labor law, measured with a workers protection index. Even though we test for the implication of the size and composition of the immigrants population, immigration is a complex phenomenon (Borjas, 2016) which can influence the receiving country in different ways through its effect on countries human capital, culture, productive knowledge, etc. In this section we try to take into account some potential immigration effects.

One of the strongest and also undoubted results of the migration literature is that several effects of immigration are skill-specific: college educated immigrants tend to be more beneficial to destination countries' economy than low educated immigrants (Docquier et al., 2014; Borjas, 2019). Investigating the skill-specific effect of immigration on countries labor regulation would be intriguing, given also the different interaction that low educated and highly educated immigrants have on the labor markets. However, the only source of data which provides skill-specific bilateral migration stocks for a wide set of destination countries is Artuç et al. (2014), which combines several censuses only for two years 1990 and 2000. Having only two years of data is insufficient for obtaining GMM estimates in our dynamic panel specification.[21] To account for the skill-composition of immigrants and the potential self-selection on education, we then follow Alesina et al. (2016) and we compute an index of immigrant population skill-selection for each country d at year t as follows:

$$Skill\ Selection_{d,t} = \sum_{o} \frac{\frac{HS\ TM_{o,2000}}{TM_{o,2000}}}{\frac{HS\ NAT_{o,2000}}{NAT_{o,2000}}} * \frac{MIG_{o,d,t}}{\sum_{o} MIG_{o,d,t}} = \sum_{o} MigSel_{o,2000} * \overline{mig}_{o,d,t} \tag{8}$$

Using Artuç et al. (2014) and Barro and Lee (2013) data we first compute, for each country of origin o in year 2000, the relative share of highly educated migrants abroad compared to highly educated natives in their origin countries native population ($MigSel_{o,2000}$). If $MigSel_{o,2000}$ is above one, it means that for the specific country of origin o, the relative share of highly educated individuals abroad is higher than at the origin countries, suggesting

[20] Adao et al. (2019) point out that another source of bias could be driven by a correlation of the errors due to similar initial distribution of immigrants by country of origin in destination countries. Countries with similar initial historical distribution of immigrants by country of origin will suffer similar shocks, which will appear in a correlation in the standard errors. We do not think that this bias could affect our results. First, the two-step GMM estimator implemented in our analysis is robust to whatever pattern of heteroskedasticity and cross-correlation (Roodman, 2009). Second, we perform a correction in the spirit of Adao et al. (2019) by firstly dividing the sample of destination countries by different quantiles based on the initial share of immigrants coming from the top five countries in terms of emigration in 2000 (Bangladesh, India, Mexico, Poland and UK). Then we perform our system-GMM analysis and we cluster the standard errors over cells corresponding to the quantiles of the initial distribution of each of these five shares. Table C-4 in the Appendix shows that standard errors associated to the epidemiological effect remains fairly similar across the different clustering, minimizing potential concerns due to unobserved correlations in the standard errors.

[21] We also followed Bahar et al. (2020b) and we combined Artuç et al. (2014) data with the Database on Immigrants in OECD Countries (DIOC), provided by the OECD, to expand the time dimension of the analysis for a subset of countries. Nevertheless, the total number of country-period observations was too small to obtain any reliable estimates.

positive selection on education. The selection index ($Skill\ Selection_{d,t}$) is then a weighted average of immigrants relative self-selection on education, using the share of immigrants by origin in country d at year t as weights, which proxies the level of education and self-selection of immigrant population.

One of the implications of international migration is its contribution to population diversity. Several studies find positive economic effects of migration diversity measures (mainly immigrants' birthplace diversity) on the economic performance at different levels of aggregation (Ottaviano and Peri, 2006; Ortega and Peri, 2014; Trax et al., 2015; Alesina et al., 2016; Docquier et al., 2020). More recently, Bahar et al. (2020b) show in a cross-country analysis that this positive effect is due to the expansion of the productive knowledge of receiving countries. The increasing variety of competences and knowledge due to immigration can have implications also on the labor regulation. To account for the potential effect of migration diversity on countries labor regulation, we compute for each country of destination d an index of immigrant birthplace diversity as follows:

$$Diversity_{d,t} = \sum_{o} \overline{mig}_{o,d,t}(1 - \overline{mig}_{o,d,t}) \tag{9}$$

where $\overline{mig}_{o,d,t}$ is the stock of immigrants from country of origin o in country d over the total stock of immigrants in destination country d at year t. This index ranges between 0 and 1, and it measures the probability to draw two random individuals from the immigrants' population which are born in two different countries. Including the immigrant birthplace diversity index in the main regression with the share of immigrants allows us to control simultaneously for both the size and the diversity of the immigrant population.[22]

An alternative approach to account for the effect of immigration on the variety of the population, is to compute a polarization index rather than a diversity index. Intuitively, polarized population are less cohesive, which could have an effect of social trust, public good provision and potential conflict (Montalvo and Reynal-Querol, 2003, 2005; Ager and Brückner, 2013). Since the most polarized population is characterized by only two groups of equal size, it is intuitive to see polarization as the other side of the coin of diversity. We follow Montalvo and Reynal-Querol (2005) and we compute an immigrants' birthplace polarization index as follows:

$$Polarization_{d,t} = 1 - \sum_{o} \left(\frac{0.5 - \overline{m}_{o,d,t}}{0.5} \right)^2 \overline{m}_{o,d,t}. \tag{10}$$

For each country of destination d and year t, the polarization index measures how much the immigrant population is far from a bimodal distribution: if it is equal to one, then the immigrant population is composed by only two groups of equal size.

In our main specification we investigate the effect of the workers protection experienced by the immigrants in their origin countries through the epidemiological effect computed in equation (2). However, immigrants bring with themselves not only their experience and habits of their labor regulation, but also of other relevant aspects. In particular, immigrants coming from developing and poor countries can behave differently than immigrants coming from more developed countries on the labor market, since the productive system can be substantially different. We then perform two alternative falsification tests to verify whether the epidemiological effect is driven by the labor regulation experienced by the immigrants and not by other factors. First, we compute an epidemiological effect as a weighted average of the GDP per capita at the origin rather than the WPI ($Epid\,GDP$). If the epidemiological effect

[22] Alesina et al. (2016) show that the immigration share and the birthplace diversity index computed for the total population (rather than for the immigrant population) are extremely correlated. Including the immigration share and the birthplace diversity index computed over the immigrant population will account for both overall diversity and diversity within immigrants' population.

is driven by any aspect related to the level of development of the origin countries, it should be captured by this term. Second, we compute an epidemiological effect after randomly assigning the level of WPI to the origin countries ($Epid\ ran$). Finally, our epidemiological effect is driven by the level of labor regulation in the origin countries and not the difference. We test for the relative distance between the level of workers protection of the origin and the destination country. To test this potential alternative story we compute an epidemiological effect using not the level of workers protection index in the origin, but a normalized Manhattan distance between the origin and the destination country ($Epid\ dist$).[23] Countries characterized by immigrants from countries with similar workers protection should experience an extremely small $Epid\ dist$ value.

IV Results

The results are organized in two parts. In Section IV.A, we present our main results measuring the impact of the size and the composition of immigrants in destination countries. In Section IV.B, we examine the robustness of our main results by its various subsamples and to other alternative effects such as diversity, polarization and skill-selection of immigrants. Additionally, we look if there are differential impacts of our main results depending on the countries level of economic development and legal system.

IV.A Main Results

We estimate the baseline model of equation (3) with system GMM using external instruments (shift-share and gravity) to instrument our two variables of interest. Our regression sample covers a panel of 70 countries with 5-year periods, from 1970 until 2010. We keep the same number of observations across all specifications to maximize the comparability of results.[24] We start from a parsimonious specification in column (1), in which there only our two variables of interest and the lag of the outcome variable are included. To avoid simultaneity bias due to "bad controls" (Angrist and Pischke, 2008), we include the control variables gradually until we reach our main specification in column (4).

In our main results of Table 2 we find a positive and statistically significant effect of the epidemiological term capturing the composition of immigration on the WPI. The coefficient is stable to the inclusion of relevant controls. This result suggests that the level of workers protection experienced by immigrants in their origin countries has an effect on destinations' labor regulation. As for the size of migration, we find a null or negative effect significant at 10% level in our main specification (column 4), but it is not robust across other specifications. Hence, if there is any effect of the size of migration it is rather negative. To have an intuition of the economic magnitude of these effects, we take the face values of the benchmark estimates in column (4). An increase in the migration share by 1 standard deviation (around 10 percentage points), induces a decrease of the WPI 6% standard deviation over a 5-year period. An increase of the epidemiological term by 1 standard deviation leads to a 7.8% standard deviation increase of WPI in the destination country, which is a substantial effect. Our lag dependent variable, as expected, is highly significant across specifications with a coefficient above 0.8 confirming the high persistency of the WPI. We do not find any

[23] The normalized Manhattan distance of WPI between origin country o and destination country d is computed as follow: $WPI^{MAN}_{o,d,2000} = \frac{|WPI_o - WPI_d|}{max_d|WPI_o - WPI_d|}$. It takes value of 0 when country o and d have the same level of WPI, while it takes value of 1 when country o and d have the highest distance over the whole sample of countries in analysis.

[24] There are six country-period observations missing from achieving a balanced panel regression sample. This is due to the polity2 variable: there is one missing observation for Bangladesh and one for Qatar in 1970, and the other four observations are for Germany before its reunification from 1970 until 1985.

Table 2: Workers Protection and Migration

	(1)	(2)	(3)	(4)
Estimation:	S-GMM	S-GMM	S-GMM	S-GMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010
Dep var:	WPI	WPI	WPI	WPI
WPI_{t-1}	0.852***	0.860***	0.858***	0.847***
	(0.066)	(0.053)	(0.055)	(0.055)
$Share\ Mig_{t-1}$	-0.003	-0.002	-0.005	-0.006*
	(0.002)	(0.003)	(0.003)	(0.003)
$Epid_{t-1}$	0.094**	0.085**	0.085***	0.078***
	(0.040)	(0.034)	(0.030)	(0.028)
$ln(GDP)_{t-1}$		-0.009	0.031	0.054
		(0.048)	(0.045)	(0.058)
$Polity2_{t-1}$			-0.101	-0.012
			(0.107)	(0.100)
$ln(HC)_{t-1}$				-0.011
				(0.077)
Year FE	✓	✓	✓	✓
Country FE	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00
AR2 p-val	0.57	0.56	0.50	0.55
Hansen p-val	0.40	0.55	0.74	0.78
Diff-Hansen p-val	0.38	0.90	0.88	0.83
Instruments	16	20	24	28
Countries	70	70	70	70
Observations	554	554	554	554

Note: standard errors are clustered at country level. * p<0.1, ** p<0.05, *** p<0.01. The dependent variable is our standardized workers protection index. As controls we include the logarithm of GDP per capita, the polity2 index and the logarithm of human capital. Our main variables of interest are the share of immigrants and the epidemiological effect: the former is instrumented using the predicted immigration share from a gravity model and the latter with the epidemiological effect using predicted bilateral immigration stocks from a shift-share approach. See Appendix A for further information on the variables.

statistically significant effect associated to the gradually included controls: the level of development, human capital and the degree of democratization.[25]

To assess the validity of our results, we perform all standard post-estimation test statistics. The first is the absence of second-order serial correlation in the residuals, which we satisfy as AR(2) p-value is always greater than 0.1. For the Hansen J-test of overidentifying restrictions and the difference Hansen tests we never reject the null hypothesis, indicating that the moment conditions are satisfied and that the instruments are valid across the specifications. Additionally, we perform various tests for the validity of instruments following Bazzi and Clemens (2013) and in Table C-1 we test the weakness of instruments in both levels and differences; the Kleibergen-Paap F-stats are significantly greater than 10, as well as the Kleibergen-Paap Wald-type statistics indicating that we do not suffer from a weak instrument problem and that we are able to remove a substantial portion of OLS bias.

IV.B Robustness and Heterogeneity

In Table 3 we perform robustness check by subsamples and by testing the relevance of imputations and different measures of the epidemiological term. Using the benchmark specification presented in column (4) in Table 2, we firstly investigate if our results are driven by a specific set of countries or years. In column (1) we remove the last 2 periods (corresponding to 10 years) of our sample, to avoid potential spurious estimates due to the 2008 financial crisis and the inclusion of 2010 migration data from a different source compared to Özden et al. (2011). In

[25] One explanation for finding no effects in the additional controls is that we only use internal instruments to mitigate endogeneity problems. In an ideal case, we would instrument each of the additional controls with valid external instruments.

columns (2) and (3) we drop countries belonging to the upper quantile of migration share and workers protection accordingly.[26] This is to address the concern of potential outliers by removing the right tail of the variable distribution. In the second part, we test whether our results are not driven by imputations and different measures of the epidemiological term. In column (4), we run our analysis in 10-year periods to verify if our results are not driven by the 5-years interpolations made in the bilateral stocks of immigrants. In column (5) we drop from the sample countries characterized by a high percentage of imputed WPI within their epidemiological term (i.e. more than 30% of the immigrants' population coming from a country with an imputed WPI). In the last three columns we test the robustness of the epidemiological term with different imputation methods: (6) not imputing the values of missing countries ($Epid\ strict$), (7) imputing the missing countries with the minimum value by legal origin ($Epid\ min$) and (8) imputing the missing countries with the maximum value by legal origin ($Epid\ max$).

Table 3: Workers Protection and Migration - Robustness Checks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Estimation:	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM
Time:	1970-2000	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var:	WPI	WPI	WPI	WPI	WPI	WPI	WPI	WPI
Robustness to:	2005-2010	Top20%Mig	Top20%WPI	10-year	Epid imp	Epid min	Epid max	Epid stric
WPI_{t-1}	0.834***	0.777***	0.787***	0.792***	0.853***	0.849***	0.857***	0.846***
	(0.047)	(0.074)	(0.074)	(0.114)	(0.059)	(0.054)	(0.055)	(0.055)
$Share\ Mig_{t-1}$	-0.001	0.007	-0.004	-0.024*	-0.008**	-0.006*	-0.006*	-0.006*
	(0.004)	(0.012)	(0.004)	(0.013)	(0.004)	(0.003)	(0.003)	(0.004)
$Epid_{t-1}$	0.090***	0.074**	0.067**	0.137**	0.070**			
	(0.031)	(0.032)	(0.031)	(0.061)	(0.028)			
$Epid\ min_{t-1}$						0.073***		
						(0.026)		
$Epid\ max_{t-1}$							0.057**	
							(0.027)	
$Epid\ stric_{t-1}$								0.079***
								(0.028)
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AR2 p-val	0.58	0.37	0.55	0.57	0.51	0.56	0.53	0.55
Hansen p-val	0.58	0.81	0.63	0.01	0.84	0.80	0.76	0.79
Diff-Hansen p-val	0.32	0.90	0.73	0.00	0.81	0.80	0.84	0.83
Instruments	24	28	28	17	28	28	28	28
Countries	70	56	56	70	56	70	70	70
Observations	414	447	446	278	442	554	554	554

Note: standard errors are clustered at country level. * p<0.1, ** p<0.05, *** p<0.01. The dependent variable is our standardized workers protection index. As controls we include the logarithm of GDP per capita, the polity2 index and the logarithm of human capital. Our main variables of interest are the share of immigrants and the epidemiological effect: the former is instrumented using the predicted immigration share from a gravity model and the latter with the epidemiological effect using predicted bilateral immigration stocks from a shift-share approach. See Appendix A for further information on the variables. Columns (1) to (5) perform the estimates after dropping from the sample: the years 2005-2010 (col. 1), countries belonging to the top quintile in terms of share of immigrants (col. 2) and in terms of workers protection index (col. 3), the 5-year interpolated observations (col. 4) and countries with more than 30% of immigrants with imputed WPI at the origin. Columns (6) to (8) include as main variable of interest instead of the standard epidemiological effect: an epidemiological effect where all the imputed WPI at the origin are equal to the lowest value available ($Epid\ min$), an epidemiological effect where all the imputed WPI at the origin are equal to the highest value available ($Epid\ max$) and an epidemiological effect where missing values are not imputed ($Epid\ strict$).

The estimated coefficient for the epidemiological term is always positive and highly significant across all subsamples and imputations. These estimates suggest that the positive effect of the epidemiological effect on WPI is not driven by particular outliers or imputation methods. Moreover, the magnitude of the coefficient is very stable, except for column (4).[27] Excluding the latter specification, our estimates satisfy the standard Hansen, difference-in-Hansen

[26] 14 countries are removed based on the values in year 2000.

[27] Re-estimating our results over a longer time span (10-year periods rather than 5-year periods) may increase the variation and consequently

and AR2 post-estimation tests. As for the estimated coefficient for the share of immigrants, it is not significant when looking at subsamples in columns (1) to (3). However, it is always significant and negative when looking at robustness to imputations in columns (4) to (8). Therefore, the conclusion for the size of migration is in line with Table 2: the size of migration has a null or small and negative impact on the WPI.

After verifying that our results are not driven by sample selection and data imputations, we investigate whether alternative effects due to immigration could replace or complement our estimates. As Section III.C presents, the literature identifies that diversity and polarization of the immigrant population can have a direct effect on countries productive knowledge and economic development (Ager and Brückner, 2013; Bahar et al., 2020b; Docquier et al., 2020). We include an index of diversity and an index of polarization among immigrants in columns (1) and (2) of Table 4 respectively. The estimates show that neither immigration diversity nor polarisation outrun the epidemiological effect as relevant channel for explaining WPI. Moreover, the estimates for both indexes are not statistically different from zero. To test whether our effects are not entirely driven by the absence of the skill-composition and self-selection of immigrants, we follow Alesina et al. (2016) and we include as additional control an index of immigrants' self-selection on education. Column (3) of Table 4 shows similar estimates to the baseline results associated to the epidemiological effect and the migration share after including the self-selection index computed in equation (8); the coefficient associated to the index of self-selection is negative and smaller compared to the epidemiological term and only significant at 10% level. Finally, to explore whether the epidemiological effect is influenced by the relative size of the immigrants population compared to the natives population in the destination country, we replace in column (4) the standard epidemiological effect with one using as origin-specific weights the share of immigrants by origin over the destination country population ($Epid\ PopDe_{t-1}$). The estimates are consistent with our previous results, suggesting that the modified epidemiological term is not affected by the relative size of the immigrant population.

To test whether the epidemiological effect is driven not only by the level of WPI experienced in the origin countries but also by the origin-destination distance in WPI, column (5) of Table 4 replaces our standard epidemiological effect with the one using WPI origin-destination distances rather than levels ($Epid\ dist$). We do not find a precisely estimated effect associated to the latter index, suggesting that the difference between the immigrants and natives WPI is far less important for the change of WPI at destination compared to the degree (level) of WPI experienced by immigrants at the origin country. Finally, since immigrants bring with themselves not only origin-country experience of the labor market regulation but also of a broader set of competences and skills, we perform two falsification tests by building two different epidemiological effects based on immigrants GDP at origin instead of WPI ($Epid\ GDP$) as well as completely randomizing the level of WPI in the origin countries ($Epid\ ran$). After replacing our main epidemiological effect with the two alternative constructions in columns (6) and (7) of Table 4, we confirm that the epidemiological effect is driven by the immigrants' origin-country experience of labor regulation.

On top of the controls included in the benchmark specification, we test the robustness of our results by including additional controls in the appendix in Table C-5. First, we include a measure of "de facto" law proxied by the rule of law index, which can serve as a complementary variable to our "de jure" measure of the WPI (Coppedge et al., 2020). Next, we add a civil liberties index which is a combination of "de facto" and "de jure" questions that are important for maintaining the rights of citizens (House, 2016). Third, we include a measure of the size of the informal market or the shadow economy which could affect the size and the composition of immigrants as well as the degree of workers protection (Elgin et al., 2012). Afterwards, we include the economic freedom index and trade

the variable of interests; additionally, the reduction of our sample size by half impacts the Hansen test which points out a potential overestimation bias.

Table 4: Workers protection and migration - Alternative Immigration Effects and Falsification tests

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Estimation:	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var:	WPI	WPI	WPI	WPI	WPI	WPI	WPI
WPI_{t-1}	0.849***	0.853***	0.847***	0.865***	0.869***	0.858***	0.868***
	(0.054)	(0.053)	(0.055)	(0.054)	(0.052)	(0.053)	(0.053)
$Share\ Mig_{t-1}$	-0.006*	-0.006*	-0.006*	-0.007	-0.006*	-0.005	-0.006**
	(0.003)	(0.003)	(0.003)	(0.005)	(0.003)	(0.003)	(0.003)
$Epid_{t-1}$	0.079***	0.079***	0.072***				
	(0.028)	(0.029)	(0.027)				
$Diversity_{t-1}$	0.018						
	(0.030)						
$Polarization_{t-1}$		0.003					
		(0.030)					
$Skill\ Selection_{t-1}$			-0.022*				
			(0.013)				
$Epid\ PopDe_{t-1}$				0.087**			
				(0.035)			
$Epid\ dist_{t-1}$					0.043		
					(0.590)		
$Epid\ GDP_{t-1}$						0.068	
						(0.049)	
$Epid\ ran_{t-1}$							-0.018
							(0.028)
Controls	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AR2 p-val	0.55	0.56	0.55	0.56	0.54	0.54	0.54
Hansen p-val	0.81	0.76	0.78	0.76	0.76	0.81	0.77
Diff-Hansen p-val	0.83	0.85	0.86	0.63	0.78	0.67	0.79
Instruments	29	29	29	28	28	28	28
Countries	70	70	70	70	70	70	70
Observations	554	554	554	554	554	554	554

Note: standard errors are clustered at country level. * p<0.1, ** p<0.05, *** p<0.01. The dependent variable is our standardized workers protection index. As controls we include the logarithm of GDP per capita, the polity2 index and the logarithm of human capital. Our main variables of interest are the share of immigrants and the epidemiological effect: the former is instrumented using the predicted immigration share from a gravity model and the latter with the epidemiological effect using predicted bilateral immigration stocks from a shift-share approach. See Appendix A for further information on the variables. Columns (1) to (3) includes as additional controls: birthplace diversity index among immigrants ($Diversity$), polarization index among immigrants ($Polarization$) and human-capital selection index of immigrant population ($Skill\ Selection$). Columns (4) to (7) include as main variable of interest instead of the standard epidemiological effect: an epidemiological effect using as origin-specific weights the share of immigrants over the total population of the destination country ($Epid\ PopDe_{t-1}$), an epidemiological effect based on the origin-destination WPI distances ($Epid\ dist$), an epidemiological effect using the level of GDP per capita at the origin as weight ($Epid\ GDP$) and an epidemiological effect where the WPI at the origin is randomly distributed ($Epid\ ran$). All the additional included variables are instrumented using predicted bilateral immigration stocks from a shift-share approach.

(exports plus imports) as a share of GDP (Gwartney et al., 2018; World Bank, 2018). Overall, after including these additional controls separately, the coefficients of interest remain stable.

In Table 5 we test for immigration heterogeneous effects on WPI across destination countries by looking at the level of development (measured by being an OECD high-income country) and at the legal origin. After including destination specific dummies and interaction terms with our variables of interest, we do not find a differential impact depending on economic development or legal origin. Columns (2) and (4) are particularly interesting as they add additional information to the finding in Table 4 that what matters for the composition effect is the immigrants absolute level of workers protection at the origin country, regardless of the legal system and economic development of the country they will take part in. Finally, we confirm the results presented in Figure 2: OECD high-income countries and civil law countries are characterized by a higher level of WPI, although such difference in level is not

Table 5: Workers Protection and Migration - Heterogeneity Analysis

	(1)	(2)	(3)	(4)
Estimation:	S-GMM	S-GMM	S-GMM	S-GMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010
Dep var:	WPI	WPI	WPI	WPI
WPI_{t-1}	0.838***	0.831***	0.822***	0.819***
	(0.054)	(0.055)	(0.064)	(0.062)
$Share\ Mig_{t-1}$	-0.005	-0.005	-0.005	-0.006*
	(0.004)	(0.004)	(0.004)	(0.003)
$Epid_{t-1}$	0.078***	0.067**	0.055**	0.068**
	(0.029)	(0.029)	(0.026)	(0.028)
$Share\ Mig_{t-1} * OECD^{HIC}$	-0.004			
	(0.005)			
$Epid_{t-1} * OECD^{HIC}$		0.042		
		(0.051)		
$Share\ Mig_{t-1} * Common\ Law$			-0.004	
			(0.005)	
$Epid_{t-1} * Common\ Law$				-0.068
				(0.091)
$OECD^{HIC}$	0.177*	0.160**		
	(0.096)	(0.080)		
$Common\ Law$			-0.096	-0.164
			(0.077)	(0.100)
Controls	✓	✓	✓	✓
Year FE	✓	✓	✓	✓
Country FE	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00
AR2 p-val	0.54	0.54	0.55	0.55
Hansen p-val	0.83	0.85	0.77	0.76
Diff-Hansen p-val	0.85	0.87	0.84	0.84
Instruments	30	30	30	30
Countries	70	70	70	70
Observations	554	554	554	554

Note: standard errors are clustered at country level. * p<0.1, ** p<0.05, *** p<0.01. The dependent variable is our standardized workers protection index. As controls we include the logarithm of GDP per capita, the polity2 index and the logarithm of human capital. Our main variables of interest are the share of immigrants and the epidemiological effect: the former is instrumented using the predicted immigration share from a gravity model and the latter with the epidemiological effect using predicted bilateral immigration stocks from a shift-share approach. Additionally, we include dummies capturing the level of development and legal origin of destination countries. See Appendix A for further information on the variables.

precisely estimated for the legal origin. Legal origin seems to explain the cross-country variation rather than the within-country evolution over time.[28]

V Mechanisms

In this section we explore few potential mechanisms via which the epidemiological term might affect WPI in the destination countries. In Section V.A, we decompose our dependent variable into its five main subcomponents in order to better identify which dimension of WPI is most affected by immigration. In Section V.B, we test immigrants' unions participation and its potential implications to the political debate.

[28]Table C-6 in the Appendix shows the cross-sectional determinants in our sample of countries (average between 1970 and 2010). The legal origin seems to explain a large portion of WPI disparities across countries.

V.A WPI Subcomponents

As mentioned in Section II.A, our workers protection index is a synthetic index based on different indicators covering separated areas of labor regulation. We perform such aggregation to capture the general effect of immigration on labor regulation. To increase our understanding of the effect of immigration on labor regulation, in Table 6 we estimate the effect of immigration on the five subdimensions of the WPI: (i) industrial action laws ($IndAction$), (ii) worker representation laws ($WkrRepr$), (iii) worker dismissal laws ($WkrDismis$), (iv) working time laws ($WorkTime$) and (v) employment forms laws ($EmptForm$). Each specification includes the same set of controls and variables of interests as in our main specification. Even though the variation over time of each subcomponent is smaller than the overall WPI, we find that the level of workers protection experienced by immigrants in their origin countries (and proxied by the epidemiological effect) has a positive and statistically significant effect on two subcomponents: worker representation laws and employment forms laws. Both effects are significant at 5% level and the magnitude of the effect is similar as for the aggregate WPI, while the size of immigration coefficient is small and close to zero. These areas of the labor regulation have important implications for the labor market. Worker representation laws, such as unions and unionization rights, are extremely relevant due to their direct impact on wage dispersion: a broad set of evidence shows that unions reduce wage dispersion, in particular for male workers (Lemieux, 1998; Card et al., 2004, 2020). Moreover the degree of rigidity of the employment forms has not only a general effect on wages, but also influences how natives react to a supply shock in the workforce due to immigration flows (D'Amuri and Peri, 2014; Edo, 2016).

Table 6: WPI Subcomponents and Migration

	(1)	(2)	(3)	(4)	(5)
Estimation:	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var: WPI Subcomponent	$IndAction$	$WkrRepr$	$WkrDismis$	$WorkTime$	$EmptForm$
Dep_{t-1}	0.885***	0.894***	0.817***	0.903***	0.922***
	(0.082)	(0.044)	(0.070)	(0.059)	(0.061)
$Share\ Mig_{t-1}$	-0.010	-0.002	0.004	-0.000	-0.005
	(0.007)	(0.004)	(0.005)	(0.003)	(0.004)
$Epid_{t-1}$	-0.030	0.070**	0.044	0.031	0.061**
	(0.034)	(0.030)	(0.038)	(0.028)	(0.031)
Controls	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00	0.00
AR2 p-val	0.69	0.79	0.39	0.11	0.86
Hansen p-val	0.89	0.50	0.54	0.57	0.34
Diff-Hansen p-val	0.83	0.39	0.37	0.53	0.36
Instruments	28	28	28	28	28
Countries	70	70	70	70	70
Observations	554	554	554	554	554

Note: standard errors are clustered at country level. * p<0.1, ** p<0.05, *** p<0.01. Each column has as dependent variable a different subcomponent of the workers protection index: industrial action and striking ($IndAction$), employment representation and unionization ($WkrRepr$), workers' dismissal regulation ($WkrDismis$), working time regulation ($WorkTime$) and employment relationship and employment forms ($EmptForm$). As controls we include the logarithm of GDP per capita, the polity2 index and the logarithm of human capital. Our main variables of interest are the share of immigrants and the epidemiological effect: the former is instrumented using the predicted immigration share from a gravity model and the latter with the epidemiological effect using predicted bilateral immigration stocks from a shift-share approach. See Appendix A for further information on the variables.

To better understand if there are specific subcomponents of WPI which are more important than others and which influence the temporal variation of WPI, in Table 7 we recalculate the epidemiological term by replacing the immi-

Table 7: WPI Subcomponents and Migration - Subcomponent Specific Epidemiological Term

	(1)	(2)	(3)	(4)	(5)
Estimation:	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var: WPI Sub-component	$IndAction$	$WkrRepr$	$WkrDismis$	$WorkTime$	$EmptForm$
Dep_{t-1}	0.877***	0.900***	0.820***	0.884***	0.924***
	(0.086)	(0.045)	(0.067)	(0.069)	(0.055)
$Share\ Mig_{t-1}$	-0.011	-0.002	0.004	-0.000	-0.004
	(0.007)	(0.003)	(0.004)	(0.003)	(0.004)
$Epid_{t-1}^{IndAction}$	-0.017				
	(0.043)				
$Epid_{t-1}^{WkrRepr}$		0.059**			
		(0.029)			
$Epid_{t-1}^{WkrDismis}$			0.035		
			(0.035)		
$Epid_{t-1}^{WorkTime}$				0.057	
				(0.037)	
$Epid_{t-1}^{EmptForm}$					0.052*
					(0.027)
Controls	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00	0.00
AR2 p-val	0.70	0.81	0.38	0.10	0.86
Hansen p-val	0.90	0.55	0.54	0.55	0.35
Diff-Hansen p-val	0.84	0.37	0.35	0.50	0.38
Instruments	28	28	28	28	28
Countries	70	70	70	70	70
Observations	554	554	554	554	554

Note: standard errors are clustered at country level. * p<0.1, ** p<0.05, *** p<0.01. Each column has as dependent variable a different subcomponent of the workers protection index: industrial action and striking ($IndAction$), employment representation and unionization ($WkrRepr$), workers' dismissal regulation ($WkrDismis$), working time regulation ($WorkTime$) and employment relationship and employment forms ($EmptForm$). As controls we include the logarithm of GDP per capita, the polity2 index and the logarithm of human capital. Our main variables of interest are the share of immigrants and the subcomponent specific epidemiological effect: the former is instrumented using the predicted immigration share from a gravity model and the latter with the epidemiological effect using predicted bilateral immigration stocks from a shift-share approach. See Appendix A for further information on the variables.

grants aggregate level of workers protection at origin with one of the five WPI subcomponent at a time. Then we estimate the subcomponent specific epidemiological effect on the same destination country subcomponent of workers protection. For instance, in column (2) we see that the epidemiological term constructed with immigrants worker representation laws at origin ($Epid^{WkrRepr}$) impacts the worker representation laws in the destination country. The magnitude of the effect is reduced from 7% to 5.9% standard deviations compared to the aggregate epidemiological effect presented in Table 6 and the significance level remains unchanged. We also find a similar although less precisely estimated effect of the subcomponent specific epidemiological effect ($Epid^{EmptForm}$) on the employment forms laws in column (5) of Table 7. We do not find any significant estimates associated neither to the epidemiological effect nor to the share of immigrants on the other three dimensions (industrial action laws, worker dismissal laws, working time laws). It is worth noting that the tested subcomponents exhibit lower variation over time than the full index and that we are capturing a lot of variation in our demanding specification with the persistency term included.

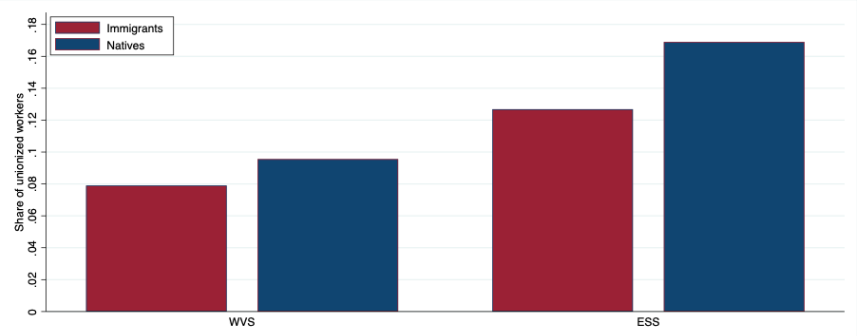
V.B Unions Participation and Parties' Political Preferences

The reduced form structure of our benchmark equation (3) does not allow us fully identify and analyze the mechanisms through which immigration influence workers' unionization rights. Nevertheless, we can think about two potential mechanisms through which immigration can affect workers protection: *direct effect* and *indirect effect*.

A *direct effect* on the legislators can occur thanks to immigrants participation to the political system through voting. If immigrants have the right to vote and, for instance, they are more prone to vote for parties which support a similar degree of workers protection experienced in their origin countries, then a higher epidemiological effect will transform in higher support for parties with a focus on a more protective labor regulation. Luttmer and Singhal (2011) show that for some EU countries immigrants who share stronger origin-specific preferences towards redistribution are more prone to support and vote for redistributive parties. However, since only a small share of immigrants obtains voting rights after a long period of residence in the destination country and only for a subset of countries in our analysis, the potential direct effect is expected to be small.[29]

The second mechanism generates an *indirect effect* of immigration on workers protection through immigrants participation to trade unions. If immigrant workers participate differentially to unions compared to native workers, then union's bargaining power should change over time: unions that represent a bigger (smaller) share of the labor force have a stronger (weaker) bargaining power (Mishel, 1986). If immigrants' participation to unions is influenced by their origin-country experience in the degree of workers protection, then an indirect effect would occur if the size and bargaining power of unions has an influence on workers protection. In this section, we provide suggestive evidence of such an indirect effect.

Figure 8: Participation to Unions: Immigrants and Natives



Note: authors' calculations on WVS and ESS data. The figure plots the share of unionized workers over the overall employed population by immigration status and by data source.

Combining the World Value Survey (WVS) longitudinal data from 1993 and the European Social Survey (ESS) data from 2000, we first explore whether immigrants are more (or less) unionized compared to natives. Both data sources ask whether the respondent is part of a trade union or a similar organization. Focusing on the labor force population, we compute the average share of unionized workers among immigrants and natives. Figure 8 shows the results splitting them by the two data sources. Immigrants are less unionized than natives: on average, only 8% (WVS) or 12.2% (ESS) of the immigrant workforce is unionized, compared to 9.8% (WVS) or 16.3% (ESS) of the

[29] Another direct effect could appear as a result of interaction between immigrants and local households. Interacting with immigrants and people abroad can influence natives' political and cultural attitudes (Batista et al., 2019; Turati, 2020). However, in our framework we are unable to test for direct interactions between natives and migrants networks.

native workforce. These descriptive statistics are in line with the literature for the sample of European and Nordic European countries (Kranendonk and De Beer, 2016; Hagen and Jensen, 2019).

Table 8: Participation to Unions

	(1)	(2)	(3)	(4)	(5)	(6)
Estimation:	OLS	OLS	OLS	OLS	OLS	OLS
Time:	2000-2010	2000-2010	2000-2010	2000-2010	2000-2010	2000-2010
Dep var: $\frac{Unionized}{Workers}$	All	Natives	Migrants	All	Natives	Migrants
$Share\ Mig_t$	0.063	-0.125	0.189**	-0.135	-0.199	0.065
	(0.343)	(0.306)	(0.086)	(0.190)	(0.177)	(0.052)
$Epid_t$	-0.150	-0.039	-0.111***			
	(0.171)	(0.146)	(0.034)			
$Epid_t^{WkrRepr}$				-0.047	0.068	-0.115**
				(0.191)	(0.158)	(0.041)
Observations	38	38	38	38	38	38
Countries	14	14	14	14	14	14
Adj. R-Square	0.98	0.98	0.92	0.98	0.98	0.90
Country FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓

Note: authors' calculations on ESS data. * p<0.1, ** p<0.05, *** p<0.01. Standard errors are clustered at country level. Our main variables of interest are the share of immigrants and the epidemiological effect (computed with the overall WPI at the origin and the $WkrRepr$ specific subcomponent). The dependent variable is the overall share of unionized workers (col. (1) and (4)), the share of native unionized workers (col. (2) and (5)) and the share of immmigrants unionized workers (col. (3) and (6)) over the overall workers population. The sample of countries includes: Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom. Waves of the survey are dropped when the size of the immigrant population was not well represented (i.e. less than 80 observations).

We then investigate if the degree of workers protection experienced by immigrants in the origin countries (captured by the epidemiological term) is related with degree of unionization of the immigrant workforce. Since information on the unionized workforce in the WVS is available for only few countries belonging to our sample of countries over multiple periods, we focus our analysis on 14 European countries from the ESS, which are part of our initial sample and for which we have multiple observations over the period 2000-2010. We drop the waves where immigrants are just a small minority of the respondents (i.e. less than 80 observations). Using a fixed-effect model, we estimate the partial correlation between the share of unionized workers and immigration (the share of immigrants and the epidemiological term). Our analysis includes both country and year fixed-effects, to capture time-invariant unobserved factors and common trends.

Table 8 shows the estimates using as dependent variable: the overall share of unionized workers (col. (1) and (4)), the share of unionized native workers (col. (2) and (5)) and the share of unionized immigrant workers (col. (3) and (6)) over the total workforce. Immigration (both in terms of size and composition) is not correlated with neither the overall nor the natives share of unionized workers. However, the size of immigration is positively related with the participation of immigrants to unions: a higher share of immigrants in the workforce increases the probability that immigrant workers are unionized. More surprisingly, the epidemiological effect is negatively related with the share of unionized workers: having more immigrants coming from countries characterized by a higher workers protection reduces the share of unionized workers. Being aware that these estimates are suggestive partial correlations,[30] we can interpret these results as follows: immigrants that are used to a more protected labor regulation tend not to seek protection from unions, and so they are less unionized. This intuition is somewhat confirmed in column (6) when

[30]For such small set of countries and short time span, our IV approaches produce weak instruments, generating unreliable estimates. Results available upon request.

we estimate the partial correlations after replacing the standard epidemiological effect from column (3) with the one using the workers' employment representation and unionization subcomponent, as in Table 7: a higher share of immigrants used to have strong unionization rights is negatively related to the share of unionized immigrants workers.

Table 9: Unions and Party Position Towards Labor Groups

	(1)	(2)	(3)	(4)	(5)	(6)
Estimation:	OLS	OLS	OLS	OLS	OLS	OLS
Time:	2000-2010	2000-2010	2000-2010	2000-2010	2000-2010	2000-2010
Dep var: Political Pref.	Lab. Groups	Lab. Groups	Lab. Groups	Lab. Groups	Lab. Groups	Lab. Groups
$Unions_{tot}$	-0.354*			-0.370**		
	(0.180)			(0.153)		
$Unions_{nat}$		-0.404**			-0.413**	
		(0.173)			(0.159)	
$Unions_{mig}$			-0.749			-1.106
			(0.781)			(0.797)
$Share\ Mig_t$				0.030	-0.034	0.222
				(0.224)	(0.241)	(0.230)
$Epid_t$				-4.791	-1.314	-11.458
				(9.358)	(10.262)	(10.877)
Observations	505	505	505	505	505	505
Countries	14	14	14	14	14	14
Adj. R-Square	0.37	0.37	0.34	0.37	0.36	0.34
Party FE	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓

Note: authors' calculations on ESS and MPD data. * p<0.1, ** p<0.05, *** p<0.01. Standard errors are clustered at country level. The dependent variable is the net positive position of parties towards labor groups. Each party is weighted with the share of votes obtained in the election. The main variable of interest is the share of unionized workers. The sample of countries includes: Austria, Belgium, Denmark, France, Germany, Greece, Ireland, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom. Waves of the survey are dropped when the size of the immigrant population was not well represented (i.e. less than 80 observations).

Figure 8 and Table 8 estimates show that immigrants are less unionized than natives, and that immigrant population used to strong labor regulation in their origin countries tend to seek less protection and participate less to unions. Consequently, the share of workers represented by unions is affected by immigration, eventually influencing their bargaining power. These effects can impact the labor regulation (i.e. law-in-the-books) if the political system reacts to such variation of unions size. To test this potential relationship, we use the Manifesto Project Database (MPD) (Volkens et al., 2019), which explores parties' political platforms through a content analysis of their political manifesto. For each party that won at least one seat in a national election, the MPD data quantifies its political preferences by counting the number of quasi-sentences related to a specific political issue over the total length of the political manifesto.[31] For our purpose, we focus on parties' political preferences on labor groups: this measure captures parties' preferences towards the working class, labor unions, unemployed workers and labor groups in general. Since MPD provides for each party the measure for both the share of positive and negative sentences towards labor groups, we built a measure of parties' net political preferences by subtracting the share of negative mentions from the share of positive mentions. We then explore over the same sample of countries and period of Table 8 the partial correlation between the share of unionized workers (overall, natives and immigrants) and parties' net political preferences towards labor groups. Intuitively, if parties decide their political agenda based on the pool of potential

[31] Although being a proxy of parties' political platforms, measuring parties' political preferences through a content-analysis of the political manifesto has been shown to be a good proxy of parties' ideological spectrum: focusing on issues related to nationalism, Moriconi et al. (2018) show that proxies with MPD data are closely related with other available data sources, like the Chapell Hill Expert survey.

voters, then parties' net positions towards labor groups and unionized work force should be positively related. In our fixed-effect regression we include year and party fixed effects, to capture common trends and time-invariant parties' ideological position, and we weight each party for the share of votes gained in each electoral event.

Table 9 shows that the share of unionized workforce is negatively related with parties' net favorable position towards labor groups. Although not precisely estimated, the point estimates associated to the unionized migration workforce are the biggest. The estimates are robust in terms of magnitude and significance after controlling for the size and composition of the immigrant population. Recalling that these estimates should be interpreted cautiously, due to the endogenous nature of the variables, the direction of the relation is indeed interesting: a reduction in the unionized workforce (i.e. a reduction in unions' bargaining power) fosters parties' favorable net position towards labor groups and unions. That would imply, from a legal point of view, a stronger and favorable regulation towards unions, which would balance out the reduction of unions' bargaining power.

VI Discussion

Our analysis provides new insights on the impact of immigration on the evolution of workers protection regulation: we find that the level of workers protection experienced by immigrants in their origin countries has a direct effect on labor regulation in the destination country. This is particularly relevant for workers' representation laws and employment forms laws. In this section we provide some back-of-the-envelope calculations based on our estimates to have a sense of the size of the effect of immigration on workers protection. Even though these simulations have a descriptive purpose, since they cannot consider all general equilibrium effects, they can give an intuitive magnitude of the estimates under various assumptions. Moreover, these simulations do not aim to explain the whole evolution of WPI presented in Figure 2 which is determined by many factors, but rather to attempt to highlight the contribution in a partial equilibrium of immigration on the evolution of WPI.

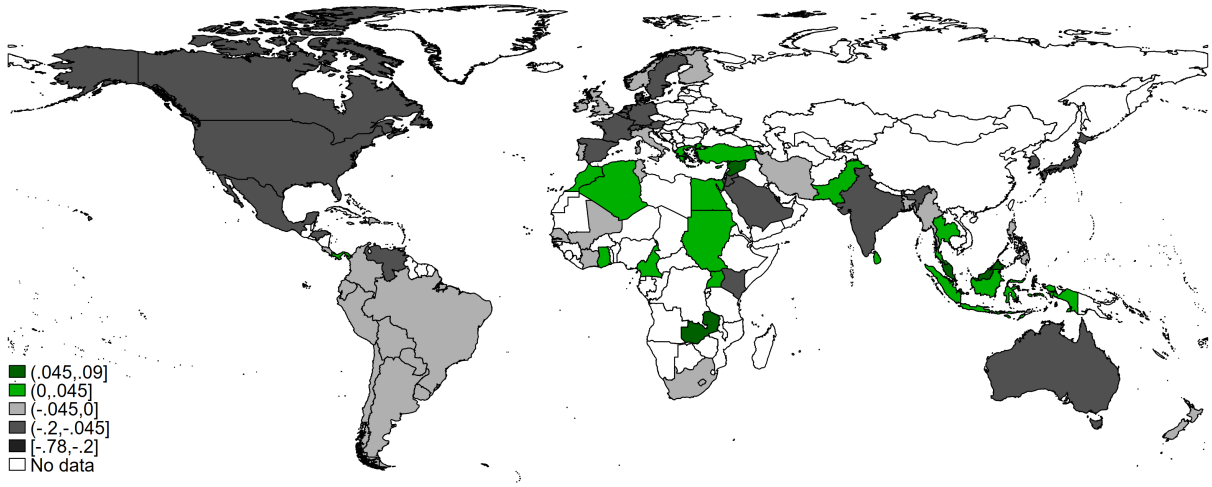
We first compute the observed long-run difference between two time periods (1970 and 2005) in the share of immigrants and in the epidemiological effect at the destination country. Then, using the estimated coefficients $\hat{\gamma}$ and $\hat{\delta}$ of our benchmark model (Table 2, column (4)), we compute the country-specific predicted variation of the workers protection index over the 1975-2010 period as follows:

$$\Delta\widehat{WPI}_{d,75-10} = \hat{\gamma}\Delta ShareMig_{d,70-05} + \hat{\delta}\Delta Epid_{d,70-05} \tag{11}$$

Figure 9 plots the results and shows a large degree of heterogeneity in the predicted variation for our sample of countries. The general pattern is that immigration has reduced the degree of workers protection in high-income developed and almost all OECD societies. This effect is explained by both the increase in the share of immigrants and by receiving immigrants from less regulated labor markets. Greece is the only exception, where the negative effect driven by the increase of the share of immigrants is counterbalanced by a positive effect from immigrants coming from countries with high levels of WPI. Concerning developing countries, the results are much more heterogeneous: African and Middle East countries experienced, on average, a predicted increase of WPI due to immigration, whereas almost all Latin American countries experienced a predicted negative change.

To have an idea of the aggregate effect, column (1) of Table 10 provides the predicted average effect of immigration on WPI for the standard scenario presented in Figure 9 and other four different scenarios, characterized by: (i) an increase in countries' epidemiological effect by 20% (Epid (+20%)); (ii) all the countries in our sample experienced the same variation of the epidemiological effect of UK (Epid (UK)); (iii) all the countries in our sample

Figure 9: WPI Simulation based on 1975-2010 variation



Note: authors' calculations on CBR Leximetric Data and World Bank data. The figure plots the predicted variation of our standardized measure of workers protection due to migration. Predictions are based on Equation (11).

experienced the same variation of the epidemiological effect of France (Epid (FR)) and (iv) countries experiencing a variation of both the immigration share and the epidemiological effect following their 2000-2010 trend (Constant trends). We take France and United Kingdom as two representative countries, which are similar in terms of population and economic development while being geographically close, but are significantly different in terms of legal system (different level of labor regulation) and immigration patterns. Although both countries experienced a sizeable increase in the share of immigrants during the analyzed period, the composition of the immigrant population was rather different: France attracted mainly immigrants from low WPI countries, producing a negative variation of the epidemiological effect of -0.73, while UK experienced a surge of immigrants from more regulated labor markets (increase of the epidemiological effect of 0.16). Finally, to take into account the differences between the level of development, the table shows the results for the whole sample (Panel A), for OECD high-income countries (Panel B) and non-OECD countries (Panel C).

The standard scenario provides an average decrease of workers protection index by 4.2% of WPI standard deviations. Since the variation of the workers protection index over the period 1970 to 2010 is around one standard deviation (see Figure 2), then the predicted effect is small, although not negligible. The effects of immigration are smaller once countries experience an increase of their epidemiological effect (by receiving more immigrants from countries with high levels of WPI) or experience the same positive variation of the epidemiological term of UK. On the other hand, experiencing the same change in the composition of immigrants between 1970 and 2005 as France, or assuming the same recent trends as in 2000-2010 will persist in the future, generates even more negative effects. The predicted effects are even more negative for OECD countries compared to non-OECD in the standard scenario: the OECD predicted WPI decrease is around 5.8% standard deviations, compared to the 3.4% for non-OECD countries.

What are the economic implications of these predicted effects on the labor market? We compute the effect of the predicted WPI change by multiplying the predicted variation of WPI with the estimated coefficients associated to each labor market outcomes presented in Table 1. The results are presented in columns (2) to (5) of Table 10, and each column shows the predicted effect of the variation of WPI due to migration on the variation of: unemployment rate (col. 2); labor productivity per hours worked (col. 3); annual hours worked per worker (col. 4) and Gini

Table 10: WPI and Labor Market Outcomes Simulations

Scenarios:	(1) $\Delta\overline{WPI}$	(2) $\Delta\overline{Unemp}$	(3) $\Delta\overline{Prod}$	(4) $\Delta\overline{Hrs}$	(5) $\Delta\overline{Gini}$
Panel A - All Countries					
Standard	-0.0425	-0.0872	-0.2107	2.0291	0.0004
Epid (+20%)	-0.0367	-0.0753	-0.1819	1.7515	0.0004
Epid (UK)	-0.0247	-0.0507	-0.1224	1.1786	0.0002
Epid (FR)	-0.0943	-0.1934	-0.4673	4.5007	0.0009
Constant trends	-0.0817	-0.1677	-0.4053	3.9027	0.0008
Panel B - OECD^{HIC}					
Standard	-0.0587	-0.1205	-0.2912	2.8047	0.0006
Epid (+20%)	-0.0520	-0.1066	-0.2576	2.4805	0.0005
Epid (UK)	-0.0341	-0.0701	-0.1693	1.6304	0.0003
Epid (FR)	-0.1037	-0.2128	-0.5143	4.9525	0.0010
Constant trends	-0.0980	-0.2011	-0.4858	4.6783	0.0010
Panel C - Non-OECD^{HIC}					
Standard	-0.0340	-0.0698	-0.1687	1.6245	0.0003
Epid (+20%)	-0.0287	-0.0589	-0.1424	1.3711	0.0003
Epid (UK)	-0.0197	-0.0405	-0.0979	0.9429	0.0002
Epid (FR)	-0.0893	-0.1833	-0.4429	4.2650	0.0009
Constant trends	-0.0733	-0.1503	-0.3632	3.4981	0.0007

Note: authors' calculations on World Bank and CBR Leximetrics data. Column (1) shows the average country variation in workers protection due to migration over the 1975-2010 period. Columns (2) to (5) show the average country variation in different labor market outcomes due to workers protection variation. Each row presents a different scenario: (i) "Standard" shows the average country variation as presented in Equation (11); (ii) "Epid (+20%)" shows the average country variation after an increase of the epidemiological term in each country by 20%; (iii) shows the average country variation if all the countries have the same variation of the epidemiological term of the United Kingdom; (iv) shows the average country variation if all the countries have the same variation of the epidemiological term of France; (v) shows the average country variation if all the countries have an increase of the epidemiological term and migration share as the 2010-2000 trend. Panel A presents the results for the whole sample of countries in our analysis, while Panel B and Panel C shows the estimates for OECD high-income countries and non-OECD high-income countries respectively.

index after tax (col. 5). In the standard scenario, the predicted reduction of WPI over the 1975-2010 period due to immigration should lead to a reduction of unemployment rate around 0.09 p.p., decrease in labor productivity per hour worked by 0.21, increase of 2.02 hours worked per worker in a year and an increase of the Gini index by 0.04 p.p.. The predictions almost double when we assume a constant trend in the migration variables. Finally, the economic predictions in OECD countries are two times the ones in non-OECD countries. Nevertheless, we are fully aware that these values have a mere descriptive purpose and should not overemphasized, due to the nature of our exercise.

VII Conclusions

An extensive effort has been made by researchers to understand the impact of immigration on natives' labor market outcomes, mainly focusing on outcomes like wages and employment. The mixed set of evidence based on different methodological assumptions and datasets converge towards an overall growing consensus that the effect of immigration, on average, is small or null, and that labor market institutions play an important role in the process of shaping natives' reactions to the inflow of immigrants in the labor market. In these studies, the labor regulations are assumed to be exogenous to the presence of immigrants - but is this the case?

This paper answers this question by using a comprehensive dataset on labor law regulation, covering 40 years for 70 countries around the world. We build a novel measure of workers protection based on 36 different aspects of labor law regulation and explore the effect of immigration both in terms of size and composition. The paper shows that

the level of immigrants' experience of workers protection in their origin country has an effect on workers protection in the destination country, which is measured with an epidemiological term *à la* Spilimbergo (2009). Namely, allowing immigrants from countries with high (low) workers protection increases (decreases) the level of workers protection in the destination country. As for the size of immigration, we find that it has a small negative or null effect on destination countries' workers protection. These results are robust after controlling for other competing or complementary effects of immigration, like diversity, polarization and skill-selection. Moreover, the paper shows that the epidemiological effect is not driven neither by immigrants' experience of the economic situation in the origin country nor by the relative distance between origin and destination countries workers protection, but only by the level of workers protection in the origin country.

Across different domains of the regulation, we find that worker representation laws and employment forms laws are the ones mostly affected by immigrants' epidemiological term. Moreover, we provide suggestive evidence of immigrants' participation to unions as one of the potential transmission channels: countries characterized by a higher share of immigrants from high workers protection countries are associated with a lower share of unionized immigrant workers. We argue that this correlation could suggest that immigrants who are used to be highly protected by workers protection are less prone to seek protection by unions. The paper shows that the weakening of unions capacity to represent the workforce is related with political parties' position towards labor groups, which may influence ultimately the evolution of labor law.

Lastly, we discuss the magnitude of the estimates with back-of-the-envelope computations in the contribution of immigration on the evolution of workers protection. Being aware of the partial nature of this exercise, the results show that, on average, immigration contributes to a reduction of 4.2% of WPI standard deviations over the 1970-2010 period. The negative effects are 72% stronger in OECD high-income countries compared to non-OECD.

The set of evidence provided in this paper shows that not only immigration has implications for labor regulation, but also that immigrants' origins matters for shaping the labor regulation. We hope that this paper will contribute not only to future research on the labor market impact of immigration, accounting for endogenous labor regulation, but also stimulate further research on the potential effect of immigration on destination countries labor market institutions and its main mechanisms at play.

References

Acemoglu, D., Gallego, F. A., and Robinson, J. A. (2014). Institutions, human capital, and development. *Annual Review of Economics*, 6(1):875–912.

Adams, Z., Bastani, P., Bishop, L., and Deakin, S. (2017). The cbr-lri dataset: Methods, properties and potential of leximetric coding of labour laws. *Journal of Comparative Labour Law and Industrial Relations*, 33(1):59–92.

Adao, R., Kolesár, M., and Morales, E. (2019). Shift-share designs: Theory and inference. *The Quarterly Journal of Economics*, 134(4):1949–2010.

Ager, P. and Brückner, M. (2013). Cultural diversity and economic growth: Evidence from the us during the age of mass migration. *European Economic Review*, 64:76–97.

Alesina, A., Harnoss, J., and Rapoport, H. (2016). Birthplace diversity and economic prosperity. *Journal of Economic Growth*, 21(2):101–138.

Angrist, J. D. and Kugler, A. D. (2003). Protective or counter-productive? Labour market institutions and the effect of immigration one unatives. *The Economic Journal*, 113(488):F302–F331.

Angrist, J. D. and Pischke, J.-S. (2008). *Mostly harmless econometrics: An empiricist's companion*. Princeton university press.

Arellano, M. and Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics*, 68(1):29–51.

Armour, J., Deakin, S., Sarkar, P., Siems, M., and Singh, A. (2009). Shareholder protection and stock market development: an empirical test of the legal origins hypothesis. *Journal of Empirical Legal Studies*, 6(2):343–380.

Arpaia, A. and Mourre, G. (2012). Institutions and performance in european labour markets: taking a fresh look at evidence. *Journal of Economic Surveys*, 26(1):1–41.

Artuç, E., Docquier, F., Özden, Ç., and Parsons, C. (2014). *A global assessment of human capital mobility: the role of non-OECD destinations*. The World Bank.

Bächli, M. and Tsankova, T. (2020). Does labor protection increase support for immigration? Evidence from switzerland. *Working Paper*.

Bahar, D., Choudhury, P., and Rapoport, H. (2020a). Migrant inventors and the technological advantage of nations. *Research Policy*, page 103947.

Bahar, D., Rapoport, H., and Turati, R. (2020b). Birthplace diversity and economic complexity: Cross-country evidence. *Research Policy*, page 103991.

Barro, R. J. and Lee, J. W. (2013). A new data set of educational attainment in the world, 1950–2010. *Journal of Development Economics*, 104:184–198.

Batista, C., Seither, J., and Vicente, P. C. (2019). Do migrant social networks shape political attitudes and behavior at home? *World Development*, 117:328–343.

Bazzi, S. and Clemens, M. A. (2013). Blunt instruments: Avoiding common pitfalls in identifying the causes of economic growth. *American Economic Journal: Macroeconomics*, 5(2):152–86.

Beine, M. and Parsons, C. (2015). Climatic factors as determinants of international migration. *The Scandinavian Journal of Economics*, 117(2):723–767.

Bertoli, S. and Ruyssen, I. (2018). Networks and migrants' intended destination. *Journal of Economic Geography*, 18(4):705–728.

Blundell, R. and Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1):115–143.

Bolt, J., Inklaar, R., de Jong, H., and Van Zanden, J. L. (2018). Rebasing 'maddison': new income comparisons and the shape of long-run economic development. *GGDC Research Memorandum*, 174.

Bond, S. R., Hoeffler, A., and Temple, J. R. (2001). Gmm estimation of empirical growth models. *CEPR discussion paper*.

Borjas, G. J. (1994). The economics of immigration. *Journal of Economic Literature*, 32(4):1667–1717.

Borjas, G. J. (1999). Immigration and welfare magnets. *Journal of Labor Economics*, 17(4):607–637.

Borjas, G. J. (2003). The labor demand curve is downward sloping: Reexamining the impact of immigration on the labor market. *The Quarterly Journal of Economics*, 118(4):1335–1374.

Borjas, G. J. (2015). Immigration and globalization: A review essay. *Journal of Economic Literature*, 53(4):961–74.

Borjas, G. J. (2016). *We wanted workers: Unraveling the immigration narrative*. WW Norton & Company.

Borjas, G. J. (2019). Immigration and economic growth. *NBER (WP 25836)*.

Borjas, G. J. and Trejo, S. J. (1991). Immigrant participation in the welfare system. *ILR Review*, 44(2):195–211.

Borzutzky, S. (2005). From chicago to santiago: Neoliberalism and social security privatization in chile. *Governance*, 18(4):655–674.

Botero, J. C., Djankov, S., Porta, R. L., Lopez-de Silanes, F., and Shleifer, A. (2004). The regulation of labor. *The Quarterly Journal of Economics*, 119(4):1339–1382.

Bove, V. and Elia, L. (2017). Migration, diversity, and economic growth. *World Development*, 89:227–239.

Card, D. (2001). Immigrant inflows, native outflows, and the local labor market impacts of higher immigration. *Journal of Labor Economics*, 19(1):22–64.

Card, D. (2009). Immigration and inequality. *American Economic Review*, 99(2):1–21.

Card, D., Lemieux, T., and Riddell, W. C. (2004). Unions and wage inequality. *Journal of Labor Research*, 25(4):519–559.

Card, D., Lemieux, T., and Riddell, W. C. (2020). Unions and wage inequality: The roles of gender, skill and public sector employment. *Canadian Journal of Economics*, 53(1):140–173.

Cattaneo, C. and Peri, G. (2016). The migration response to increasing temperatures. *Journal of Development Economics*, 122:127–146.

Clark, J. R., Lawson, R., Nowrasteh, A., Powell, B., and Murphy, R. (2015). Does immigration impact institutions? *Public Choice*, 163(3-4):321–335.

Clemens, M. A., Lewis, E. G., and Postel, H. M. (2018). Immigration restrictions as active labor market policy: Evidence from the mexican bracero exclusion. *American Economic Review*, 108(6):1468–87.

Collier, P. (2013). *Exodus: Immigration and multiculturalism in the 21st century*. Penguin UK.

Coppedge, M., Gerring, J., Knutsen, C. H., Lindberg, S. I., Teorell, J., Altman, D., Bernhard, M., Fish, M. S., Glynn, A., Hicken, A., et al. (2020). V-dem dataset v10.

D'Amuri, F. and Peri, G. (2014). Immigration, jobs, and employment protection: evidence from europe before and during the great recession. *Journal of the European Economic Association*, 12(2):432–464.

De Bel-Air, F. (2014). Demography, migration, and labour market in qatar. Technical report, GLMM - EN - No. 8/2014.

Docquier, F., Lodigiani, E., Rapoport, H., and Schiff, M. (2016). Emigration and democracy. *Journal of Development Economics*, 120:209–223.

Docquier, F., Ozden, Ç., and Peri, G. (2014). The labour market effects of immigration and emigration in oecd countries. *The Economic Journal*, 124(579):1106–1145.

Docquier, F., Turati, R., Valette, J., and Vasilakis, C. (2020). Birthplace diversity and economic growth: Evidence from the us states in the post-world war ii period. *Journal of Economic Geography*, 20(2):321–354.

Dustmann, C. and Frattini, T. (2014). The fiscal effects of immigration to the uk. *The Economic Journal*, 124(580):F593–F643.

Edo, A. (2016). How do rigid labor markets absorb immigration? Evidence from france. *IZA Journal of Migration*, 5(1):7.

Edo, A. (2019). The impact of immigration on the labor market. *Journal of Economic Surveys*, 33(3):922–948.

Edo, A. and Rapoport, H. (2019). Minimum wages and the labor market effects of immigration. *Labour Economics*, 61:101753.

Elgin, C., Oztunali, O., et al. (2012). Shadow economies around the world: model based estimates. *Bogazici University Department of Economics Working Papers*, 5(2012):1–48.

Faria, H. J., Montesinos-Yufa, H. M., Morales, D. R., and Navarro, C. E. (2016). Unbundling the roles of human capital and institutions in economic development. *European Journal of Political Economy*, 45:108–128.

Feenstra, R. C., Inklaar, R., and Timmer, M. P. (2015). The next generation of the penn world table. *American Economic Review*, 105(10):3150–82.

Feyrer, J. (2019). Trade and income—exploiting time series in geography. *American Economic Journal: Applied Economics*, 11(4):1–35.

Goldsmith-Pinkham, P., Sorkin, I., and Swift, H. (2020). Bartik instruments: What, when, why, and how. *American Economic Review*, 110(8).

Gwartney, J., Lawson, R., Hall, J., and Murphy, R. (2018). Economic freedom of the world 2018 annual report. *Vancouver: Fraser Institute*.

Hagen, I. M. and Jensen, R. S. (2019). Trade union representatives from ethnic minorities. representation revisited. *Transfer: European Review of Labour and Research*, 25(4):437–450.

Halla, M., Wagner, A. F., and Zweimüller, J. (2017). Immigration and voting for the far right. *Journal of the European Economic Association*, 15(6):1341–1385.

Head, K., Mayer, T., and Ries, J. (2010). The erosion of colonial trade linkages after independence. *Journal of International Economics*, 81(1):1–14.

House, F. (2016). Freedom in the world country ratings: 1973–2016. *Database. Washington, DC: Freedom House*.

Hunt, J. (2003). Fair and just working conditions. *Economic and Social Rights under the EU Charter of Fundamental Rights: A legal perspective, Oxford: Hart Publishing*, pages 45–66.

ILO (2019). Ilostat database.

Jaeger, D. A., Ruist, J., and Stuhler, J. (2018). Shift-share instruments and the impact of immigration. Technical report, NBER.

Kranendonk, M. and De Beer, P. (2016). What explains the union membership gap between migrants and natives? *British Journal of Industrial Relations*, 54(4):846–869.

La Porta, R., Lopez-de Silanes, F., and Shleifer, A. (2008). The economic consequences of legal origins. *Journal of Economic Literature*, 46(2):285–332.

La Porta, R., Lopez-de Silanes, F., Shleifer, A., and Vishny, R. W. (1997). Legal determinants of external finance. *The journal of finance*, 52(3):1131–1150.

Lemieux, T. (1998). Estimating the effects of unions on wage inequality in a panel data model with comparative advantage and nonrandom selection. *Journal of Labor Economics*, 16(2):261–291.

Lewis, E. (2011). Immigration, skill mix, and capital skill complementarity. *The Quarterly Journal of Economics*, 126(2):1029–1069.

Luttmer, E. F. and Singhal, M. (2011). Culture, context, and the taste for redistribution. *American Economic Journal: Economic Policy*, 3(1):157–79.

Manacorda, M., Manning, A., and Wadsworth, J. (2012). The impact of immigration on the structure of wages: theory and evidence from britain. *Journal of the European Economic Association*, 10(1):120–151.

Marshall, M. G., Jaggers, K., and Gurr, T. R. (2002). Polity iv dataset.

Mishel, L. (1986). The structural determinants of union bargaining power. *ILR Review*, 40(1):90–104.

Montalvo, J. G. and Reynal-Querol, M. (2003). Religious polarization and economic development. *Economics Letters*, 80(2):201–210.

Montalvo, J. G. and Reynal-Querol, M. (2005). Ethnic polarization, potential conflict, and civil wars. *American Economic Review*, 95(3):796–816.

Moriconi, S., Peri, G., and Turati, R. (2018). Skill of the immigrants and vote of the natives: Immigration and nationalism in european elections 2007-2016. *NBER (WP 25077)*.

Moriconi, S., Peri, G., and Turati, R. (2019). Immigration and voting for redistribution: Evidence from european elections. *Labour Economics*, 61:101765.

Nataraj, S., Perez-Arce, F., Kumar, K. B., and Srinivasan, S. V. (2014). The impact of labor market regulation on employment in low-income countries: A meta-analysis. *Journal of Economic Surveys*, 28(3):551–572.

Nickell, S. (1981). Biases in dynamic models with fixed effects. *Econometrica: Journal of the Econometric Society*, pages 1417–1426.

OECD (2013). OECD Indicators of Employment Protection Legislation. Data retrieved from OECD Indicators of Employment Protection, https://www.oecd.org/els/emp/oecdindicatorsofemploymentprotection.htm.

Ortega, F. and Peri, G. (2014). Openness and income: The roles of trade and migration. *Journal of International Economics*, 92(2):231–251.

Ottaviano, G. I. and Peri, G. (2006). The economic value of cultural diversity: evidence from us cities. *Journal of Economic Geography*, 6(1):9–44.

Ottaviano, G. I. and Peri, G. (2012). Rethinking the effect of immigration on wages. *Journal of the European Economic Association*, 10(1):152–197.

Özden, Ç., Parsons, C. R., Schiff, M., and Walmsley, T. L. (2011). Where on earth is everybody? The evolution of global bilateral migration 1960–2000. *The World Bank Economic Review*, 25(1):12–56.

Pagano, M. and Volpin, P. (2006). Shareholder protection, stock market development, and politics. *Journal of the European Economic Association*, 4(2-3):315–341.

Peri, G. (2012). The effect of immigration on productivity: Evidence from us states. *Review of Economics and Statistics*, 94(1):348–358.

Peri, G. and Sparber, C. (2009). Task specialization, immigration, and wages. *American Economic Journal: Applied Economics*, 1(3):135–69.

Powell, B., Clark, J. R., and Nowrasteh, A. (2017). Does mass immigration destroy institutions? 1990s israel as a natural experiment. *Journal of Economic Behavior & Organization*, 141:83–95.

Preacher, K. J. and MacCallum, R. C. (2003). Repairing tom swift's electric factor analysis machine. *Understanding statistics: Statistical issues in psychology, education, and the social sciences*, 2(1):13–43.

Roodman, D. (2009). A note on the theme of too many instruments. *Oxford Bulletin of Economics and Statistics*, 71(1):135–158.

Silva, J. S. and Tenreyro, S. (2006). The log of gravity. *The Review of Economics and Statistics*, 88(4):641–658.

Smooha, S. (2008). The mass immigrations to israel: A comparison of the failure of the mizrahi immigrants of the 1950s with the success of the russian immigrants of the 1990s. *Journal of Israeli History*, 27(1):1–27.

Solt, F. (2016). The standardized world income inequality database. *Social Science Quarterly*, 97(5):1267–1281.

Spilimbergo, A. (2009). Democracy and foreign education. *American Economic Review*, 99(1):528–43.

Steinmayr, A. (2020). Contact versus exposure: Refugee presence and voting for the far-right. *Review of Economics and Statistics*, pages 1–47.

Stock, J. H., Yogo, M., and Andrews, D. W. (2005). Identification and inference for econometric models: Essays in honor of thomas rothenberg. *Cambridge Univ Press*.

Total Economy Database (2019). The conference board total economy database™.

Trax, M., Brunow, S., and Suedekum, J. (2015). Cultural diversity and plant-level productivity. *Regional Science and Urban Economics*, 53:85–96.

Turati, R. (2020). Network-based connectedness and the diffusion of cultural traits (dp 2020/12). *IRES Discussion Papers*.

United Nations (2019). International migrant stock 2019. Data retrieved from UN data, https://www.un.org/en/development/desa/population/migration/data/estimates2/estimates19.asp.

Valette, J. (2018). Do migrants transfer productive knowledge back to their origin countries? *The Journal of Development Studies*, 54(9):1637–1656.

Volkens, A., Krause, W., Lehmann, P., Matthieß, T., Merz, N., Regel, S., and Weßels, B. (2019). The manifesto data collection. manifesto project (mrg/cmp/marpor). version 2019b.

Windmeijer, F. (2005). A finite sample correction for the variance of linear efficient two-step gmm estimators. *Journal of Econometrics*, 126(1):25–51.

World Bank (2010). Bilateral migration matrix. Data retrieved from Migration and Remittances Data, https://www.worldbank.org/en/topic/migrationremittancesdiasporaissues/brief/migration-remittances-data.

World Bank (2018). World development indicators database. *The World Bank*.

A Summary of Data and Variable Definition

Table A-1: Variable Definitions and Sources

Variable	Description	Source
PANEL A - WPI		
Workers protection, compacted (2SFA, S.D.)	Calculated using factor analysis composed from 5 subindexes below	Adams et al. (2017)
Working time laws (FA, S.D.)	The index includes following variables: 1) Annual leave entitlements; 2) Public holiday entitlements; 3) Overtime premia; 4) Weekend working; 5) Limits to overtime working; 6) Duration of the normal working week; 7) Maximum daily working time	
Worker dismissal laws (FA, S.D.)	The index includes following variables: 1) Legally mandated notice period; 2) Legally mandated redundancy compensation; 3) Minimum qualifying period of service for normal case of unjust dismissal; 4) Law imposes procedural constraints on dismissal; 5) Law imposes substantive constraints on dismissal; 6) Reinstatement normal remedy for unfair dismissal; 7) Notification of dismissal; 8) Redundancy selection; 9) Priority in re-employment	
Worker representation laws (FA, S.D.)	The index includes following variables: 1) Right to unionization; 2) Right to collective bargaining; 3) Duty to bargain; 4) Extension of collective agreements; 5) Closed shops; 6) Codetermination: board membership; 7) Codetermination and information/consultation of workers	
Industrial action laws (FA, S.D.)	The index includes following variables: 1) Unofficial industrial action; 2) Political industrial action; 3) Secondary industrial action; 4) Lockouts; 5) Right to industrial action	
Employment forms laws (FA, S.D.)	The index includes following variables: 1) The law, as opposed to the contracting parties, determines the legal status of the worker; 2) Part-time workers have the right to equal treatment with full-time workers; 3) The cost of dismissing part-time workers is equal in proportionate terms to the cost of dismissing full-time workers; 4) Fixed-term contracts are allowed only for work of limited duration; 5) Fixed-term workers have the right to equal treatment with permanent workers; 6) Maximum duration of fixed-term contracts; 7) Agency work is prohibited or strictly controlled; 8) Agency workers have the right to equal treatment with permanent workers of the user undertaking	
PANEL B - Country Level Variables		
Share of immigrants	Share of immigrants over 2000 population (%)	Artuç et al. (2014); World Bank (2010)
Epidemiological Effect	Epidemiological term (see Eq. (2))	Adams et al. (2017); Artuç et al. (2014); World Bank (2010)
GDP per capita (log)	Real GDP/capita at constant 2011 national prices (in mil. 2011US$)	Feenstra et al. (2015)
Polity2	Measure of political regime. Time-varying dummy =1 (Democratic regime) for polity score greater or equal to 5 and otherwise =0 (Autocratic regime)	Marshall et al. (2002)
Human capital (log)	Years of schooling	Barro and Lee (2013)
Rule of Law	Rule of Law index	Coppedge et al. (2020)
Shadow Economy	Size of the shadow economy	Elgin et al. (2012)
Civil Liberties	The civil liberties index	House (2016)
Economic Freedom Index	The Economic Freedom Index	Gwartney et al. (2018)
Trade / GDP	Trade (Exports plus Imports) as a share of GDP	World Bank (2018)
ctfp	TFP level at current PPPs (USA=1)	Feenstra et al. (2015)
PANEL C - Labor Market Outcomes Variables		
Unemp rate	Share of unemployed in the total labor force (national estimate)	ILO (2019)
Labor productivity	Labor productivity per hour worked in 2017 USD (converted to 2017 price level with updated 2011 PPPs)	Total Economy Database (2019)
Hrs Worked Pc	Annual hours worked per worker	Total Economy Database (2019)
Gini	Estimate of Gini index of inequality in equivalized (square root scale) household disposable (post-tax, post-transfer) income, using Luxembourg Income Study data as the standard	Solt (2016)
Common law	Time invariant. Dummy = 1 for common law and civil law otherwise	La Porta et al. (2008)
PANEL D - Gravity Model Variables		CEPII (2010), Head et al. (2010)
Bilateral weighted distance	Geodesic distance in km	
Colonial relationship	Dummy = 1 for pair ever in colonial relationship	
Common ethnic language	Dummy = 1 for pair with language shared by at least 9% of populations	
Common official language	Dummy = 1 for pair with same official language	
Horizontal Time difference	Difference in time zones in hours	

Table A-2: Summary Statistics - 70 Countries, 1970-2010

Variable	Mean	S.D.	Min.	Max.	Obs.	Corr
PANEL A - Workers Protection Index						
$WPI_{\ t}$ (2SFA)	0.00	1.00	-2.55	2.69	630	1.00***
$EmptForm_{\ t}$ (FA)	-0.00	1.00	-1.31	2.79	630	0.74***
$WorkTime_{\ t}$ (FA)	-0.00	1.00	-2.87	1.61	630	0.50***
$WkrDismis_{\ t}$ (FA)	-0.00	1.00	-2.23	1.99	630	0.65***
$WkrRepr_{\ t}$ (FA)	-0.00	1.00	-1.81	2.35	630	0.78***
$IndAction_{\ t}$ (FA)	-0.00	1.00	-1.35	2.30	630	0.29***
PANEL B - Country Level Variables						
Share of migrants $_{t-1}$	5.71	10.19	0.06	135.43	554	
Epidemiological effect $_{t-1}$	0.01	1.01	-3.02	2.68	554	
GDP per capita (log) $_{t-1}$	-4.68	1.11	-7.28	-1.68	554	
Polity2 $_{t-1}$	0.58	0.49	0.00	1.00	554	
Human capital (log) $_{t-1}$	1.61	0.68	-1.63	2.57	554	
Rule of Law $_{t-1}$	0.61	0.32	0.03	1.00	554	
Shadow Economy $_{t-1}$	31.15	14.59	8.11	71.99	495	
Civil Liberties $_{t-1}$	4.73	1.85	1.00	7.00	487	
Economic Freedom Index $_{t-1}$	5.91	1.39	2.45	9.05	499	
Trade / GDP $_{t-1}$	65.32	50.23	1.24	423.28	532	
OECD^{HIC}	0.34	0.47	0.00	1.00	554	
Common law	0.32	0.47	0.00	1.00	554	
PANEL C - Labor Market Outcomes Variables						
Unemp rate $_{t}$	7.00	5.00	0.20	31.84	322	
Labor productivity $_{t}$	28.54	20.13	0.64	95.33	394	
Hrs Worked Pc $_{t}$	1951.26	275.32	1389.88	2746.89	394	
Gini $_{t}$	0.38	0.09	0.20	0.59	495	
PANEL D - Gravity Model Variables						
Bilateral weighted distance $_{t}$	8249.82	4622.22	1.00	19781.39	388287	
Colonial relationship $_{t}$	0.01	0.10	0.00	1.00	388287	
Common ethnic language $_{t}$	0.16	0.36	0.00	1.00	388287	
Common official language $_{t}$	0.17	0.37	0.00	1.00	388287	
Common border $_{t}$	0.01	0.12	0.00	1.00	388287	
Horizontal Time difference $_{t}$	4.86	3.46	0.00	12.00	388287	

Note: For detailed sources and definitions, see Appendix Table A-1. * p<0.1, ** p<0.05, *** p<0.01.

Table A-3: Workers Protection Index - Summary Statistics by Country

Country	Mean	Min	Max	Country	Mean	Min	Max	Country	Mean	Min	Max
Algeria	1.59	0.31	2.34	Honduras	0.18	0.01	0.2	Portugal	2.05	-0.21	2.69
Argentina	0.86	0.18	1.21	India	-0.01	-0.37	0.17	Qatar	-0.68	-0.77	-0.63
Australia	-1.38	-1.68	-0.61	Indonesia	0.36	0.11	0.85	Saudi Arabia	-1.06	-1.15	-0.53
Austria	1	0.13	1.48	Iran	-0.87	-1.4	-0.35	Senegal	0.69	0.24	1.07
Bangladesh	-0.34	-0.38	-0.05	Ireland	-0.86	-1.63	0.44	Singapore	-0.9	-0.99	-0.66
Belgium	0.39	-0.39	1.25	Israel	-0.08	-0.39	0.43	South Africa	-0.27	-0.76	0.47
Bolivia	0.49	0.35	1.18	Italy	1.63	1.52	1.78	South Korea	0.36	-0.39	1.51
Brazil	0.38	-0.04	0.78	Japan	-0.58	-0.65	-0.49	Spain	1.11	-0.32	1.72
Cameroon	0.06	-0.36	0.24	Jordan	-0.75	-0.95	-0.2	Sri Lanka	-0.05	-0.14	0.08
Canada	-0.93	-1.16	-0.62	Kenya	-1.2	-1.53	-0.43	Sudan	-1.13	-1.73	-0.69
Chile	-0.35	-0.8	0.2	Luxembourg	1.2	-0.96	2.36	Sweden	0.79	-1.29	1.83
Colombia	0	-0.19	0.22	Malaysia	-0.65	-1.05	-0.43	Switzerland	-0.23	-0.57	0.13
Costa Rica	-0.56	-0.57	-0.53	Mali	-0.35	-0.6	-0.01	Syria	-0.57	-0.62	-0.21
Cote d'Ivoire	-0.92	-1.58	0.16	Mexico	0.31	0.31	0.31	Thailand	-0.41	-1.91	0.07
Cyprus	0	-0.21	0.75	Morocco	0.76	-0.07	1.38	Tunisia	0.32	-0.43	1.12
Denmark	0.29	-0.79	0.92	Myanmar	-1.19	-1.2	-1.1	Turkey	0.02	-0.26	0.99
Dominican Republic	-0.53	-0.6	-0.21	Netherlands	0.89	0.19	1.9	Uganda	-1.29	-1.7	-0.3
Ecuador	0.81	0.07	1.57	New Zealand	-0.93	-1.65	-0.52	United Kingdom	-1.15	-1.83	-0.08
Egypt	0.46	-0.14	0.84	Norway	1	-0.04	2.13	United States	-2.46	-2.55	-2.38
Finland	0.77	-0.56	1.85	Pakistan	1.12	-0.25	1.35	Uruguay	0.27	-0.63	0.67
France	1.88	-0.1	2.5	Panama	-0.25	-1.45	0.09	Venezuela	0.79	0.26	1.64
Germany	1.45	1.16	1.94	Paraguay	0.28	0.16	0.44	Zambia	-1.4	-2.09	-1.07
Ghana	-0.44	-0.89	0.32	Peru	0.65	-0.22	1.21				
Greece	0.09	-1.12	1.22	Philippines	-0.57	-2.3	0.16				

Note: List of all 70 countries used in the analysis. Balanced panel with 9 five-year periods for each country. The values presented are the average, minimum and maximum values for the standardized measures of workers protection index during the 1970-2010 period.

Figure A-1: Workers Protection Index Sub-components - Evolution over Time

Note: authors' calculations on CBR Leximetric Data. Figures plots the average standardized workers protection index and its five sub-components.

B Factor Analysis

Table B-1: Factor Analysis - Employment Forms & Working Time

Employment Forms

Factor	(1) Eigenvalue	(2) Difference	(3) Proportion
Factor1	2.047	1.576	0.910
Factor2	0.475	0.168	0.211
Factor3	0.307	0.187	0.136
Factor4	0.120	0.144	0.053

Working Time

Factor	(1) Eigenvalue	(2) Difference	(3) Proportion
Factor1	1.338	0.887	1.049
Factor2	0.451	0.351	0.353
Factor3	0.100	0.104	0.079

Table B-2: Factor Loadings - Employment Forms & Working Time

Employment Forms

Variable	Factor 1	Factor 2	Factor 3	Factor 4
$EmptForm_1$	0.394	0.341	-0.084	-0.109
$EmptForm_2$	0.537	-0.338	-0.154	-0.036
$EmptForm_3$	0.139	-0.004	0.087	0.275
$EmptForm_4$	0.517	0.276	-0.232	-0.015
$EmptForm_5$	0.701	-0.308	-0.084	-0.010
$EmptForm_6$	0.544	0.188	-0.073	0.163
$EmptForm_7$	0.410	0.175	0.322	-0.047
$EmptForm_8$	0.602	-0.088	0.315	-0.050

Working Time

Variable	Factor 1	Factor 2	Factor 3
$WorkTime_1$	0.335	0.409	-0.073
$WorkTime_2$	0.343	0.160	0.068
$WorkTime_3$	0.369	-0.052	0.170
$WorkTime_4$	0.487	-0.008	0.178
$WorkTime_5$	0.621	-0.159	-0.120
$WorkTime_6$	0.050	0.453	-0.020
$WorkTime_7$	0.589	-0.158	-0.123

Table B-3: Correlations - Employment Form & Working Time

Employment Forms

	$EmptForm_{Ind}$
$EmptForm_1$	0.452***
$EmptForm_2$	0.615***
$EmptForm_3$	0.159***
$EmptForm_4$	0.592***
$EmptForm_5$	0.804***
$EmptForm_6$	0.624***
$EmptForm_7$	0.470***
$EmptForm_8$	0.690***

Working Time

	$WorkTime_{Ind}$
$WorkTime_1$	0.420***
$WorkTime_2$	0.430***
$WorkTime_3$	0.463***
$WorkTime_4$	0.610***
$WorkTime_5$	0.778***
$WorkTime_6$	0.0633***
$WorkTime_7$	0.737***

Table B-4: Factor Analysis - Workers Dismissal & Employment Representation

Workers Dismissal

Factor	(1) Eigenvalue	(2) Difference	(3) Proportion
Factor1	1.878	1.259	0.905
Factor2	0.619	0.374	0.298
Factor3	0.245	0.101	0.118
Factor4	0.143	0.183	0.069

Employment Representation

Factor	(1) Eigenvalue	(2) Difference	(3) Proportion
Factor1	1.047	0.507	0.874
Factor2	0.540	0.320	0.451
Factor3	0.221	0.221	0.184

Table B-5: Factor Loadings - Workers Dismissal & Employment Representation

Workers Dismissal

Variable	Factor 1	Factor 2	Factor 3	Factor 4
$WkrDismis_1$	0.024	0.174	0.152	0.064
$WkrDismis_2$	0.046	-0.092	0.246	-0.173
$WkrDismis_3$	0.121	-0.091	0.044	0.254
$WkrDismis_4$	0.261	-0.093	-0.268	-0.151
$WkrDismis_5$	0.254	-0.189	0.167	-0.071
$WkrDismis_6$	0.192	-0.157	-0.013	0.167
$WkrDismis_7$	0.191	-0.001	-0.052	-0.049
$WkrDismis_8$	0.166	0.386	-0.137	-0.029
$WkrDismis_9$	0.176	0.277	0.188	0.020

Employment Representation

Variable	Factor 1	Factor 2	Factor 3
$WkrRepr_1$	0.185	0.199	0.028
$WkrRepr_2$	0.209	0.242	0.060
$WkrRepr_3$	0.101	0.083	0.311
$WkrRepr_4$	0.147	0.207	-0.107
$WkrRepr_5$	0.036	-0.202	0.209
$WkrRepr_6$	0.250	-0.238	0.036
$WkrRepr_7$	0.390	-0.223	-0.178

Table B-6: Correlations - Workers Dismissal & Employment Representation

Workers Dismissal

	$WkrDismis_{Ind}$
$WkrDismis_1$	0.0864***
$WkrDismis_2$	0.190***
$WkrDismis_3$	0.439***
$WkrDismis_4$	0.725***
$WkrDismis_5$	0.711***
$WkrDismis_6$	0.615***
$WkrDismis_7$	0.640***
$WkrDismis_8$	0.510***
$WkrDismis_9$	0.525***

Employment Representation

	$WkrRepr_{Ind}$
$WkrRepr_1$	0.496***
$WkrRepr_2$	0.528***
$WkrRepr_3$	0.237***
$WkrRepr_4$	0.411***
$WkrRepr_5$	0.138***
$WkrRepr_6$	0.634***
$WkrRepr_7$	0.798***

Table B-7: Factor Analysis - Industrial Actions & Workers Protection Index

Industrial Actions

Factor	(1) Eigenvalue	(2) Difference	(3) Proportion
Factor1	0.922	0.477	1.134
Factor2	0.445	0.577	0.547

Workers Protection Index

Factor	(1) Eigenvalue	(2) Difference	(3) Proportion
Factor1	1.186	1.176	1.450
Factor2	0.010	0.043	0.012

Table B-8: Factor Loadings - Industrial Actions & Workers Protection Index

Industrial Actions

Variable	Factor 1	Factor 2
$IndAction_1$	0.449	-0.252
$IndAction_2$	0.562	0.058
$IndAction_3$	0.587	-0.116
$IndAction_4$	0.185	0.410
$IndAction_5$	0.163	0.443

Workers Protection Index

Variable	Factor 1	Factor 2
$EmptForm_{Ind}$	0.305	-0.039
$WorkTime_{Ind}$	0.179	0.024
$WkrDismis_{Ind}$	0.245	-0.015
$WkrRepr_{Ind}$	0.334	0.001
$IndAction_{Ind}$	0.081	0.095

Table B-9: Correlations - Industrial Actions & Workers Protection Index

Industrial Actions

	$IndAction_{Ind}$
$IndAction_1$	0.613***
$IndAction_2$	0.767***
$IndAction_3$	0.801***
$IndAction_4$	0.253***
$IndAction_5$	0.223***

Workers Protection Index

	WPI
$EmptForm_{Ind}$	0.752***
$WorkTime_{Ind}$	0.522***
$WkrDismis_{Ind}$	0.661***
$WkrRepr_{Ind}$	0.796***
$IndAction_{Ind}$	0.255***

C Additional Analysis

Table C-1: Weak Instrument Tests

	(1)	(2)
Estimation:	IV	IV
Time:	1970-2010	1970-2010
Dep Var:	WPI	WPI
Equation:	Levels	Differences
$Prot_{t-1}$	0.922***	0.004
	(0.020)	(0.044)
$Share\ Mig_{t-1}$	-0.000	0.002
	(0.001)	(0.005)
$Epid_{t-1}$	0.057***	-0.400
	(0.021)	(0.471)
Year FE	✓	✓
Instruments	10	9
Observations	560	490
KP LM test p-val	0.00	0.00
KP F-stat	812.85	17.00
KP rel bias¿30%	0.00	0.00

Note: Table reports weak instrument diagnostics. For the KP p-val, since critical values do not exist for the KP statistic, we follow the approach suggested by Bazzi and Clemens (2013) and use the Stock et al. (2005) 30 percent of the OLS bias critical values for the multivariate statistic. Standard errors are clustered at country level. * p<0.1, ** p<0.05, *** p<0.01.

Table C-2: Correlation between pre-1960 Indicators and Shift-Share based Epidemiological Term Growth

	(1)	(2)	(3)	(4)
Estimation:	OLS	OLS	OLS	OLS
Dep var:	$\widetilde{Epid}^{SS}_{70-80}$	$\widetilde{Epid}^{SS}_{70-90}$	$\widetilde{Epid}^{SS}_{70-00}$	$\widetilde{Epid}^{SS}_{70-10}$
Panel A - GDP per capita				
	0.235	0.361	-0.121	-0.032
	(0.570)	(0.577)	(0.300)	(0.251)
Countries/Observations	68	43	43	40
Panel B - Population				
	1.492	0.033	0.190	0.121
	(0.931)	(0.618)	(0.365)	(0.298)
Countries/Observations	70	45	45	44
Panel C - Legal origin: Common Law				
	0.081	0.065	0.110	0.072
	(0.310)	(0.312)	(0.277)	(0.307)
Countries/Observations	70	70	70	70

Note: authors' calculations on World Bank and Maddison Project data. * p<0.1, ** p<0.05, *** p<0.01. The dependent variable is our standardized measure of workers protection. In Panel A (GDP per capita) and B (Population) the table shows the predicted coefficients regressing the growth rate of macro indicators between: 1950 to 1960 (col. 1), 1940 and 1960 (col. 2), 1930 and 1960 (col. 3) 1920 and 1960 (col. 4) on the national predicted epidemiological effect with our shift-share strategy over different periods. Panel C shows the predicted coefficients of common law legal origin the national predicted epidemiological effect with our shift-share strategy over different periods.

Table C-3: Robustness Checks: Lag Structure of Instruments

	(1)	(2)	(3)	(4)	(5)	(6)
Estimation:	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var:	WPI	WPI	WPI	WPI	WPI	WPI
$Prot_{t-1}$	0.848***	0.822***	0.848***	0.851***	0.829***	0.829***
	(0.054)	(0.081)	(0.054)	(0.054)	(0.047)	(0.048)
$Share\ Mig_{t-1}$	-0.006*	-0.004	-0.006*	-0.006	-0.006*	-0.007*
	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)
$Epid_{t-1}$	0.085***	0.106***	0.081***	0.076***	0.077***	0.077***
	(0.028)	(0.039)	(0.029)	(0.028)	(0.028)	(0.028)
Controls	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00	0.00	0.00
AR2 p-val	0.52	0.48	0.54	0.55	0.57	0.57
Hansen p-val	0.78	0.11	0.61	0.80	0.49	0.57
Diff-Hansen p-val	0.91	0.30	0.91	0.79	0.74	0.83
Instruments	22	28	23	27	31	33
Countries	70	70	70	70	70	70
Observations	554	554	554	554	554	554
$First\ lag\ WPI_{t-1}$	3	3	3	3	4	4
$Last\ lag\ WPI_{t-1}$	4	4	5	6	5	7
$First\ lag\ Controls_{t-1}$	2	4	2	2	2	2
$Last\ lag\ Controls_{t-1}$	3	7	3	4	6	6

Note: standard errors are clustered at country level. * p<0.1, ** p<0.05, *** p<0.01. The dependent variable is our standardized workers protection index. As controls we include logarithm of GDP per capita, polity2 index and logarithm of human capital. Our main variables of interest are the share of immigrants and the epidemiological effect: the former is instrumented using the predicted immigration share from a gravity model and the latter with the epidemiological effect using predicted bilateral immigration stocks from a shift-share approach. Each column includes a different set of lags. See Appendix A for further information on the variables.

Table C-4: Robustness Checks: Adao Standard Error Correction

	(1)	(2)	(3)	(4)	(5)	(6)
Estimation:	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var:	WPI	WPI	WPI	WPI	WPI	WPI
SE clustered at:	CNT	POL20	BGD20	IND20	GBR20	MEX20
$Prot_{t-1}$	0.863***	0.863***	0.863***	0.863***	0.863***	0.863***
	(0.057)	(0.052)	(0.057)	(0.067)	(0.055)	(0.049)
$Share\ Mig_{t-1}$	-0.006	-0.006	-0.006	-0.006	-0.006	-0.006
	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)	(0.004)
$Epid_{t-1}$	0.080***	0.080**	0.080**	0.080**	0.080**	0.080*
	(0.030)	(0.029)	(0.029)	(0.032)	(0.031)	(0.038)
Controls	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00	0.00	0.00
AR2 p-val	0.51	0.51	0.51	0.51	0.51	0.51
Hansen p-val	0.79	1.00	1.00	0.97	0.97	1.00
Diff-Hansen p-val	0.84	0.95	1.00	0.86	0.90	1.00
Instruments	28	28	28	28	28	28
Clusters	70	19	15	20	20	16
Countries	70	70	70	70	70	70
Observations	554	554	554	554	554	554

Note: * p<0.1, ** p<0.05, *** p<0.01. The dependent variable is our standardized workers protection index. As controls we include the logarithm of GDP per capita, the polity2 index and the logarithm of human capital. Our main variables of interest are the share of immigrants and the epidemiological effect: the former is instrumented using the predicted immigration share from a gravity model and the latter with the epidemiological effect using predicted bilateral immigration stocks from a shift-share approach. See Appendix A for further information on the variables. The table reports system GMM results across different standard error clusters: country level (col. 1), and grouping countries with similar proportion of immigrants in the year 2000 from Poland (col. 2), Bangladesh (col. 3), India (col. 4), United Kingdom (col. 5) and Mexico (col. 6).

Table C-5: Robustness Checks: Additional Controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Estimation:	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM	S-GMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var:	WPI	WPI	WPI	WPI	WPI	WPI	WPI	WPI
$WPIt-1$	0.834***	0.806***	0.779***	0.857***	0.864***	0.796***	0.815***	0.822***
	(0.073)	(0.068)	(0.079)	(0.065)	(0.066)	(0.082)	(0.070)	(0.065)
$Share\ Mig_{t-1}$	-0.007	-0.003	-0.006**	-0.009	-0.004	-0.005	-0.005	-0.007
	(0.004)	(0.003)	(0.003)	(0.006)	(0.004)	(0.006)	(0.005)	(0.004)
$Epid_{t-1}$	0.079**	0.091**	0.098**	0.071**	0.077**	0.088**	0.077**	0.087**
	(0.031)	(0.035)	(0.038)	(0.029)	(0.034)	(0.042)	(0.030)	(0.034)
$Rule\ Of\ Law_{t-1}$	-0.134							
	(0.305)							
$Civil\ Liberties_{t-1}$		0.122**						
		(0.054)						
$Shadow\ Econ_{t-1}$			0.003					
			(0.007)					
$Econ\ Freedom_{t-1}$				0.015				
				(0.044)				
$Trade/GDP_{t-1}$					-0.002*			
					(0.001)			
EU						0.269*		
						(0.144)		
ILO							0.365	
							(0.491)	
WTO								0.075
								(0.084)
Controls	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AR2 p-val	0.53	0.34	0.78	0.91	0.81	0.59	0.56	0.61
Hansen p-val	0.80	0.83	0.85	0.62	0.92	0.06	0.42	0.21
Diff-Hansen p-val	0.81	0.62	0.70	0.56	0.87	0.12	0.42	0.81
Instruments	32	31	32	32	32	31	32	31
Countries	70	70	64	67	70	70	70	70
Observations	554	487	495	499	532	554	554	554

Note: standard errors are clustered at country level. * p<0.1, ** p<0.05, *** p<0.01. The dependent variable is our standardized workers protection index. As controls we include the logarithm of GDP per capita, the polity2 index and the logarithm of human capital. Our main variables of interest are the share of immigrants and the epidemiological effect: the former is instrumented using the predicted immigration share from a gravity model and the latter with the epidemiological effect using predicted bilateral immigration stocks from a shift-share approach. As additional controls we include rule of law index, size of the shadow economy, civil liberties, economic freedom index, trade (exports plus Imports) as a share of GDP, European Union membership, International Labour Organization membership and World Trade Organization membership. See Appendix A for further information on the variables.

Table C-6: Cross-sectional Determinants of Worker Protection Index

	(1)	(2)	(3)	(4)	(5)	(6)
Estimation:	OLS	OLS	OLS	OLS	OLS	OLS
Dep var:	WPI	WPI	WPI	WPI	WPI	WPI
$Share\ Mig$	-0.027***	-0.018**	-0.018	-0.029***	-0.031***	-0.010
	(0.009)	(0.008)	(0.013)	(0.010)	(0.010)	(0.014)
$Epid$	0.386***	0.256***	0.358***	0.383***	0.394***	0.150
	(0.092)	(0.090)	(0.094)	(0.093)	(0.089)	(0.094)
$ln(GDP)$	0.332**	0.211	0.313	0.335**	0.361**	0.308
	(0.145)	(0.139)	(0.253)	(0.144)	(0.149)	(0.294)
$Polity2$	0.478*	0.548*	0.567*	0.551*	0.368	0.820**
	(0.272)	(0.293)	(0.287)	(0.309)	(0.271)	(0.364)
$ln(HC)$	-0.454	-0.340	-0.583	-0.509	-0.434	-0.677
	(0.296)	(0.306)	(0.472)	(0.329)	(0.278)	(0.472)
$Common\ Law$		-0.684***				-0.949***
		(0.233)				(0.266)
ctfp			-0.313			-0.457
			(0.717)			(0.786)
$Trade/GDP$				0.002		0.002
				(0.002)		(0.002)
$unemp\ rate$					-0.027	-0.003
					(0.019)	(0.025)
Adj. R-Square	0.32	0.42	0.25	0.32	0.31	0.40
Observations	70	70	61	70	68	59

Note: standard errors are clustered at country level. * p<0.1, ** p<0.05, *** p<0.01. The dependent variable is the country average workers protection index over the entire time span. As controls we include logarithm of GDP per capita, polity2 index, logarithm of human capital, a dummy associated to country legal origin, logarithm of productivity, trade as a share of GDP and share of unemployed workers. Our main variables of interest are the share of immigrants and the epidemiological effect. See A for further information on the variables.

Table C-7: Predicted Stocks Through Gravity Model

	(1)
Estimation:	PPML
Time:	1970-2010
Dep var:	$Stock_{c,j,t}$
$Dist^{w}_{c,j} * I_{1970}$	-0.038***
	(0.009)
$Dist^{w}_{c,j} * I_{1975}$	-0.037***
	(0.008)
$Dist^{w}_{c,j} * I_{1980}$	-0.035***
	(0.008)
$Dist^{w}_{c,j} * I_{1985}$	-0.034***
	(0.007)
$Dist^{w}_{c,j} * I_{1990}$	-0.033***
	(0.006)
$Dist^{w}_{c,j} * I_{1995}$	-0.031***
	(0.006)
$Dist^{w}_{c,j} * I_{2000}$	-0.030***
	(0.005)
$Dist^{w}_{c,j} * I_{2005}$	-0.029***
	(0.005)
$Dist^{w}_{c,j} * I_{2010}$	-0.029***
	(0.004)
Observations	137970
Countries	70
Partial R-Square	0.44

Note: authors' calculations on World Bank data. Standard errors are clustered at country level. * p<0.1, ** p<0.05, *** p<0.01. The set of controls includes the interactions between bilateral distance (weighted by population size) and year dummies, year fixed-effects and destination country fixed-effects. The dependent variable is the bilateral migration stock.

Table C-8: WPI Subcomponents and Labor Market Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Estimation:	FE	FE	FE	FE	FE	FE	FE	FE
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var:	Unempl	Labor Produc	Hours worked pc	Gini	Unempl	Labor Produc	Hours worked pc	Gini
Panel A								
$CollectAct_t$	-0.158	0.038	-25.701	-0.006				
	(0.335)	(1.626)	(18.836)	(0.004)				
$CollectAct_{t-1}$					0.376	-0.106	-26.358	-0.005
					(0.304)	(1.435)	(20.139)	(0.004)
Panel B								
$WkrRepr_t$	1.374*	0.752	-27.223*	-0.004				
	(0.704)	(1.218)	(15.984)	(0.004)				
$WkrRepr_{t-1}$					1.788**	0.633	-24.772*	-0.004
					(0.782)	(1.128)	(13.353)	(0.003)
Panel C								
$WkrDismis_t$	0.947	4.182**	-33.619*	-0.004				
	(0.719)	(1.995)	(17.996)	(0.005)				
$WkrDismis_{t-1}$					0.932*	4.103**	-27.838*	-0.001
					(0.525)	(1.712)	(15.891)	(0.005)
Panel D								
$WorkTime_t$	0.131	-0.295	18.508	-0.007				
	(0.718)	(1.328)	(18.508)	(0.004)				
$WorkTime_{t-1}$					-0.458	-0.007	13.557	-0.008*
					(0.604)	(1.096)	(17.743)	(0.004)
Panel E								
$EmptForm_t$	0.986**	4.266***	-31.317**	-0.004				
	(0.405)	(1.037)	(13.138)	(0.003)				
$EmptForm_{t-1}$					0.877**	3.373***	-22.104*	-0.002
					(0.382)	(1.024)	(11.788)	(0.004)
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓
Countries	68	47	47	69	68	47	47	69
Observations	322	394	394	495	302	353	353	466

Note: standard errors are clustered at country level. * p<0.1, ** p<0.05, *** p<0.01. The dependent variables are: unemployment rate, labor productivity per hour worked, annual hours worked per worker and Gini after tax. Each panel provides the estimates associated to the following variables of interests: industrial action laws ($IndAction$), worker representation laws ($WkrRepr$), dismissal laws ($WkrDismis$), working time laws ($WorkTime$), employment forms laws ($EmptForm$). See Appendix A for further information on the variables.

Últims documents de treball publicats

Núm	Títol	Autor	Data
21.01	Do you want to migrate to the United States? Migration intentions and Cultural Traits in Latin America	Riccardo Turati	Gener 2021
20.12	The determinants of equality in CO2 emissions per capita between developing countries	Emilio Padilla / Evans Jadotte	Octubre 2020
20.11	Congestion in highways when tolls and railroads matter: Evidence from European cities	Miquel-Àngel Garcia-López / Ilias Pasidis / Elisabet Viladecans-Marsal	Octubre 2020
20.10	Forgetting –by-not-doing: The case of surgeons and cesarean sections	Gabriel A. Facchini Palma	Octubre 2020
20.09	Low Staffing in the Maternity Word: Keep Calm and call the Surgeon	Gabriel A. Facchini Palma	Setembre 2020
20.08	Impact of public transport strikes on air pollution and transport modes substitution in Barcelona	Lyna González / Jordi Perdiguero / Àlex González	Setembre 2020
20.07	Globalización y responsabilidad en los problemas ecológicos	Jordi Roca Jusmet / Emilio Padilla Rosa	Setembre 2020
20.06	Do short-term rental platforms affect housing markets? Evidence form Airbnb in Barcelona	Miquel-Àgel Garcia / Jordi Jofre / Rodrigo Martínez / Mariona Segú	Setembre 2020
20.05	The driving factors of CO2 emissions from electricity generation in Spain: A decomposition analysis	Vicent Alcántara / Emilio Padilla / Pablo del Río	Juliol 2020
20.04	CO_2 What do divided cities have in common? Am international comparison of income segregation	Paolo Veneri/ Andre Comandon / Miquel-Àngel Garcia López / Michiel N.Daams	Juliol 2020
20.03	CO_2 emissions of the construction sector in Spain during the real estate boom: input-output subsystem analysis and decomposition	Vicent Alcántara/ Emilio Padilla	Juny 2020
20.02	The Direct Rebound Effect of Electricity Energy Services in Spanish Households: Evidence from Error Correction Model and System GMM estimates	Martín Bordón / Jaume Freire / Emilio Padilla	Maig 2020