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ABSTRACT

International Immigration and Labor Regulation*

The existing literature investigating the labor market impact of immigration assumes, implicitly or explicitly, that the law or labor regulation is exogenous to immigration. To test this assumption, we build a novel workers' protection measure based on 36 labor law variables that capture labor regulation 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 establish a new result: immigrants' norms and experience of labor regulation influence the evolution of host countries labor law regulation. This effect is particularly strong for two components of workers' protection: worker representation laws and employment forms laws. Our main results are consistent with suggestive evidence on the transmission of preferences from migrants to their offspring (vertical transmission), and from migrants to natives or local political parties (horizontal transmission). Finally, we find that the size of the immigrant population per se has a small and negligible impact on host country labor market regulation.

JEL Classification: J61, K31, F22

Keywords: international migration, labor market institutions, labor regulation, legal transplants

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I Introduction

An extensive literature measuring the effect of immigration on native labor market outcomes finds that, on average, immigration has a small or null effect, depending on the methodology and the context of the analysis (see Edo (2019) for a recent survey of the literature). However, one systematic feature of the literature is that labor regulation is assumed, either implicitly or explicitly, to be exogenous to immigration. To our knowledge, this assumption has never been tested, and the labor regulation is usually argued to be implicitly accounted for with the inclusion of fixed-effects.[1]

However, concerns about the impact of immigration on countries' institutions have been raised in response to increasing inflows of immigrants from culturally and institutionally diverse countries (Collier, 2013; Borjas, 2015). Recent evidence also suggests that immigrants' origin-specific preferences influence natives' preferences and institutions (Giuliano and Tabellini, 2021; Miho et al., 2023). Anecdotal evidence, such as the story of Samuel Gompers, born in London in 1850 and later becoming the founder and president of the American Federation of Labor (AFL) in the US, highlights immigrants' role in shaping labor unions and US labor history (Greenbaum, 1966). Similarly, Swedish immigration to the US in the early 20^{th} century contributed to the spread of labor unions across the American states (Nordahl, 1994; Bengston, 1999; Karadja and Prawitz, 2019).

This paper empirically tests this assumption by studying the impact of immigration on labor regulation, using a dataset of 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 novel measure of labor regulation that focuses on workers' protection, which we call the *workers' protection index* (WPI). Compared to existing measures, such as Botero et al. (2004) or OECD (2013), our index covers a longer time span for a large set of countries, allowing us to track the evolution of labor regulation across developed and developing countries. *Second*, we investigate the impact of immigration on workers' protection, both in terms of size and composition, due to their distinct effect on the labor market. The size of the immigrant population mechanically influences both labor supply and skill composition of the workforce, which could have far-reaching implications for labor regulation. Regarding the composition of the immigrant population, we adopt an epidemiological approach, as suggested in the literature (Spilimbergo, 2009; Docquier et al., 2016; Valette, 2018; Lodigiani and Salomone, 2020). Immigrants' experience with regulation in their countries of origin can influence their behavior in the destination country, thereby affecting the functioning of the labor market and the workers' protection regulation. *Third*, by looking at the past four decades (medium-run), our empirical setup distinguishes from the majority of the literature, which mostly focuses on short-run (limited external validity) or long-run historical events (usually limited as they do not track the time periods in between and have to assume persistency of the effect). The medium-run time horizon is distinctive and important for identification, as labor regulation is persistent over time and slowly adapts to changes in country-specific conditions.

[1] Once explicitly accounted for as an exogenous and time-invariant factor, few papers show that heterogeneity in the level of labor regulation, such as the presence of minimum wages or the rigidity of labor contracts, shapes immigrants' labor market impact (Angrist and Kugler, 2003; D'Amuri and Peri, 2014; Edo, 2016; Edo and Rapoport, 2019)

To identify the causal effect of immigration, we adopt a dynamic panel specification over four decades – accounting for the high persistency of worker's protection regulation – and estimate it with a system GMM with both internal and external instruments. Internal instruments are used to remove the Nickell bias in the lag term (Nickell, 1981). Being aware of immigrants' non-random sorting across countries and the potential presence of time-varying omitted factors that could influence simultaneously workers' protection regulation and migration location, we use external instruments relying on well-known strategies. Namely, the shift-share approach (Card, 2001; Moriconi et al., 2022b) to instrument the composition effect of immigration, and the gravity-model based approach (Alesina et al., 2016; Docquier et al., 2020) to instrument the size effect of immigration.

In terms of exclusion restriction and identifying assumptions, common critiques of the shift-share approach indicate a possible threat from 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). A wide set of historical events that undermine persistent local factors (e.g., the fall of the 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) assuage these concerns in our setting. Moreover, our approach follows Goldsmith-Pinkham et al. (2020) which relies on the exogeneity of the initial shares as identifying assumption. We show no statistically significant correlation between the initial shares of relevant origin countries for our instrument and initial conditions in destination countries. In addition, we find no correlation between our predicted measures and pre-period economic and social trends. We also observe no significant variation in the error terms after clustering countries by similar distribution of immigrants' origin countries in the 1960s. As for the validity of the exclusion restriction of the gravity-model approach, concerns would arise if the included gravity controls were to affect the evolution of labor regulation through other channels, such as trade or foreign direct investment. However, the highly parsimonious estimated gravity model is less likely to violate the exclusion restriction and allows us for a more causal interpretation of the results once the predicted stocks are used.

Our paper provides three main findings. *First*, we find a strong and positive effect of migrants' level of workers' protection in their origin countries—measured by an epidemiological term —on workers' protection in destination countries.[2] This result is consistent with the concept of legal transplants from the comparative law literature, and the anecdotal evidence of Samuel Gompers or the Swedish immigration to the United States. One standard deviation increase in the epidemiological term increases the workers' protection index by 7.8% of WPI standard deviations. In addition, we find that the immigration size effect has a small negative or null impact on workers' protection. *Second*, our results indicate that two areas of labor regulation are particularly influenced by immigration: worker representation laws (e.g., laws concerning the right to unionize or allowing collective bargaining) and employment forms laws

[2] Namely, receiving immigrants' from countries with high levels of workers' protection (such as France or Germany) positively influence the evolution of workers' protection in destination countries; conversely, immigrants from countries with low levels of workers' protection (such as the US or Australia) decrease workers' protection in destination countries.

(e.g., laws concerning the flexibility of contracts). *Third*, consistent with the literature suggesting a potential transmission of preferences from migrants to the host society (Rapoport et al., 2021; Giuliano and Tabellini, 2021; Miho et al., 2023), we provide suggestive evidence that natives' unionization rates and political parties' attitudes towards labor groups are influenced by the exposure to immigrants' labor regulation norms (horizontal transmission). We also provide mild evidence that 2^{nd} generation migrants preferences and attitudes towards labor market protection and government intervention are positively related to their father's country of origin labor regulation (i.e., vertical transmission).

This paper contributes to three broad strands of literature. The first concerns the overall impact of migration on the recipient country's labor market, and more specifically on natives' labor market outcomes. Overall, it is shown that, on average, immigration has a small or null effect on natives' wages and employment (Borjas, 2003; Peri and Sparber, 2009; Ottaviano and Peri, 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 by exploring the heterogeneous effects across labor market institutions and regulations (Angrist and Kugler, 2003; D'Amuri and Peri, 2014; Edo, 2016; Edo and Rapoport, 2019; Foged et al., 2022; Edo and Özgüzel, 2023). Although the literature recognizes the importance of labor regulation for various outcomes, to our knowledge, no previous work has examined the effect of immigration on workers' protection, or more broadly, on labor regulation. Our paper aims to test this assumption by examining the impact of immigration on labor regulation.

The second broad strand of literature to which we contribute investigates determinants of legal institutions' and how they respond to the international movement of factors (Facchini and Willmann, 2005; Clark et al., 2015; Powell et al., 2017; Baudassé et al., 2018). Concerning the demand for labor regulation and the welfare state, evidence shows the relevance of family ties (Alesina et al., 2015) and generalized trust (Algan et al., 2016) as potential determinants. With an origin-country perspective, 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). More related to our paper, Giuliano and Tabellini (2021) shows that the exposure to European immigrants, with stronger preferences for redistribution, during the Age of Mass Migration has a long-lasting effect on Americans political ideology. Similarly, Miho et al. (2023) highlights that regions exposed to higher share of deported Germans due to Stalin's deportation policy hold nowadays more gender egalitarian attitudes. These evidences suggest a transmission of preferences and institutions from origin countries to the recipient ones. Our paper contributes to this rising literature by providing the first set of evidence on the impact of immigration on an important part of institutions, which is the labor regulation.

Third, we contribute to the literature on comparative legal studies, and more specifically on legal transplants. The concept of legal transplants was introduced in the seminal work of Watson (1974). As an example, the author notes that the private law of many countries is fundamentally based on the reception of Roman law and argues that society's laws do not usually develop as a logical outgrowth of solely its own experience. Moreover, the author argues that the law cannot be used as a tool for understanding

societies without taking legal transplants into account. In the contemporary legal transplant literature, comparative lawyers agree that a country's legal culture can be transplanted through legal education, methods, and mentalities (Twining, 2009; Graziadei, 2006; Kalantry, 2020). We contribute directly to this strand of literature by providing the first systematic empirical evidence on how immigrants can be a source of legal transplant or law transfer.

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 and our identification strategies. Section IV shows the main results of the analysis, the robustness checks, and the falsification tests. Section V explores the mechanism for the different subcomponents of the workers' protection index and the potential role of the transmission of preferences from the immigrants to the hosting society. Finally, Section VI concludes.

II Data and Stylized Facts

This paper integrates various data sources covering 70 countries at 5-year intervals from 1970 to 2010. Section II.A outlines the workers' protection data and the methodology for constructing the workers' protection index. Section II.B discusses the immigration data, the development of the epidemiological term, and the trends in immigrant population dynamics over time.

II.A Workers' Protection Index

To construct the novel workers' protection index, we use the Leximetric dataset developed by legal scholars (Adams et al., 2017). This dataset quantifies the level and evolution of labor law and workers' protection based on the "law-in-the-books". The Leximetric data on workers' protection covers 117 countries over the 1970–2013 period.[3] The dataset documents the degree of legal protection associated with permanent and part-time workers.[4]

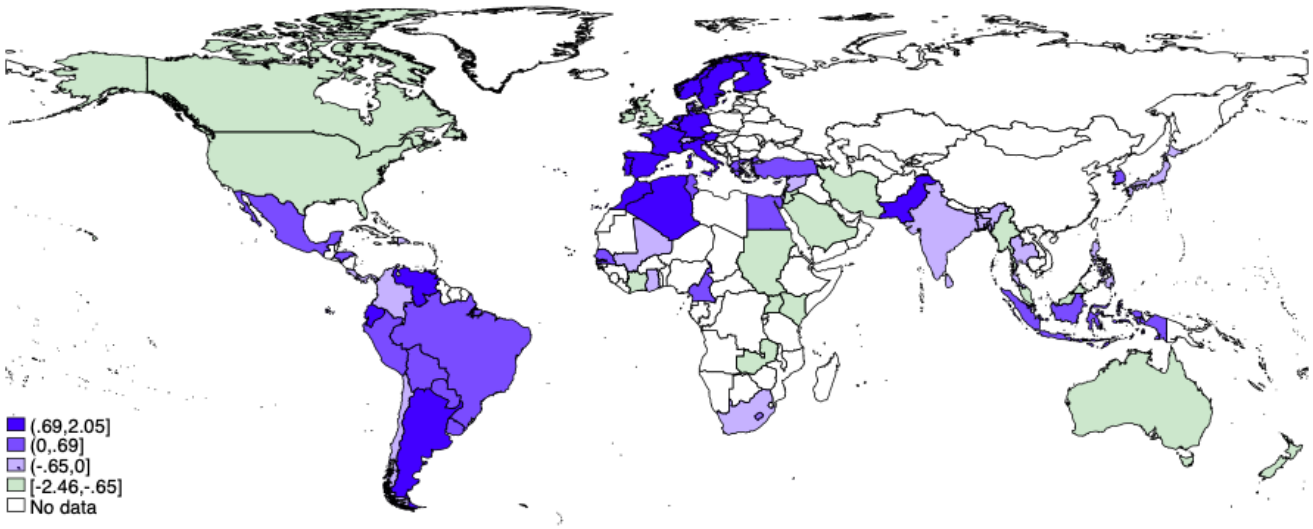
The dataset includes 36 relevant variables associated with different aspects of workers' protection. Each of these variables is assigned a value between zero and one, with zero representing no protection/lowest possible protection and one representing the maximum protection available in that area. All 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 ($WkrRepr$), and industrial action laws ($IndAction$).[5] The first area represents the

[3]For a few post-socialist countries, data are available only after 1990. In order to have a more balanced sample, we keep only those countries with data from 1970 in our final sample.

[4]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 with the least protected group. This aspect implies that the dataset captures the degree of protection guaranteed to the least protected workers.

[5]A list of all workers' protection variables is available in Table A-3. These five broad areas closely align with the categories examined Botero et al. (2004) in a cross-sectional study, which subsequently formed the methodological foundation for the World Bank's Doing Business reports.

Figure 1: Workers Protection Index - Geographical Distribution



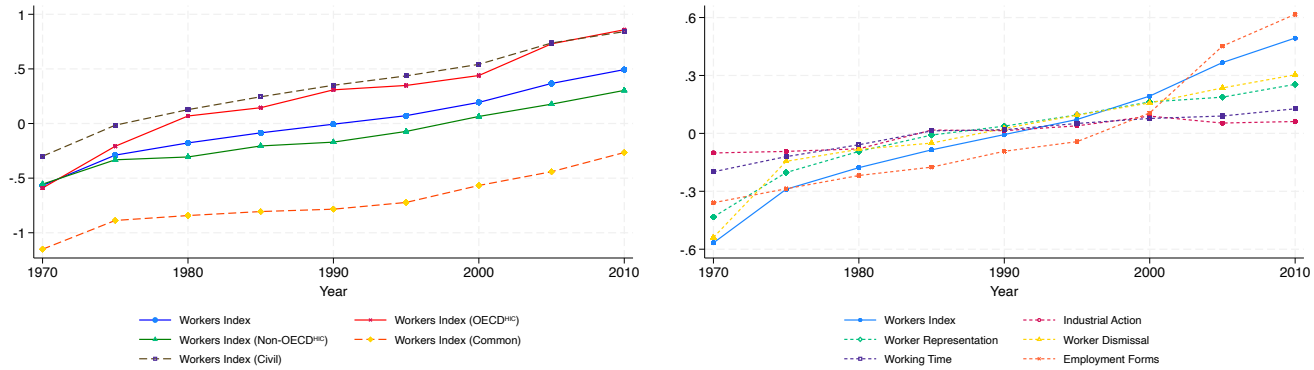
Note: Authors' calculations on CBR Leximetric data. The figure plots the average standardized workers' protection index by quartile at the country level over the 1970–2010 period.

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, for instance, when workers that have temporary/fixed-term contracts are protected. Working time laws ($WorkTime$) cover holiday pay, overtime compensation, and reasonable work hours. Worker dismissal laws ($WkrDismis$) include legislative areas related to notice periods, termination conditions, and post-dismissal compensation. Worker representation laws ($WkrRepr$) address union rights, collective bargaining, and representation on company boards. The final area ($IndAction$) focuses on the rights related to industrial actions and strikes, encompassing legislation granting workers the right to strike and limiting employers' ability to lock out employees.

The wide range of legal issues covered by the Leximetric data provides us with a comprehensive measure of different aspects related to workers' protection. Nevertheless, to have a general overview of the evolution of labor regulation, we take the following steps to construct one synthetic measure of workers' protection at the country level. First, we build five indicators associated with the five previously outlined areas of working protection. Following Preacher and MacCallum (2003) guidelines, we aggregate the variables associated with each area through a factor analysis, and we standardize them with mean zero and a standard deviation equal to one.[6] Second, we perform a second factor analysis over the five aggregated indicators associated with 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). Appendix C shows that our measure is positively and significantly correlated with

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

Figure 2: Workers' Protection Index - Evolution over Time



(a) WPI by development level and legal origin

(b) WPI and its sub-components

Note: Authors' calculations on CBR Leximetric data. Figure (a) plots the average standardized workers' protection index by destination countries' level of development and legal origin. Figure (b) plots the average standardized workers' protection index and its five subcomponents.

alternative sources, such as the OECD Employment Protection data OECD (2013) and indexes provided by Botero et al. (2004).

Figure 1 shows the geographical distribution of the average workers' protection index. European countries (excluding the 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 WPI comparable to Continental Europe, which has a 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 is characterized by the lowest WPI level in our sample (-2.46).[7] Concerning developing countries, Latin American countries are characterized by a high level of workers' protection. African and Middle Eastern countries show a high degree of heterogeneity in WPI, ranging from countries with a relatively high level of WPI, such as Algeria (1.59) and Morocco (0.76), to countries with a low level of WPI, such as Saudi Arabia (-1.06) and Kenya (-1.2).

The historical trend of the Worker Protection Index, shown in Figure 2, demonstrates a consistent upward trajectory from 1970 to 2010, depicted by the dotted blue line in both panels (a) and (b). Initially averaging at -0.6, it rose to 0.5 over the period. However, variations exist based on countries' economic development and legal origins. OECD high-income countries experienced accelerated growth in WPI compared to non-OECD countries post-1980. Similarly, civil law countries consistently outpaced common law counterparts in WPI levels. Figure 2(b) delineates the WPI and its five subcomponents.

[7]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., 2008). Table G-7 looks at the cross-sectional determinants 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 with the epidemiological term, GDP per capita and democracy, whereas we find a negative correlation with the size of immigration.

Subcomponents of the WPI showed consistent improvement in worker dismissal, representation, and employment forms protection laws, while industrial action and working time protection laws stagnated.

II.B Immigration Data and the Epidemiological Term

We combine two different data sources to have a more comprehensive picture of the immigrant population over a broad sample of destination countries. 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 and 2000. We combine and harmonize it with the World Bank Bilateral Migration Matrix of 2010 (World Bank, 2010), such that we have decennial coverage from 1960 to 2010. Finally, to deal with the mixed frequency of the data (the outcome is in five-year periods), we interpolate the decennial bilateral migration stocks to five-year periods.[8]

To measure the size of the immigrant population, 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 $MIG_{d,t}$ is the total stock of immigrants. Following Moriconi et al. (2022b), we compute the share of immigrants using the population in a fixed year as the denominator to uniquely identify the source of variation in the changes in the immigrant stocks.[9] Such measure is a proxy of immigrant population size, which can influence countries' economy and legislative aspects. For example, a greater proportion of immigrants typically indicates an increased labor supply, which can directly impact wages and employment (see Borjas, 2003; Edo, 2019). This situation may lead to a heightened demand for employment protection among native workers. Conversely, higher immigration rates might diminish the bargaining power of native workers, given the influx of non-voting competitors. In response to potential adverse effects on native workers' economic prospects, institutions may adjust labor regulations and laws.

Figure D-3(a) in the Appendix shows the geographical distribution of the average share of immigrants as computed in equation (1) over the period 1970–2010. 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).[10] Developing countries in Latin America, Africa, and Asia are characterized by a lower share of immigrants.[11]

[8] We perform such interpolation to have more data points, which will be relevant for the strength of our estimation strategy. Apart from using a simple average, we do recognize there are better imputation methods that consider multiple demographic dimensions (Standaert et al., 2022). Nevertheless, when we remove interpolated observations (i.e., 1975, 1985, 1995, and 2005), the main results remain unchanged, as columns (4) and (9) in Table 2 show.

[9] In Table G-4, 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.

[10] Those countries are characterized by a large immigrant population because of the structure of the labor market and institutions (see De Bel-Air (2014) for Qatar). The large size of the immigrant population, for example in Israel, is related to historical reasons, such as the exodus of soviet Jews from Russia to Israel in the 1990s after the collapse of the USSR.

[11] Appendix D depicts the time variation of the share of immigrants. Figure D-4 shows that the average share of immigrants

Migration can influence destination countries not only because of its size, but also because of its composition in terms of skills and norms.[12] Collier (2013) points out that immigrants can convey to destination countries the institutions and social norms of their country of origin, and recent papers provided empirical evidence of this claim (Giuliano and Tabellini, 2021; Miho et al., 2023). To empirically test this claim in our setting, we follow Lodigiani and Salomone (2020) and we proxy immigration-driven norms by computing the following epidemiological term:

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

The index $Epid_{d,t}$ captures for a country of destination d at year t the degree of workers' protection norms of its immigrant population. It is measured as a weighted average of the WPI in the origin countries, using as weights the share of immigrants coming from country of origin o and living in country d over the total population d.[13] We assume that people from the same origin are exposed to the same norms and institutions (Fernández and Fogli, 2009).[14] We proxy for the degree of workers' protection in the country of origin with the WPI in the year 2000.[15] Nonetheless, Table G-5 confirms the main results, maintaining both magnitude and significance, even with the inclusion of an epidemiological effect derived from a time-varying WPI. This consistency is unsurprising given the high persistence of the WPI variable.

Figure D-3(b) in the Appendix 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 Luxembourg (5.39), followed by Switzerland (2.59), and Israel (1.74). Figure D-5 depicts the evolution and average value of the epidemiological term across

evolves with a similar trend both across countries' level of development and across countries' legal origin.

[12] Aspects such as immigrants' education and their capacity to expand the knowledge set of a given country as a result of their novel competences and skills are just a few examples of how immigrants' characteristics could affect natives' behavior and countries' economies (e.g., Borjas, 2019; Moriconi et al., 2019; Docquier et al., 2020). Even though aspects such as diversity, polarization, and skill selection are not the main focus of our paper, we test for them in Table 3.

[13] Alternatively, we compute the epidemiological term following Spilimbergo (2009), hence weighting the share of immigrants over the total immigrant population in country d. Column (6) of Table 3 provides consistent results with this alternative definition of the epidemiological effect.

[14] However, we are aware that emigrants could be selected on their attitudes or preferences towards origin country institutions. Our exploration of available international datasets on migration intentions (such as the Gallup World Poll) do not provide good proxies to test for such potential self-selection concerns.

[15] We do this for two reasons. First, by fixing the level of WPI at the year 2000, variations of the epidemiological effects are driven *exclusively* by changes in the composition of the immigrant population, rather than changes in the labor regulation in origin countries. That allow us to clearly identify the source of variation of the epidemiological effect. Second, many countries enter the Leximetric data starting only from 1990. To have the broadest geographical coverage in terms of WPI for origin countries, we take as a reference the year 2000. For such year, we compute the WPI for 116 origin countries. Although we cover the majority of the countries, for a few origin countries, we still 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. To assuage concerns driven by our imputations, we perform in Table 2 two robustness checks. 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 immigrant 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 ($Epid\ strict$); and (ii) imputing the missing countries with the minimum value by legal origin ($Epid\ min$). Results remain unchanged across these different robustness tests.

countries' level of development and legal origin. First, as the dotted blue line shows, the epidemiological term is rather stable over time. Given the rise of the share of immigrants, this stable trend would suggest a change in the composition of the migrant population legal norms. Moreover, 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.

III Empirical strategy

Our objective is to evaluate the impact of immigration on workers' protection. Section III.A describes our linear dynamic panel model specification and the system GMM estimation technique employed. Section III.B presents our identification strategy to isolate the causal effect.

III.A Empirical model and estimation technique

Our estimation strategy uses five-year periods for all variables (from 1970 to 2010) to account for the slow changes in law, to rule out short-run (e.g., annual frequency) fluctuations in the data, and to better harmonize the occurrence of gaps from the mixed frequency of the data.[16] All of our explanatory variables are lagged by a five-year period, since labor laws do not respond instantaneously to changes induced by our explanatory variables.[17] Since labor law is highly persistent over time, we use a linear dynamic specification. In line with other studies using a dynamic panel specification to measure the effect of migration on different institutional outcomes (Spilimbergo, 2009; Docquier et al., 2016), we estimate the following model:

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

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 that allows 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 $t-1$. The vector $\mathbf{X_{d,t-1}}$ includes controls (such as GDP per capita, political regime, and human capital) that could affect simultaneously our variables of interest and the outcome. In addition, ζ_d denotes a country fixed effect, η_t is a time fixed effect, and $\epsilon_{d,t}$ is the error term.

The set of controls is borrowed from the economic growth literature and are ex-ante important for both the workers' protection index and immigration. More developed countries, on average, have higher

[16] 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 2.

[17] Institutions and laws are persistent factors, and any change requires a significant period of discussion and agreements, in particular in democratic countries. We can see the high persistency of the WPI in Figure 2 and in Table 1 where our autoregressive coefficient is always above 0.8. Table G-1 shows that estimating the model with contemporaneous explanatory variables provides similar although less precise estimates compared to our benchmark results.

values of WPI (recall Figure 2). The political regime and political shocks may influence labor regulation, as it happened under the Pinochet regime (Borzutzky, 2005). Finally, human capital, by contributing to the overall development of a country and being correlated with country's institutions (Acemoglu et al., 2014), can influence the development of labor market institutions.

Our analysis employs a system GMM estimator to estimate equation (3). This estimator 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. This estimation strategy allows us to circumvent the dynamic panel bias stemming from the inclusion of the lagged dependent variable in a within-group estimator with a short time period known as the Nickel bias (Nickell, 1981). We utilize a two-step system GMM procedure, known for its asymptotic efficiency over the one-step approach. However, in small samples, it may produce downward-biased standard errors (Bond et al., 2001). To mitigate this potential bias, we employ the finite sample correction method proposed by Windmeijer (2005), which offers more precise estimates. 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. Furthermore, we perform weak instrument diagnostics to ensure that the estimated coefficients are unbiased (Bazzi and Clemens, 2013).

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. To avoid arbitrary exogeneity assumptions, we treat all right-hand-side variables as endogenous, as is most common in the literature. However, this decision leads to numerous instruments that can potentially overfit the instrumented variables. We handle this by collapsing the matrix of instruments and reducing the lag structure to have fewer instruments than countries, as suggested by Roodman (2009). We keep the same instrument set across all regressions: we instrument $WPI_{d,t-1}$ always with its third to seventh lag, and $X_{d,t-1}$ with its second to fourth lag.[18] 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, detailed in the next section.

III.B Identification strategy

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 three main sources of bias. First, unobserved time-varying country character-

[18] In Table E-3, we test for different lag structures of the internal instruments, and our main results remain robust to various lag structures.

istics, captured by the error term, could influence simultaneously country's labor law and immigrants' destination country choice. The direction of such bias is unclear, since it depends on the role played by each omitted confounding factor. Second, the correlation between immigration and labor law could suffer from reverse causation. Immigrants may be attracted by countries with higher level of workers protection, inducing a bias in our γ parameter. Moreover, if immigrants select their country of destination *and* this selection is based on the desire to have institutions similar to the ones in the origin country, then δ would suffer from an upward bias.[19]

To strongly mitigate these potential biases and estimate the causal relationship of immigration on workers' protection, we rely on two well-known instrumental variable approaches to build valid external instruments and to exploit exogenous variation in migration variables: the shift-share approach and the gravity model approach. We follow Bahar et al. (2022) and use both IV strategies simultaneously to instrument our migration variables: shift-share approach to instrument the epidemiological effect and the gravity-based approach to instrument the share of immigrants. By doing so, we address the concern based on the potential immigrants' endogenous location across host countries, directly tackling the bias stemming from reverse causation and unobserved factors.

Shift-share Our first instrumental variable approach is based on the shift-share methodology (Card, 2001; Moriconi et al., 2019). The intuition behind this approach is to use past settlements of immigrants by country of origin as a predictor of future migration flows due to network effects. We then allocate the aggregate immigration flows by country of origin, mainly driven by push factors, to the sample of destination countries following a historical distribution of the population of immigrants by country of origin. In our setting, our identifying assumption is based on the exogenous distribution of the shares, which is sufficient to generate a source of exogenous variation stemming from such predicted migration stocks (Goldsmith-Pinkham et al., 2020). 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:

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

[19] Additionally, immigration could influence destination countries through different channels not proxied by our measures of size and norms of the immigrant population. We take into account these alternative dimensions in the robustness checks.

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

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

The literature shows that the shift-share approach can predict well the immigrant population composition by origin (Alesina et al., 2016; Bahar et al., 2022; Docquier et al., 2020); we use the predicted bilateral stocks computed in equation (6) to construct 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.[20]

Gravity Model The second instrumental variable approach is based on Ortega and Peri (2014) and Docquier et al. (2020), which estimate a gravity model to predict the bilateral stocks of immigrants. Following their approach, we propose a concise gravity model that (i) minimizes the risk of violating the exclusion restriction and (ii) incorporates year dummies interacted with the geographical distance between origin and destination countries, which aims to account for the decreasing cost of displacement due to reduced transportation costs (Feyrer, 2019). 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 bilateral 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).[21] As Figure E-6 shows, bilateral geographical distance is unrelated with bilateral labor regulation distance, mitigating concerns of a potential correlation with origin-destination institutions. Given the high number of zeros due to empty bilateral corridors, we estimate equation (7) using a Poisson pseudo maximum likelihood (PPML) estimator, as suggested by Silva and Tenreyro (2006), and we cluster the standard errors at the country level. Table E-1 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 aggregate them to compute our instrumental variable for the immigration shares ($\widehat{ShareMig}^{G}_{d,t}$).

Threats to Identification Both instruments pass the Bazzi and Clemens (2013) test on weak instruments in a system GMM context.[22] Despite their common use in the literature, both approaches have

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

[21] 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 the time-invariant unobserved heterogeneity in destination countries.

[22] Table E-2 provides the values of the F-test on weak instruments comparable to the values suggested by Stock et al. (2005).

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 also on the degree of workers' protection. However, if such an effect is related to any kind of economic channels, the inclusion of GDP per capita as a control should account for it.

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, then an omitted variable bias could arise (Jaeger et al., 2018; Goldsmith-Pinkham et al., 2020). Although our identification assumption is based on the exogeneity of the initial shares, which we corroborate with a battery of tests, our setting provides several shocks breaking the serial correlation of migration flows both in terms of magnitude and in composition of countries of origin, such as the fall of Soviet Union and the creation of the Schengen area (Borusyak et al., 2022). Moreover, following Goldsmith-Pinkham et al. (2020) we provide evidence in Appendix Section E that the initial distribution of immigrants by origin across destination countries in the 1960s is exogenous to destination countries' specific factors. By computing the Rotemberg weights across different periods in time, Table E-4 identifies the origin countries that identify the highest variation in the IV.[23] Then, in Table E-5, we show the correlation between the top origin-specific shares identified by the highest Rotemberg weights and a set of country characteristics in 1960. We find no significant correlations, both across different origins and in the variation of the predicted epidemiological term, suggesting that our initial shares are exogenous to destination country factors. Finally, using historical data from the Maddison Project (Bolt et al., 2018) and following Moriconi et al. (2022b), we check the correlations between the instrument and the pre-1960 economic trends. Table E-6 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 periods. None of the correlations are statistically significant. This is also the case when we regress the growth of our external IV on countries' legal origin (Panel C). This evidence suggests that our predicted epidemiological effect is not correlated with pre-existing national trends, and therefore increases the validity of the instrument.[24]

[23] The size of the Rotemberg weights proxy for the importance of each specific origin group. As suggested by Goldsmith-Pinkham et al. (2020), we report the top-five origin countries in terms of Rotemberg weights, which accounts for, on average, 40% of the total weights, which is not far from the results provided in the canonical migration setting.

[24] Adao et al. (2019) point out that another source of bias could be driven by a correlation of the errors due to a similar initial distribution of immigrants by country of origin in destination countries. Countries with a 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 doubt that this bias could affect our results. First, the two-step GMM estimator implemented in our analysis is robust to any pattern of heteroskedasticity and cross-correlation (Roodman, 2009). Second, we perform a correction in the spirit of Adao et al. (2019) by first dividing the sample of destination countries by different quantiles based on the initial share of immigrants coming from the top-origin countries identified by the Rotemberg Weights in Table E-4. Then we perform our system GMM analysis and cluster the standard errors over cells corresponding to the quantiles of the initial distribution of each of these shares. Table E-7 shows that standard errors associated with the epidemiological term remain fairly similar across the different clustering, minimizing potential concerns arising from unobserved correlations in the standard errors.

IV Results

The results are organized in two parts. In Section IV.A, we present our main results measuring the impact of immigration on WPI. 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.

IV.A Main Results

We estimate the baseline model of equation (3) with system GMM using external instruments (shift-share and gravity) for our two variables of interest. Our regression sample covers a panel of 70 countries with five-year periods, from 1970 to 2010. We keep the same number of observations across all specifications to maximize the comparability of results.[25] We start with a naive pooled OLS in column (1) of Table 1 to see in which direction the bias is corrected: this is ex-ante unclear as there is Nickell bias, reverse causality and omitted variable bias occurring at the same time. Then in columns (2) and (3) we have a parsimonious specification, in which we include the lag of the outcome variable and the two immigration variables of interest separately. To assuage the concern of the simultaneity bias due to "bad controls" (Angrist and Pischke, 2008), we gradually include control variables until we reach our main specification in column (7), which shows that the estimated coefficients of interest remain unaltered.

Table 1 shows a positive and statistically significant effect of the epidemiological term, capturing immigrants' norms, on the WPI. The coefficient is stable to the inclusion of relevant controls. This result suggests that destination countries' labor regulation responds immigrants' labor regulation norms. To grasp the economic magnitude of these effects, we take the face values of the benchmark estimates in column (7): a one standard deviation increase in the epidemiological term leads to an 8.7% standard deviation increase in the WPI in the destination country. For instance, looking at the effect at the median, Colombia (ranked 36^{th} in WPI) would rank higher than Cameroon (ranked 33^{rd}). In terms of migration size, we observe a null or negative effect, which lacks statistical significance in our main specification (column 7). Therefore, we do not consider the immigrant population size as a significant driver of labor regulation changes, with the estimate's sign suggesting a potential absence of reverse causation (i.e., immigrants attracted by protected labor markets). As anticipated, our lag dependent variable remains highly significant across specifications, with a coefficient exceeding 0.8, confirming the WPI's high persistence.

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 the AR(2) p-value is always greater than 0.1. For the Hansen J-test of overidentifying restrictions and the difference-in-Hansen tests, we never reject the null hypothesis, indicating that the moment conditions are satisfied and that the instruments are valid across specifications. Table E-2 tests the weakness of the instruments following

[25] Six missing country-period observations prevent us from achieving a balanced panel regression sample. This omission 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 to 1985.

Table 1: Workers' Protection and Immigration

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Estimation:	OLS	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM
Time:	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10
Dep var:	WPI	WPI	WPI	WPI	WPI	WPI	WPI
WPI_{t-1}	0.950***	0.895***	0.829***	0.838***	0.879***	0.870***	0.865***
	(0.018)	(0.056)	(0.080)	(0.074)	(0.051)	(0.055)	(0.054)
$Share\ Mig_{t-1}$	-0.002**	-0.002		-0.005*	-0.002	-0.005	-0.007
	(0.001)	(0.002)		(0.002)	(0.004)	(0.004)	(0.005)
$Epid_{t-1}$	0.050***		0.108**	0.102**	0.086**	0.097**	0.087**
	(0.014)		(0.047)	(0.045)	(0.037)	(0.039)	(0.035)
$ln(GDP)_{t-1}$					-0.018	0.030	0.052
					(0.058)	(0.056)	(0.063)
$Polity2_{t-1}$						-0.107	-0.038
						(0.114)	(0.101)
$ln(HC)_{t-1}$							-0.009
							(0.078)
Year FE		✓	✓	✓	✓	✓	✓
Country FE		✓	✓	✓	✓	✓	✓
AR1 p-val		0.00	0.00	0.00	0.00	0.00	0.00
AR2 p-val		0.57	0.59	0.59	0.58	0.52	0.56
Hansen		0.37	0.35	0.30	0.43	0.64	0.76
Diff-Hansen		0.27	0.26	0.19	0.61	0.48	0.63
Instruments		15	15	16	20	24	28
Countries	70	70	70	70	70	70	70
Observations	554	554	554	554	554	554	554

Note: Standard errors are clustered at the 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.

Bazzi and Clemens (2013); the Kleibergen-Paap F-stats are significantly greater than 10, indicating that our setting does not suffer from a weak instrument problem.

In Table G-6 in the Appendix, we explore potential heterogeneous effects of immigration on WPI across destination countries through a subsample analysis. We examine development level (OECD high-income status), legal origin, and net increase in WPI over the analyzed period. Regarding the level of development, we find no heterogeneous effects between OECD and non-OECD countries. However, among civil law countries, we observe a confirmed positive relation between immigrants' norms and labor law regulation, whereas the effect is close to zero among common law countries. Finally, the effect is confirmed when focusing on countries with a positive evolution of labor regulation.

Lastly, Section F in the Appendix explores various scenarios to quantify the potential magnitude of the estimated effects on the long-run evolution of labor law regulation. Although having a merely descriptive purpose, it shows that the changes in the size and composition of immigrant population over the period 1970 to 2005 is associated with a reduction of 4.3% of WPI standard deviation. Given the overall variation of WPI presented in Figure 2 (around one standard deviation in our period of analysis) the computed change is small albeit not negligible. Moreover, they show that the changes are bigger in

magnitude among OECD high-income countries than non-OECD ones.

IV.B Robustness Checks and Alternative Epidemiological Measures

To assess the robustness of our results to various specification choices, variable constructions, subsamples of countries and years, and alternative migration-specific effects, we conduct a comprehensive set of robustness checks and tests using our GMM estimators. Below, we provide a summary of our main findings, with a particular focus on the estimates related to immigrants' norms.

Subsample analysis - In Table 2 we first investigate whether our results are driven by a specific set of countries or years. In column (1), we remove the last two 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 columns (2) and (3), we drop countries belonging to the top quintile of the migration share and workers' protection index accordingly, to address the concern about potential outliers by removing the right tail of the variable distribution. Our main results remain unaffected.

Role of Imputations - We conduct tests to examine the impact of imputations and different measures of the epidemiological term on our results. In column (4) of Table 2, we analyze our data in 10-year periods to assess the effect of five-year interpolations in the bilateral stocks of immigrants. Column (5) excludes countries with a high percentage of imputed WPI within their epidemiological term (more than 30% of the immigrant population coming from a country with an imputed WPI). Column (6) presents results using an epidemiological term constructed with the total immigrant population in the host country, as suggested by Spilimbergo (2009). Subsequent columns test the robustness of the epidemiological term with different imputation methods: (7) imputing missing countries with the minimum value by legal origin, and (8) not imputing missing values. In the last column, we test a specification that simultaneously excludes imputed values for the epidemiological and migration terms and uses 10-year periods. Across these specifications, the estimated effect associated with immigrants' norms remains consistent.[26] Concerning the share of immigrants, the estimated effect is on average negative and unlikely to be statistically different from zero.

Alternative Migration-Driven Effects - As Appendix Section G.1 presents, the literature identifies that diversity and polarization of the immigrant population can have a direct effect on countries' productive knowledge and economic development (Bahar et al., 2022; Docquier et al., 2020). We include an index of diversity and an index of polarization among immigrants in columns (1) and (2) of Table 3, respectively. The estimates show that neither immigration diversity nor polarization outruns the epidemiological effect as a relevant channel for explaining WPI variation. 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

[26] Apart from the Hansen test below 0.1 threshold in column (9), all of our estimates satisfy the standard Hansen, difference-in-Hansen, and AR2 post-estimation tests.

Table 2: Workers' Protection and Immigration - Robustness Checks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Estimation:	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM
Time:	1970-00	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10
Dep var:	WPI	WPI	WPI	WPI	WPI	WPI	WPI	WPI	WPI
Robustness to:	1970-00	Top20% Mig	Top20% WPI	10-year	Epid imp	Epid Mig	Epid min	Epid stric	Epid stric &10y
WPI_{t-1}	0.858***	0.759***	0.818***	0.767***	0.867***	0.847***	0.824***	0.859***	0.767***
	(0.039)	(0.069)	(0.092)	(0.126)	(0.063)	(0.055)	(0.060)	(0.053)	(0.112)
$Share\ Mig_{t-1}$	-0.001	0.003	-0.005	-0.028*	-0.009	-0.006*	-0.002	-0.007	-0.028**
	(0.005)	(0.013)	(0.006)	(0.016)	(0.005)	(0.003)	(0.004)	(0.005)	(0.014)
$Epid_{t-1}$	0.106**	0.249**	0.067**	0.168***	0.088**				
	(0.041)	(0.097)	(0.030)	(0.055)	(0.038)				
$Epid\ Mig_{t-1}$						0.078***			
						(0.028)			
$Epid\ min_{t-1}$							0.149**		
							(0.059)		
$Epid\ stric_{t-1}$								0.097**	0.152***
								(0.039)	(0.043)
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AR2 p-val	0.61	0.37	0.54	0.43	0.52	0.55	0.60	0.56	0.49
Hansen	0.65	0.91	0.46	0.12	0.81	0.78	0.80	0.77	0.16
Diff-Hansen	0.45	0.89	0.47	0.65	0.65	0.83	0.60	0.60	0.42
Instruments	24	28	28	17	28	28	28	28	17
Countries	70	56	56	70	56	70	70	70	70
Observations	414	447	446	278	442	554	554	554	278

Note: Standard errors are clustered at the 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) report 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 five-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 term computed weighting each origin group by the total migrant population ($Epid\ Mig$), an epidemiological effect where all the imputed WPI measures at the origin are equal to the lowest value available ($Epid\ min$), and an epidemiological effect where missing values are not imputed ($Epid\ strict$). Column (9) reports results with no imputation in the epidemiological term and with 10-year periods.

include as additional control an index of immigrants' self-selection on education. Column (3) of Table 3 shows estimates that are similar to the baseline results associated with the epidemiological term and the migration share after including the self-selection index computed in equation (G-2); the coefficient associated with the index of self-selection is negative and smaller compared to the epidemiological term and only significant at the 10% level.

Placebo Epidemiological term - To test whether immigrants' norms are related only by the level of WPI experienced in the origin countries and not by other factors, in column (5) of Table 3 we first replace the standard epidemiological effect with the one using WPI origin-destination distances rather than levels

Table 3: Workers' Protection and Immigration - Alternative Immigration Effects & Falsification tests

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Estimation:	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM
Time:	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10
Dep var:	WPI	WPI	WPI	WPI	WPI	WPI	WPI
WPI_{t-1}	0.864***	0.874***	0.863***	0.869***	0.860***	0.876***	0.860***
	(0.055)	(0.051)	(0.054)	(0.062)	(0.059)	(0.053)	(0.060)
$Share\ Mig_{t-1}$	-0.007	-0.006	-0.007	-0.005	-0.004	-0.005	-0.004
	(0.004)	(0.005)	(0.005)	(0.007)	(0.006)	(0.007)	(0.006)
$Epid_{t-1}$	0.087**	0.085**	0.080**				
	(0.035)	(0.033)	(0.033)				
$Diversity_{t-1}$	0.017						
	(0.033)						
$Polar\ Mig_{t-1}$		0.012					
		(0.032)					
$Selection_{t-1}$			-0.024*				
			(0.013)				
$Epid\ Distance_{t-1}$				-0.008			
				(0.094)			
$Epid\ GDP_{t-1}$					-0.022		
					(0.070)		
$Epid\ Family_{t-1}$						-0.001	
						(0.069)	
$Epid\ Trust_{t-1}$							-0.028
							(0.076)
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	0.56	0.58	0.56	0.53	0.54	0.56	0.55
Hansen	0.78	0.73	0.77	0.77	0.78	0.72	0.78
Diff-Hansen	0.63	0.63	0.66	0.80	0.76	0.78	0.71
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 the 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) include 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 (9) include as main variables of interest instead of the standard epidemiological effect: an epidemiological effect based on the origin-destination WPI distances ($Epid\ Distance$), an epidemiological effect using the level of GDP per capita at the origin as weight ($Epid\ GDP$), an epidemiological effect using the share of individuals living with the family at the origin as weight ($Epid\ Family$), and an epidemiological effect using the share of individuals in the origin who trust others as weight ($Epid\ Trust$). All the additional included variables are instrumented using predicted bilateral immigration stocks from a shift-share approach.

($Epid\ Distance$). We do not find a significant effect associated with the latter index, suggesting that the difference between immigrants' and natives' WPI is much less important for the change in WPI at destination compared to the degree (level) of WPI that immigrants experienced in the origin country. In addition, considering that immigrants bring not only knowledge of labor regulation from their origin countries but also a broader range of competencies and skills, we conduct three falsification tests. These tests involve constructing three different epidemiological effects by replacing WPI at the origin with: (i)

GDP at the origin, (ii) the significance of family ties in driving labor regulation (Alesina et al., 2015), and (iii) individual generalized trust and civicness in determining the size of the welfare state (Algan et al., 2016).[27] Columns (5) to (7) indicate that the newly constructed epidemiological terms are not statistically significant. This suggests that development, family ties, and trust may be less relevant in explaining the impact of immigration on labor regulation, at least during the analyzed period.

Additional Country Controls - Beyond the controls included in the benchmark specification, we test the robustness of our results by including additional controls in Table G-2. 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). Afterward, we include the economic freedom index(Gwartney et al., 2018). Finally, we control for countries' membership in the European Union, the International Labor Organization (ILO), and the World Trade Organization (WTO). Overall, after including these additional controls separately, the coefficients of interest remain consistent with our benchmark results.

Alternative Specifications - Table G-3 presents alternative estimators and specifications that are relevant for the credibility of our results. OLS results in columns (1) and (2) show significant correlations consistent with the baseline, albeit with a halved effect size for the epidemiological term. Addition of country and year fixed-effects in columns (3) and (4) reduces the lag dependent variable's effect as expected. The size of the estimated effect of the epidemiological term remains the same, however the results are less precise. Nonetheless, it is important to recall that estimates presented from column (1) to (4) have multiple sources of bias: Nickell bias, due to the presence of the lag dependent in short panels, reverse causality since migration is not an exogenous phenomenon and could be affected by labor regulation as pull factor, and omitted variable bias. Finally, in the last columns we report results using a GMM estimator without the lag dependent variable, and we find that the epidemiological term is five times larger compared to the baseline results. Overall, these set of estimates confirms the direction of the estimates of our benchmark specification, however the size and precision of the estimates may be affected by a not well-specified model.

Time Varying Migration Variables - Tables G-4 and G-5 show that our results are not driven by the time-invariant components of our variables of interest: the WPI at the origin for the epidemiological effect and the population in the destination country for the share of migrants. Estimates associated both to the epidemiological effect computed with a time-variant WPI at the origin ($Epid\ Tvar$) and to the share of migrants over the actual population ($Share\ Mig\ Tvar$) remain qualitatively unchanged.

[27] Following the methodologies of the aforementioned studies, we computed the shares of individuals living with parents and the shares of individuals who trust others. We then used these to construct two epidemiological effects using family ties ($Epid\ Family$) and trust ($Epid\ Trust$) as weights.

V Mechanisms

In this section, we investigate potential mechanisms through which immigrants' norms can influence labor regulation. In Section V.A, we decompose our dependent variable into its five main subcomponents to understand the dimension of WPI most affected by immigration. Section V.B offers suggestive evidence on the transmission of labor market attitudes and preferences from migrants to the host society, both vertically (e.g., through migrants' offspring) and horizontally (e.g., through natives and local political parties).

V.A WPI Subcomponents

Table 4 presents the estimates of the response of the five subdimensions of the WPI to immigration: (i) industrial action laws, (ii) worker representation laws, (iii) worker dismissal laws, (iv) working time laws, and (v) employment forms laws. Each specification includes the same set of controls and variables of interest as our benchmark specification.

Although the variation of each subcomponent over time is smaller than the overall WPI, we find that immigrants' norms (and proxied by the epidemiological effect) has a positive and statistically significant effect on two subcomponents: worker representation laws and employment forms laws. Both coefficients are statistically different from zero at the 5% level, and the magnitude of the effect is similar to the aggregate WPI. The estimates associated with the size of immigration are small and close to zero. These areas of labor regulation have important implications for the labor market. Worker representation laws, such as unionization and collective bargaining rights, are extremely relevant because of their direct impact on wage dispersion: a broad set of evidence shows that unions reduce wage dispersion, in particular for male workers (Card et al., 2004, 2020). Moreover, the degree of rigidity of the employment forms not only has a general effect on wages and employment, but also influences how natives react to a supply shock in the workforce as a result of immigration flows (D'Amuri and Peri, 2014; Edo, 2016).

To better grasp whether the estimates are driven by immigrants' experience of the specific area of labor regulation, Table H-1 presents estimates after computing epidemiological terms specific to each subdimension of labor law regulation in the origin country. We then estimate the subcomponent-specific epidemiological effect on the corresponding subcomponent of workers' protection in the destination country. Our results confirm that both workers' representation laws and employment forms laws respond to immigrants' norms. Additionally, we find that working time laws also appear to react to immigrants' labor regulation experience. Overall, our findings indicate that certain areas of labor regulation are more likely to be influenced by immigration, while others, such as industrial actions and workers' dismissal, are less responsive to immigration.

Table 4: WPI Subcomponents and Immigration

	(1)	(2)	(3)	(4)	(5)
Estimation:	sGMM	sGMM	sGMM	sGMM	sGMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var: WPI Subcomponent	$IndAction$	$WkrRepr$	$WkrDismis$	$WorkTime$	$EmptForm$
$WPI_{t-1}^{SubComp}$	0.882***	0.880***	0.831***	0.900***	0.899***
	(0.085)	(0.047)	(0.067)	(0.068)	(0.074)
$Share\ Mig_{t-1}$	-0.010	-0.002	0.004	-0.001	-0.004
	(0.007)	(0.004)	(0.005)	(0.002)	(0.005)
$Epid_{t-1}$	-0.015	0.079***	0.026	0.055	0.080**
	(0.027)	(0.027)	(0.034)	(0.041)	(0.034)
Controls	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00	0.00
AR2 p-val	0.70	0.80	0.40	0.11	0.81
Hansen	0.89	0.49	0.50	0.57	0.32
Diff-Hansen	0.84	0.38	0.36	0.53	0.40
Instruments	28	28	28	28	28
Countries	70	70	70	70	70
Observations	554	554	554	554	554

Note: Standard errors are clustered at the country level. * p<0.1, ** p<0.05, *** p<0.01. Each column has as a 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.

V.B Transmission of Preferences

Our empirical analysis documents two main findings. First, the size of the migrants population has no or negligible effect on the evolution of labor regulation in the destination country. This downplays the importance of a potential direct economic effect through immigrants labor market participation (Edo, 2019). Second, our results show a significant and positive effect of immigrants' norms on destination country labor regulation.

These results could be explained by a potential transmission of migrants' attitudes and preferences to natives and the host society (Miho et al., 2023; Rapoport et al., 2021; Giuliano and Tabellini, 2021).[28] In this section, we test and provide evidence for two complementary ways through which immigrants' can transmit their norms to the hosting societies. Firstly, through vertical transmission, immigrants may influence regulation by transmitting their preferences to their offspring, who are more likely to have voting rights and affect the legislative process. Secondly, through horizontal transmission, immigrants can directly impact the evolution of law by sharing their origin country experience and knowledge with local actors, including natives and political parties.[29]

[28]For instance, Giuliano and Tabellini (2021) show that natives living in US counties with a higher share of European migrants during the Age of Mass Migration are characterized by stronger redistributive preferences, which could be explained by intergroup contact and horizontal transmission of Europeans pro-redistributive preferences to US natives.

[29]A complementary channel would be through migrants' voting after being enfranchised. Bhatiya (2023) shows that UK

V.B.1 Vertical Transmission

The vertical transmission of preferences is empirically studied in the literature by focusing on the relation between 2^{nd} (and further) generation immigrants preferences and parents' country of origin characteristics (Fernández and Fogli, 2009; Giavazzi et al., 2019). To explore this channel, we follow Moriconi et al. (2022a) and we rely on the European Social Survey (ESS) data. This is a repeated cross-section biennial dataset with a randomized sample of individuals across European countries from 2002. Using the 9 available waves, we identify across 30 countries of residence a sample of approximately 13000 second generation immigrants, i.e., individuals born in the country of residence whose father was born abroad.[30] To have some proxies of individual preferences towards labor regulation and government intervention, we rely on respondent's agreement/disagreement on the following statements: (i) government should take measures to reduce differences in income levels; (ii) government should commit to guaranteeing a job to everyone; and (iii) government should commit in guaranteeing good living standards for unemployed.[31] Additionally, to capture actual behavior for seeking protection in the labor market, we add as an additional outcome respondent's membership in a trade union.

We estimate the following equation on the sample of 2^{nd} generation immigrants with fathers from origin country o and living in destination country d in year t:

$$y^{o}_{i,d,t} = \alpha + \beta^{m}\overline{WPI^{o}}_{i,d,t} + \Gamma \mathbf{X}_{i,d,t} + \theta_{dt} + \epsilon_{i,d,t}. \tag{8}$$

Our main variable of interest is $\overline{WPI^{o}}_{i,d,t}$, which is the average worker's protection index of father's birthplace between 1970 and 2000. Since we do not know the year of father's exact migration, we rely on the average over the period. The vector $\mathbf{X}_{i,d,t}$ includes individual characteristics, such as age, gender, employment status, marital status, level of education and having a child dummy, while θ_{dt} are destination by year fixed effects. By estimating β^{m} with OLS, we capture the partial correlation between father's experienced labor market institution and 2^{nd} generation migrants preferences and behaviors. Moreover, we minimize concerns of omitted variable bias and measurement error by using origin country o legal origin as IV, and performing 2SLS estimates.[32]

Table 5 displays the results. OLS findings indicate a positive link between second-generation immigrants' preferences for government intervention and their fathers' level of workers' protection regulation in the origin country. However, only estimates concerning government intervention to ensure living

politicians exposed to a higher share of enfranchised migrants are more prone to discuss issues that affect immigrants positively, yet they vote to increase immigration restrictions.

[30]The 30 countries are Austria, Belgium, Bulgaria, Switzerland, Cyprus, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Greece, Croatia, Hungary, Ireland, Israel, Italy, Lithuania, Latvia, The Netherlands, Norway, Poland, Portugal, Romania, Sweden, Slovenia, Slovak Republic and Turkey. We exclude from our sample Luxembourg, Serbia, Russian Federation, Kosovo, Ukraine, and Iceland.

[31]The answers to these questions are ranked with higher values for strong agreement with these statements. The first measure is asked across all ESS waves, while other measures are asked only in wave 4 (2008).

[32]Table G-7 shows that legal origin is the strongest predictor for the level of worker's protection. The exclusion restriction assumption is that father's birthplace legal origin does not affect directly second generation migrants preferences living in a distinct country of residence.

Table 5: Vertical Transmission - 2^{nd} Generation Migrants

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Estimation:	OLS	2SLS	OLS	2SLS	OLS	2SLS	OLS	2SLS
Time:	2002-18	2002-18	2008	2008	2008	2008	2002-18	2002-18
Dep var:	Gov. Reduce Income Diff.		Gov. Guarantee Jobs		Gov. Improve Unemp. Living		Trade Union Member	
$\overline{WPI^o}$	0.060***	–0.023	0.215**	0.040	0.267	0.343***	0.004	0.012
	(0.018)	(0.078)	(0.097)	(0.288)	(0.184)	(0.061)	(0.005)	(0.010)
Observations	13573	13573	2130	2130	2134	2134	13710	13710
Countries	30	30	29	29	29	29	30	30
KP F-stat		74.855		22.977		22.956		73.902
R2	0.080	0.013	0.153	0.024	0.131	0.021	0.145	0.051
Ind. Controls	✓	✓	✓	✓	✓	✓	✓	✓
Country-Year FE	✓	✓	✓	✓	✓	✓	✓	✓

Note: Authors' calculations using ESS data. * p<0.1, ** p<0.05, *** p<0.01. Standard errors are clustered at the destination country level. The sample includes only 2^{nd} generation immigrants. Our main variables of interest is the average Workers Protection Index in father's birthplace country computed over the 1970-2000 period ($\overline{WPI_o}$). The dependent variables are respondent's preferences towards a stronger government intervention to reduce income differences (col. (1) and (2)), stronger government commitment in guaranteeing job to everyone (col. (3) and (4)), stronger government commitment guaranteeing good living standards for unemployed (col. (5) and (6)), dummy variable whether respondent is currently member of a trade union (col. (7) and (8)). Each specification includes country by year fixed effects, and a set of individual controls: age, gender, employment status, marital status, level of education and having a child dummy. OLS estimates are presented in odd columns, while 2SLS estimates using the father's birthplace country legal origin as IV are presented in even columns.

standards for the unemployed remain statistically significant after 2SLS (column 6). Columns (7) and (8) show no significant relationship between seeking protection through union participation and fathers' level of workers' protection at the origin. Overall, this evidence mildly supports the vertical transmission of immigrants' norms to their offspring, suggesting it is hardly the only mechanism explaining our results.

V.B.2 Horizontal Transmission

If the transmission of preferences occurs horizontally, we should expect a positive relation between local actors' preferences and immigrants' norms. We test this potential mechanism by focusing on two relevant local actors for the evolution of labor regulation: natives and political parties.

To estimate the partial correlation between local actors and immigrants' norms, we estimate the following equation on the population g of either natives (n) or parties (p):

$$y_{g,d,t} = \alpha + \beta^g \overline{Epid^d}_{g,d,t} + \eta^g \overline{Mig^d}_{g,d,t} + \Delta^g \mathbf{W}_{d,t} + \theta_t^g + \epsilon_{g,d,t} \tag{9}$$

The variables of interest are $\overline{Epid^d}_{g,d,t}$ and $\overline{Mig^d}_{g,d,t}$ which are the average epidemiological term and average migration share in country d over the 1970-2000 period, respectively. To reduce omitted variable bias, our specification includes a vector ($\mathbf{W}_{d,t}$) of time-varying country controls such as GDP per capita, political regime, human capital and population (total and employed), and year fixed-effects (θ_t).

Focusing first on natives preferences, we rely on the same dataset (ESS) and measures used for testing the vertical transmission channel, but this time we focus on the sample of natives (i.e., individuals born

Table 6: Horizontal Transmission - Natives

	Gov. reduce income differences	Gov. guarantee jobs for everyone	Gov. guarantee good std. livings unemployed	Trade Union Member
	(1)	(2)	(3)	(4)
Estimation:	OLS	OLS	OLS	OLS
$\overline{Epid_d}$	0.595	–5.036	–1.323	1.428**
	(1.365)	(5.645)	(6.212)	(0.604)
$\overline{ShareMig_d}$	2.069	0.335	–2.586	–3.186***
	(1.982)	(6.049)	(6.477)	(0.632)
Observations	134933	22266	22283	135282
Dest. Countries	19	18	18	19
R2	0.083	0.079	0.094	0.143
Ind. Controls	✓	✓	✓	✓
Country Controls	✓	✓	✓	✓
Year FE	✓	✓	✓	✓

Note: Authors' calculations on ESS data. * p<0.1, ** p<0.05, *** p<0.01. Standard errors are clustered at the destination country level. The sample includes only natives. Our main variables of interest are the average Epidemiological term ($\overline{Epid_d}$) and Migration share ($\overline{ShareMig_d}$) computed over the 1970-2000 period. The dependent variable is respondent's preferences towards a stronger government intervention to reduce income differences (col. (1)), stronger government commitment to guaranteeing job to everyone (col. (2)), stronger government commitment guaranteeing good living standards for unemployed (col. (3)), dummy variable whether respondent is currently member of a trade union (col. (4)). Each specification includes year fixed effects, a set of individual controls (age, gender, employment status, marital status, level of education and having a child dummy) and time-varying country controls (Polity2 index, logarithm of the human capital index, of the real GDP per capita, of the employed population, of the overall population).

in the country of residence whose father was also born in the country of residence).[33] We also include the same vector of individual controls $X_{n,d,t}$. If horizontal transmission is a relevant mechanism, we should expect a positive relation between natives' stated or revealed preferences and immigrants' origin country labor regulation (i.e., $\hat{\beta}_n > 0$). We estimate equation (9) with OLS, since our instrumental variables are not strong enough in this empirical setting.

Table 6 shows that natives preferences towards government intervention are not influenced by the exposure to the immigrant population, both in terms of size and norms. However, OLS results available in columns (4) point towards a statistically significant relationship between immigration and natives' participation in unions: natives' unionization rate is negatively affected by the share of immigrants (Antón et al., 2022), while it is positively related to immigrants' experience of origin country labor institution. Such positive relation with the propensity of being unionized could be related to natives' perceived threat of immigrants' origin experience. However, exploiting natives' attitudes towards migration does not support this interpretation: Table H-2 in the Appendix shows no relation between the exposure to immigrants' norms and natives' negative attitudes towards immigrants. If any, the exposure to immigrants' origin is positively related to natives' perception of the enriching role of immigration in national culture.

We then focus on the potential effect on political parties' preferences, by relying on a dataset of parties' political agenda during electoral campaigns: the *Manifesto Project Database* (MPD) (Volkens et al., 2020). By performing a content analysis of parties' manifesto, the MPD provides quantitative

[33]The sample of countries includes countries that are available both in the ESS and in our benchmark analysis. The sample includes Austria, Belgium, Switzerland, Cyprus, Germany, Denmark, Spain, Finland, France, United Kingdom, Greece, Ireland, Israel, Italy, The Netherlands, Norway, Portugal, Sweden, and Turkey.

Table 7: Horizontal Transmission - Political Parties

	Unweighted			Votes Weighted		
	Labor Groups Positive	Labor Groups Negative	Labor Groups Net	Labor Groups Positive	Labor Groups Negative	Labor Groups Net
	(1)	(2)	(3)	(4)	(5)	(6)
Estimation:	2SLS	2SLS	2SLS	2SLS	2SLS	2SLS
$\overline{Epid_d}$	7.379**	–1.123	8.502**	8.896**	–1.720	10.616***
	(2.838)	(1.067)	(3.126)	(3.308)	(1.067)	(3.471)
$\overline{ShareMig_d}$	–14.512***	1.913	–16.424***	–16.377***	2.615*	–18.992***
	(2.250)	(1.227)	(2.455)	(2.551)	(1.428)	(2.249)
Observations	1265	1265	1265	1236	1236	1236
Dest. Countries	28	28	28	28	28	28
KP F-stat	46.567	46.567	46.567	34.861	34.861	34.861
R2	0.038	0.040	0.044	0.071	0.051	0.083
Country Controls	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓

Note: Authors' calculations on MPD data. * p<0.1, ** p<0.05, *** p<0.01. Standard errors are clustered at the destination country level. The sample includes parties running for elections between 1990 and 2018. Our main variables of interest are the average Epidemiological term ($\overline{Epid_d}$) and Migration share ($\overline{ShareMig_d}$) computed over the 1970-1990 period. The dependent variable is parties' positive stance towards labor groups (col. (1) and (4)), parties' negative stance towards labor groups (col. (2) and (5)), and parties' net positive stance towards labor groups (col. (3) and (6)). Observations are unweighted in col. (1) to (3) and weighted by the percentage of votes obtained in col. (4) to (6). Each specification includes year fixed effects and time-varying country controls (Polity2 index, logarithm of the human capital index, of the real GDP per capita, of the employed population, of the overall population). 2SLS estimates are presented using the predicted average epidemiological term and migration share as IV.

measure of parties political preferences on several issues (e.g., welfare state expansion, law and order, etc.), based on the share of quasi-sentences on a specific topic. For our purpose, our dependent variables $y_{p,d,t}$ capture parties stances towards labor groups: (i) positive stances towards labor groups, implying favorable references towards the working class, unions and asking for better job conditions; (ii) negative stances towards labor groups, capturing statement against the abuse of power of trade unions. We then additionally construct a measure of parties net positive stance towards labor groups, which nets out from the positive stances the negative ones. Since MPD data has a structural break with the collapse of the Berlin Wall, we focus on the elections after 1990.[34] Intuitively, if horizontal transmission is a plausible mechanism we should expect a positive and significant partial correlation between parties positive and net stances and exposure to immigrants' norms (i.e., $\hat{\beta}_p > 0$).

For brevity, Table 7 provides directly 2SLS estimates using IVs based on predicted stocks from our shift-share and gravity model strategies. The results seem to support the validity of horizontal transmission as a contributing mechanism: estimates in columns (1) to (3) show that parties' positive and net stances towards labor groups are positively related to immigrants' labor regulation experience in their origin countries, while they are negatively influenced by the share of immigrants population. To capture the support of voters for these specific parties, we re-estimate equation (9) after weighting each party for

[34]Moreover, we focus on the subset of countries which are also included in our benchmark analysis: Australia, Austria, Belgium, Canada, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, Malta, Mexico, The Netherlands, New Zealand, Norway, Portugal, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.

the percentage of votes obtained at the election (col. (4) to (6)). The estimated coefficients are confirmed and bigger in magnitude, suggesting that such support for labor groups could have reached the parliament, therefore potentially influencing the legislative process. Additionally, Table H-3 shows that the estimates are robust once we estimate the effect of the migration-specific variables of interest computed at the beginning of our period (1970) or once we include a European Union dummy. Overall, these results suggest that horizontal transmission to political parties could be a contributing mechanism in explaining our benchmark findings.

VI Conclusions

Labor market institutions indeed play a crucial role in influencing how workers respond to globalization shocks and business cycles. However, a pertinent question arises: is labor regulation considered exogenous in the context of one such shock, namely immigration?

This paper answers this question by using a comprehensive dataset on labor 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 regulation and explore the reaction of labor regulation to immigration, in terms of both size and composition. The paper shows that immigration is a source of legal transplants: receiving immigrants from countries with high levels of workers' protection increases host country workers' protection. As for the size of immigration, we find that it has a small negative or null effect on the workers' protection in destination countries.

These results are robust after controlling for other competing or complementary effects of immigration, such as diversity, polarization, and skill selection, and by other origin-specific norms. Across different domains of the regulation, we find that worker representation laws and employment forms laws are the ones that are mostly influenced by immigrants' norms. Moreover, we provide suggestive evidence on the transmission of preferences from migrants to the hosting society. Consistent with the horizontal transmission mechanisms, natives' unionization rate and political parties support towards labor groups are positively influenced by migrants' norms. Additionally, migrants' offspring attitudes towards government intervention are mildly related to parents' degree of workers protection in the origin country.

Lastly, we discuss the magnitude of the effect on workers' protection with back-of-the-envelope computations. Being aware of the partial nature of this exercise, we note that the results show that, on average, immigration contributes to a reduction in WPI of 4.3% standard deviations over the 1970–2010 period. The negative effects are 15% stronger in high-income OECD countries compared to non-OECD countries.

The set of evidence provided in this paper shows that immigrants are a source of law transfer which shape labor regulation, and we provide suggestive evidence for the mechanism explaining this effect. In terms of policy recommendations, we do not claim that our results should be interpreted with a normative perspective, since high (low) workers' protection should not be automatically interpreted as a sign of good

(bad) labor market institutions. The optimal level of workers' protection is country-specific and depends on the desired social welfare function. These results support further research on the labor market impact of international immigration, accounting for the endogenous nature of labor regulation.

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International Immigration and Labor Regulation

Online Appendix

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A Summary of Data and Variable Definition

Table A-1: 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 Rep.	-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	N.Zealand	-0.93	-1.65	-0.52	UK	-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 nine five-year periods for each country. The values presented are the average, minimum, and maximum values for the standardized measures of the workers' protection index during the 1970–2010 period.

Table A-2: Summary Statistics

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	0.98	-3.70	6.52	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 $_{t-1}$	30.70	13.85	8.11	71.99	504	
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	
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	
PANEL E - Individuals attitudes and behaviors						
Gov. Reduce Income Diff.	2.80	1.06	0.00	4.00	146000	
Gov. Guarantee Jobs	6.53	2.56	0.00	10.00	23917	
Gov.Improve Unemp	6.99	2.20	0.00	10.00	23937	
Trade Union Member	0.28	0.45	0.00	1.00	146382	
PANEL F - Parties political preferences						
Lab. Groups Positive	2.97	3.27	0.00	21.69	1265	
Lab. Groups Negative	0.12	0.62	0.00	10.85	1265	
Lab. Groups Net	2.85	3.38	-9.43	21.69	1265	

Note: For detailed sources and definitions, see Table A-3. * p<0.1, ** p<0.05, *** p<0.01.

Table A-3: Variable Definitions and Sources

Variable	Description	Source
PANEL A - WPI		
Workers' protection, Index	Calculated using factor analysis composed of 5 subindexes.	Adams et al. (2017)
Working time laws (FA, S.D.)	The index includes: 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: 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)
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)
ctfp	TFP level at current PPPs (USA=1).	Feenstra et al. (2015)
EU	Dummy = 1 if country is a member of the European Union.	
ILO	Dummy = 1 if country is a member of the International Labour Organization.	
WTO	Dummy = 1 if country is a member of the World Trade Organization.	
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.	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.	
PANEL E - Individuals attitudes and behaviors		
Gov. Reduce Income Diff.	5-level scale on whether Government should reduce differences in income level.	European Social Survey.
Gov. Guarantee Jobs	10-level scale on whether Government should commit in guaranteeing jobs.	
Gov.Improve Unemp. Living	10-level scale on whether Government should commit in guaranteeing good living standards for unemployed.	
Trade Union Member	Dummy = 1 if respondent is currently member of a trade union.	
PANEL F - Parties political preferences		
Lab. Groups Positive	Percentage of quasi-sentence in favor of labor groups in parties' political manifesto.	MPD, Volkens et al. (2020)
Lab. Groups Negative	Percentage of quasi-sentence against labor groups in parties' political manifesto.	
Lab. Groups Net	Difference between the percentage of quasi-sentence in favor and against labor groups in parties' political manifesto.	

B Workers' Protection Index - 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***

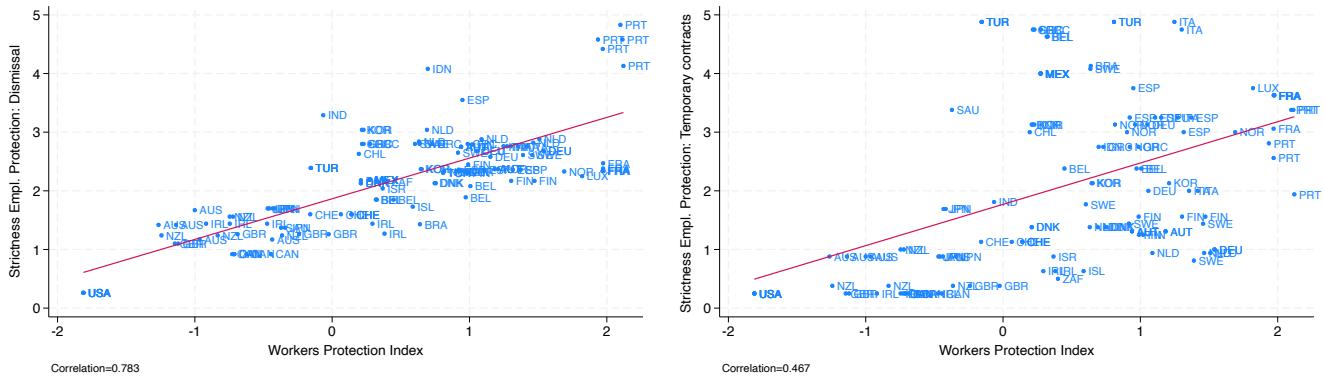
Workers' Protection Index

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

C Correlation between WPI and Alternative Sources

The Leximetric data can tap into multiple aspects of the legislation associated with workers' rights. Moreover, as the authors of the database point out, the data aim to capture how the law protects the labor relations between employers and employees, rather than the actual cost that the legislation imposes on employers.[35] However, the Leximetric dataset is not the only one available that 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 that are available for 33 countries over the 1990–2010 period: (i) the index of the strictness of employment regulation on individual and collective dismissal (DI^{OE}), and (ii) the index of the strictness of employment regulation on temporary contracts (TC^{OE}). The former captures procedures and costs involved in dismissing workers, such as procedural inconveniences that employers have to face through the dismissal process, notice period, and severance pay; while the latter measures the duration, regulation, and conditions associated with temporary contracts compared to permanent contracts. Both indicators have high values when workers have a higher degree of protection (i.e., more hindrances to employers when they want to lay off a worker and when they want to hire a temporary/fixed-term worker). Figure C-1 shows the correlations between the WPI and the two OECD indicators. In both Figures C-1(a) and C-1(b), the WPI is positively correlated with the OECD indicators, and the correlations are statistically significant at a 1% level.

Figure C-1: 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)).

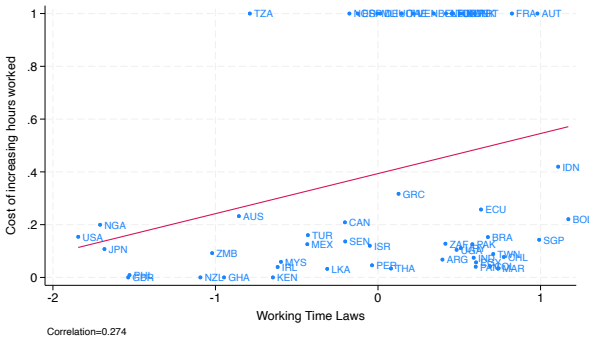
Additionally, in Figure C-2 we cross-validate each of the five WPI subcomponents with the related cross-sectional labor regulation measures available Botero et al. (2004), and we find strong and positive correlations between the proxies. Overall, we provide evidence on correlations across different related data sources for our

[35]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 that 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 in workers' protection can also have beneficial effects on firms' costs, such as the reduction in transaction costs after introducing collective bargaining.

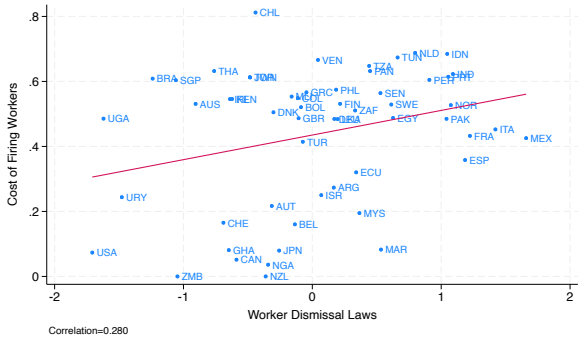
measure of workers' protection and its main subcomponents, which is reassuring for the external validity of our measure. Our novel index, constructed on proxies from the "law-in-the-books", provides a measure of the labor regulation for the least protected workers in a given country. Therefore, it captures the extent of the existing corpus of laws, which influences the functioning of the labor market. Employees can rely on additional layers of protection, that could come from their participation in trade union and from sectoral or firm specific collective bargains. Our measure is unable to capture such existing heterogeneity across firms and sectors, which would require more detailed data not currently available. Nonetheless, Aldashev et al. (2012) show that formal laws can act as an outside anchor, or a "magnet," moving the custom in a favorable direction for the marginalized groups: if the fundamental labor laws are more regulated, the additional layers of protection will be more regulated as well.

Figure C-2: Workers' Protection Index Subcomponents - Correlations with Botero et al. (2004)

(a) Employment Forms Laws and Alternative Employment Contracts

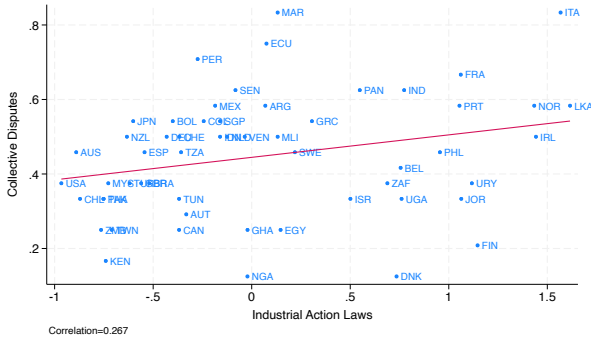


(b) Working Time Laws and Cost of increasing hours worked



(c) Worker Dismissal Laws and Cost of Firing Workers

(d) Worker Representation Laws and Labor Union Power

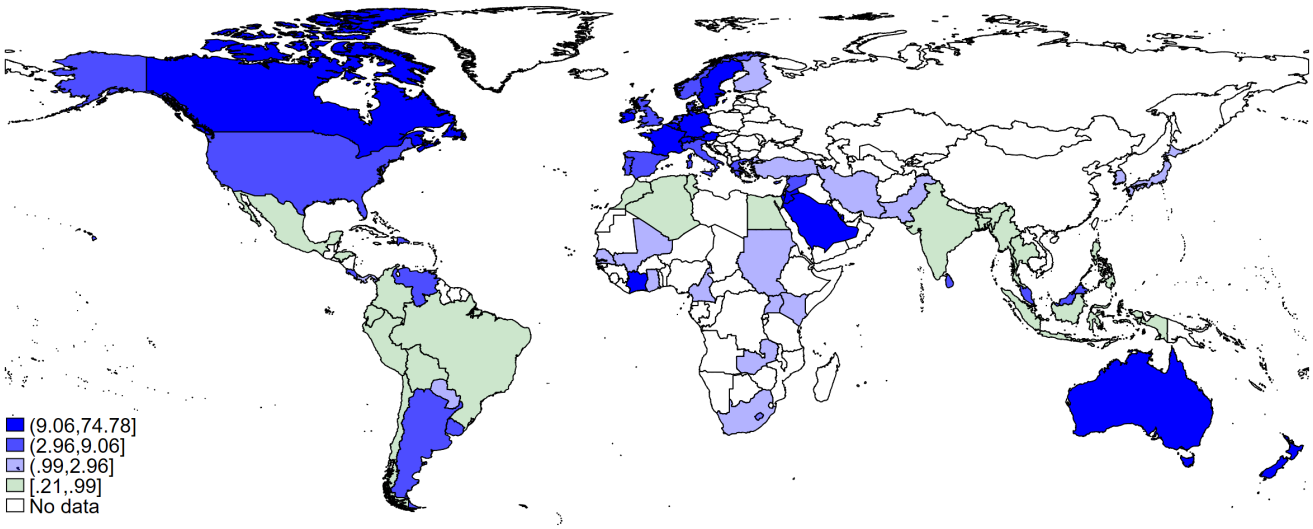


(e) Industrial Action Laws and Collective Disputes

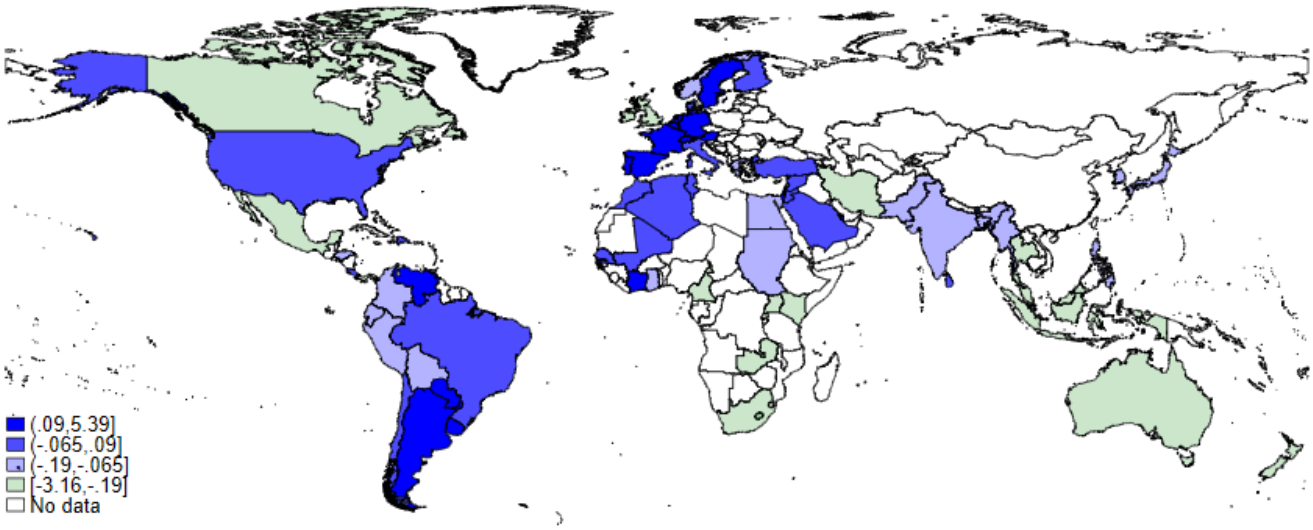
Note: Authors' calculations on CBR Leximetric data (x-axis) and Botero et al. (2004) (y-axis). The figure plots the 1970–2010 average at the country level of the standardized workers' protection subcomponents on the related cross-sectional measures of workers' protection by Botero et al. (2004).

D Immigration Variables - Descriptive Statistics

Figure D-3: Share of Immigrants and the Epidemiological Term - Geographical Distribution



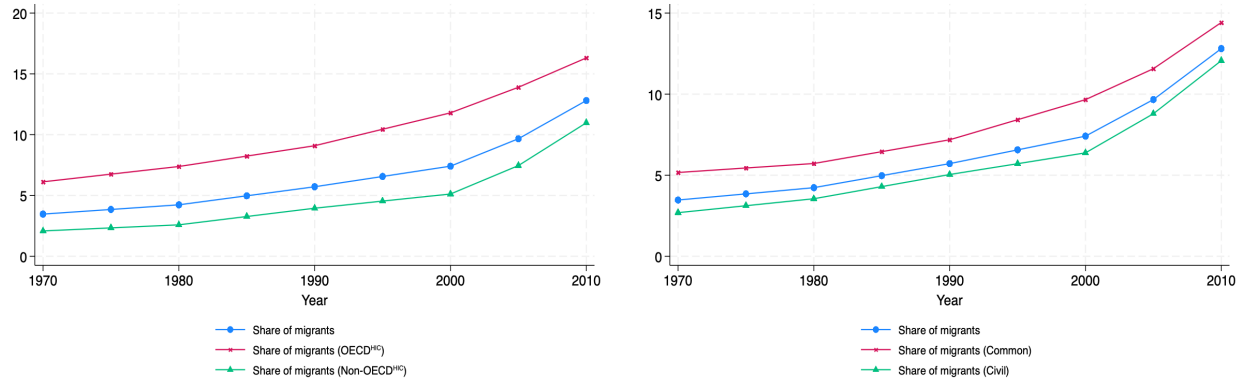
(a) Share of Immigrants



(b) Epidemiological Term

Note: Authors' calculations on Özden et al. (2011) and World Bank data. Panel (a) plots the average share of immigrants over the 2000 population by quartile at country level over the 1970–2010 period. Panel (b) plots the country average epidemiological term (as we compute in equation (2)) by quartile at country level over the 1970–2010 period.

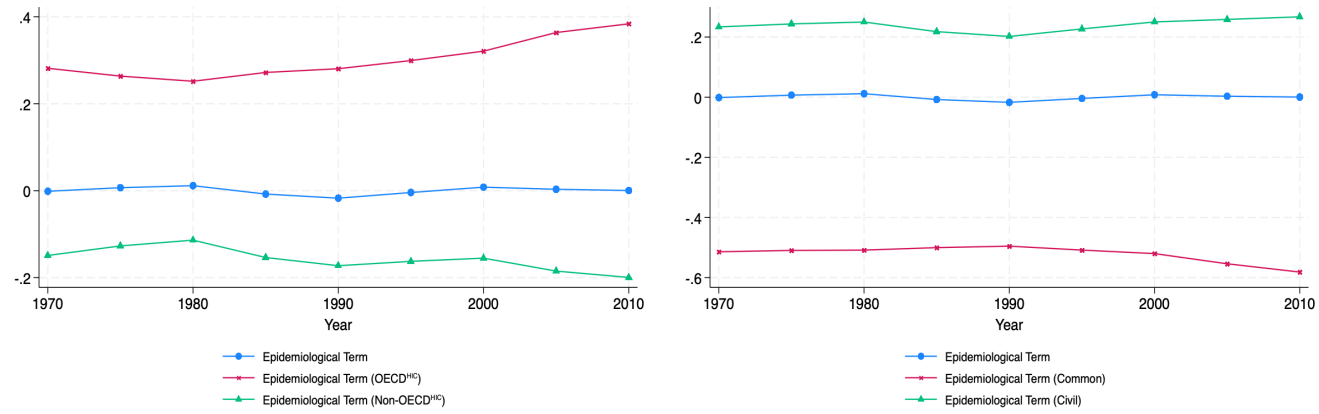
Figure D-4: Share of Immigrants - Evolution over Time



(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) plot the country average share of immigrants over the 2000 population by destination countries' level of development (Figure (a)) and legal origin (Figure (b)).

Figure D-5: 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) plot the country average epidemiological term (as we compute in equation (2)) by destination countries' level of development (Figure (a)) and legal origin (Figure (b)).

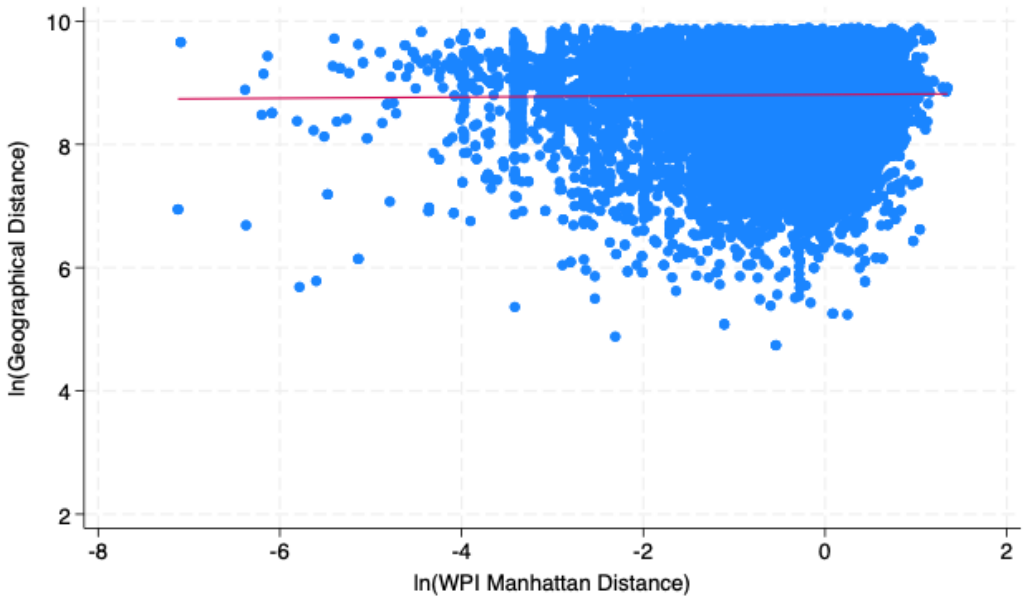
E Identification Strategy - Additional Results

Table E-1: 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 the 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.

Figure E-6: Bilateral Geographical and WPI Distance



Note: Authors' calculations on Head et al. (2010) data. The figure plots the scatterplot and the regression line between the logarithm of geographical distance and the logarithm of workers' protection index distance, computed as a Manhattan distance.

Table E-2: Weak Instrument Test

	(1)
Estimation:	IV
Time:	1970-2010
Dep Var:	WPI
WPI_{t-1}	0.903***
	(0.024)
$Share\ Mig_{t-1}$	-0.003*
	(0.002)
$Epid_{t-1}$	0.123***
	(0.045)
Year FE	✓
Instruments	10
Observations	560
KP LM test p-val	0.00
KP F-stat	38.54
KP rel bias>30%	0.00

Note: The 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% of the OLS bias critical values for the multivariate statistic. Standard errors are clustered at the country level. * p<0.1, ** p<0.05, *** p<0.01.

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

	(1)	(2)	(3)	(4)	(5)	(6)
Estimation:	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var:	WPI	WPI	WPI	WPI	WPI	WPI
WPI_{t-1}	0.857***	0.827***	0.860***	0.870***	0.844***	0.843***
	(0.054)	(0.090)	(0.054)	(0.053)	(0.056)	(0.057)
$Share\ Mig_{t-1}$	-0.007	-0.003	-0.007	-0.006	-0.007	-0.008
	(0.005)	(0.007)	(0.005)	(0.005)	(0.005)	(0.005)
$Epid_{t-1}$	0.094***	0.101**	0.089***	0.088**	0.090**	0.090**
	(0.031)	(0.044)	(0.031)	(0.036)	(0.038)	(0.037)
Controls	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00	0.00	0.00
AR2 p-val	0.54	0.51	0.56	0.56	0.57	0.57
Hansen	0.78	0.15	0.61	0.79	0.48	0.57
Diff-Hansen	0.64	0.18	0.43	0.62	0.59	0.70
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 the 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. Each column includes a different set of lags. See Appendix A for further information on the variables.

Table E-4: Rotemberg Weights

1975				1990				2010			
(1) Origin	(2) $\hat{\alpha_k}$	(3) $\sum \hat{\alpha_k}$	(4) Ratio	(5) Origin	(6) $\hat{\alpha_k}$	(7) $\sum \hat{\alpha_k}$	(8) Ratio	(9) Origin	(10) $\hat{\alpha_k}$	(11) $\sum \hat{\alpha_k}$	(12) Ratio
Bangladesh	0.079	1.483	0.397	Turkey	0.082	1.628	0.391	Italy	0.044	1.243	0.484
Mexico	0.090	1.483	0.397	Puerto Rico	0.083	1.628	0.391	Puerto Rico	0.051	1.243	0.484
Algeria	0.102	1.483	0.397	Philippines	0.090	1.628	0.391	Turkey	0.053	1.243	0.484
Pakistan	0.134	1.483	0.397	Italy	0.118	1.628	0.391	Philippines	0.097	1.243	0.484
Italy	0.183	1.483	0.397	Mexico	0.264	1.628	0.391	Mexico	0.355	1.243	0.484

Note: Authors' calculations following (Goldsmith-Pinkham et al., 2020) methodology. The table shows the top-five Rotemberg weights ($\hat{\alpha}$) by origin and year (1975, 1990, and 2010). Columns (3), (7), and (11) report the sum of the positive Rotemberg weights, while columns (4), (8), and (12) report the ratio between the sum of the top-five Rotemberg weights by origin and the total positive weights.

Table E-5: Origin Country Shares and Destination Countries' Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Time	1960	1960	1960	1960	1960	1960	1960	1960	1960	1970-2010
	Origin Shares									$\widetilde{Epid}^{SS}_{70-10}$
	DZA	BGD	ITA	MEX	PAK	PHI	PRI	TUR	ALL	
$ln(GDP)$	0.013	-0.008	0.015	0.001	-0.042	0.003	0.001	0.006	-0.012	0.525
	(0.01)	(0.02)	(0.01)	(0.01)	(0.04)	(0.01)	(0.01)	(0.01)	(0.07)	(0.45)
$ln(Col)$	-0.010	-0.001	0.009	0.022	0.001	0.015	0.022	0.007	0.066	-0.230
	(0.01)	(0.00)	(0.01)	(0.02)	(0.01)	(0.02)	(0.02)	(0.01)	(0.07)	(0.31)
$ln(PopD)$	0.006	0.007	-0.002	-0.004	0.014	-0.003	-0.004	0.006*	0.021	-0.015
	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.03)	(0.17)
$Polity2$	-0.001	-0.000	0.000	-0.001	0.002	-0.001	-0.001	-0.000	-0.002	-0.015
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.04)
$Common\ Law$	-0.012	0.025	0.009	0.051	0.059	0.043	0.052	0.011	0.239	-0.423
	(0.01)	(0.02)	(0.02)	(0.05)	(0.06)	(0.04)	(0.05)	(0.01)	(0.18)	(0.64)
$OECD^{HIC}$	0.032	0.008	-0.013	0.019	-0.002	0.016	0.018	0.015	0.093	-0.477
	(0.03)	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.03)	(0.01)	(0.11)	(0.91)
Observations	62	62	62	62	62	62	62	62	62	62
R-Square	0.05	0.08	0.19	0.10	0.14	0.10	0.10	0.24	0.11	0.02

Note: Authors' calculations on World Bank and Maddison Project data. * p<0.1, ** p<0.05, *** p<0.01. Columns (1) to (8) report results of a single regression of a 1960 origin-specific share on 1960 destination countries' characteristics. Column (9) reports the results using as a dependent variable the sum of the origin-specific shares identified in Table E-4. Column (10) reports the estimates on the predicted growth of the epidemiological term using the predicted stocks constructed through our shift-share strategy between 1970 and 2010.

Table E-6: 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				
	1.233	0.339	-0.687	-0.373
	(1.363)	(1.205)	(0.652)	(0.563)
Countries/Observations	68	43	43	40
Panel B - Population				
	0.919	0.217	0.680	0.644
	(2.054)	(1.289)	(0.797)	(0.668)
Countries/Observations	70	45	45	44
Panel C - Legal origin: Common Law				
	0.643	0.228	0.007	-0.093
	(0.669)	(0.613)	(0.563)	(0.931)
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 Panel 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), and 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 on the national predicted epidemiological effect with our shift-share strategy over different periods.

Table E-7: Robustness Checks: Adao Standard Error Correction

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Estimation:	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM
Time:	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10
Dep var:	WPI	WPI	WPI	WPI	WPI	WPI	WPI	WPI	WPI
SE clustered at:	DZA	BGD	ITA	MEX	PAK	PHL	PUE	TUR	CNT
WPI_{t-1}	0.849***	0.849***	0.849***	0.849***	0.849***	0.849***	0.849***	0.849***	0.849***
	(0.059)	(0.053)	(0.067)	(0.045)	(0.059)	(0.066)	(0.045)	(0.053)	(0.058)
$Share\ Mig_{t-1}$	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005*	-0.005	-0.005
	(0.005)	(0.006)	(0.004)	(0.005)	(0.004)	(0.005)	(0.003)	(0.004)	(0.004)
$Epid_{t-1}$	0.101***	0.101***	0.101**	0.101***	0.101***	0.101***	0.101***	0.101***	0.101***
	(0.034)	(0.030)	(0.040)	(0.031)	(0.032)	(0.033)	(0.018)	(0.031)	(0.033)
Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AR2 p-val	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
Hansen	0.97	1.00	1.00	1.00	1.00	0.97	1.00	0.96	0.77
Diff-Hansen	0.81	1.00	0.96	1.00	0.89	0.78		0.84	0.64
Instruments	28	28	28	28	28	28	28	28	28
Clusters	18	15	20	16	19	19	9	18	70
Countries	70	70	70	70	70	70	70	70	70
Observations	554	554	554	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 initial shares of immigrants in the year 1960 from Germany (col. 2), Italy (col. 3), Mexico (col. 4), Morocco (col. 5), Pakistan (col. 6), Philippines (col. 7), Portugal (col. 8), and Puerto Rico (col. 9).

F Magnitude of the Estimates

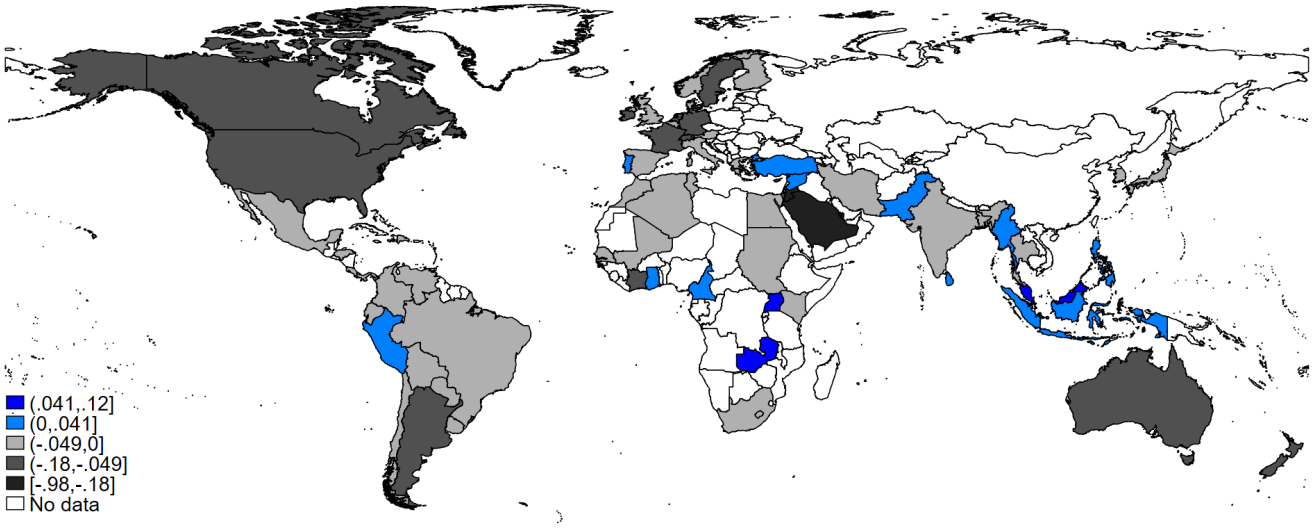
In this section, we provide some back-of-the-envelope calculations based on our estimates to have a sense of the magnitude of the immigration effect on WPI. Even though these simulations have a descriptive purpose, since they cannot consider all general equilibrium effects, they can provide an intuitive picture of the magnitude of the effect 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 of a partial equilibrium of immigration to the evolution of WPI.

We first compute the observed long-run differences between two periods (1970 and 2005) in the share of immigrants and in the epidemiological term. Then, using the estimated coefficients $\hat{\gamma}$ and $\hat{\delta}$ of our benchmark model (Table 1, column (7)), we compute the country-specific predicted variation in the WPI over the 1975–2010 period as follows:

$$\Delta\widehat{WPI}_{d,75-10} = \hat{\gamma}\Delta ShareMig_{d,70-05} + \hat{\delta}\Delta Epid_{d,70-05} \tag{F-1}$$

Figure F-7 plots the results and shows a large degree of heterogeneity in the predicted variation for our sample of countries. The general pattern shows that immigration decreases WPI in high-income OECD societies. This effect is explained both by 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 of the increase in the share of immigrants is counteracted 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 Eastern countries experienced, on average, a predicted increase of WPI as a result of immigration, whereas almost all Latin American countries experienced a predicted decrease.

Figure F-7: WPI Simulation Based on 1975-2010 Variation



Note: Authors' calculations on CBR Leximetric data and World Bank data. The figure plots the predicted variation in our standardized measure of workers' protection due to migration. Predictions are based on equation (F-1).

To provide a better idea of the aggregate effect, column (1) of Table F-1 presents the predicted average immigration effect on WPI for the standard scenario presented in Figure F-7 and other four different scenarios, characterized

by the following: (i) countries' epidemiological effect increased by 20% (Epid (+20%)); (ii) all the countries in our sample experienced the same variation in the epidemiological effect of the UK (Epid (UK)); (iii) all the countries in our sample experienced the same variation in the epidemiological effect of France (Epid (FR)); and (iv) countries experienced a variation in both the immigration share and the epidemiological effect following their 2000–2010 trend (Constant trends). We take France and the United Kingdom as two representative countries that are similar in terms of population and economic development while being geographically close, but significantly different in terms of their legal system (different levels 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 -0.73 in the epidemiological effect, while the UK experienced a surge of immigrants from more regulated labor markets (increase of 0.16 in the epidemiological effect). Finally, to take into account the differences between the levels of development, the table shows the results for the whole sample (Panel A), for OECD high-income countries (Panel B), and for non-OECD countries (Panel C).

Table F-1: 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	-0.0430	-0.0882	-0.2131	2.0525	0.0004
Epid (+20%)	-0.0382	-0.0785	-0.1896	1.8261	0.0004
Epid (UK)	-0.0437	-0.0898	-0.2169	2.0887	0.0004
Epid (FR)	-0.1000	-0.2052	-0.4958	4.7751	0.0010
Constant trends	-0.0814	-0.1671	-0.4037	3.8876	0.0008
Panel B - OECD^{HIC}					
Standard	-0.0473	-0.0970	-0.2344	2.2570	0.0005
Epid (+20%)	-0.0409	-0.0839	-0.2026	1.9514	0.0004
Epid (UK)	-0.0548	-0.1124	-0.2716	2.6158	0.0005
Epid (FR)	-0.1110	-0.2279	-0.5506	5.3022	0.0011
Constant trends	-0.0857	-0.1759	-0.4249	4.0921	0.0009
Panel C - Non-OECD^{HIC}					
Standard	-0.0408	-0.0836	-0.2021	1.9458	0.0004
Epid (+20%)	-0.0369	-0.0757	-0.1828	1.7607	0.0004
Epid (UK)	-0.0380	-0.0779	-0.1883	1.8137	0.0004
Epid (FR)	-0.0942	-0.1934	-0.4673	4.5001	0.0009
Constant trends	-0.0792	-0.1625	-0.3926	3.7809	0.0008

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 the variation in workers' protection. Each row presents a different scenario: (i) "Standard" shows the average country variation as presented in equation (F-1); (ii) "Epid (+20%)" shows the average country variation after an increase in the epidemiological term in each country by 20%; (iii) "Epid (UK)" shows the average country variation if all the countries have the same variation in the epidemiological term of the United Kingdom; (iv) "Epid (FR)" shows the average country variation if all the countries have the same variation in the epidemiological term of France; (v) "Constant trends" shows the average country variation if all the countries have an increase in 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 show the estimates for OECD high-income countries and non-OECD high-income countries, respectively.

The standard scenario provides an average decrease in the workers' protection index by 4.3% of WPI standard deviations. Since the variation in the WPI over the period 1970–2010 is around one standard deviation (see Figure 2), the predicted effect is small albeit not negligible. The effects of immigration are smaller once countries expe-

rience an increase in their epidemiological term (by receiving more immigrants from countries with high levels of WPI) or experience the same positive variation in the epidemiological term of the UK. On the other hand, experiencing the same change in the composition of immigrants between 1970 and 2005 as France, or assuming that the same recent trends as in 2000–2010 will persist in the future, generates even more negative effects. The predicted magnitudes are even more negative for OECD countries compared to non-OECD in the standard scenario: the predicted WPI decrease in OECD countries is around 4.7% standard deviations, compared to the prediction of 4.1% for non-OECD countries.

What would be the economic implications of these predicted effects on economic outcomes, such as wages and employment? First, we explore the relation between labor regulation and various economic outcomes. Table F-2 shows the partial correlation between WPI and 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.[36] Overall, the WPI is indeed related to relevant labor market outcomes, and the partial correlations are on average statistically significant at a 5% level. Moreover, the direction of the relationship is heterogeneous across labor market outcomes. The change in the workers' protection index is positively associated with the unemployment rate and labor productivity, whereas it is negatively associated with the total hours worked and inequality.

Table F-2: Workers' Protection and Labor Market Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Estimation:	FE	FE	FE	FE	FE	FE	FE	FE
Time:	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10
Dep var:	Unemp Rate	Labor Produc	Pc Hrs Worked	Gini	Unemp Rate	Labor Produc	Pc hrs worked	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 the 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 index after tax. See Appendix A for further information on the variables.

Then, we compute the potential effect of the predicted WPI change by multiplying the predicted variation in WPI with the estimated coefficients associated with each labor market outcome presented in Table F-2. The results are presented in columns (2) to (5) of Table F-1, and each column shows the predicted effect of the variation in WPI resulting from migration on the variation in the unemployment rate (col. 2), labor productivity per hours worked

[36] We perform our analysis using the majority of countries depicted in Figure 1 with five-year time periods from 1970 to 2010, and we investigate the relationship between WPI and economic outcomes in the same year and with a one-period lag. To avoid the issue of bad controls (see Angrist and Pischke (2008)), our specification includes only country and year fixed effects in order to capture time-invariant unobserved heterogeneity and common trends.

(col. 3), annual hours worked per worker (col. 4), and the Gini index after tax (col. 5). In the standard scenario, the predicted reduction in WPI over the 1975–2010 period resulting from immigration should lead to a reduction in the unemployment rate of around 0.08 percentage points, a decrease in labor productivity per hours worked by 0.21, an increase of 2.05 hours worked per worker in a year, and an increase in the Gini index by 0.04 percentage points.[37] The predictions almost double when we assume a constant trend in the migration variables. Finally, the economic predictions are larger in OECD countries than in non-OECD countries. Being aware that these values have a descriptive purpose and should not be overemphasized, we note that these results aim to provide intuitive magnitudes of the non-negligible economic implications of WPI changes resulting from immigration.

[37]These results are in line with Botero et al. (2004), who suggest in a cross-sectional setting at the country level that protective labor regulation is negatively related to employment in the formal sector while enhancing employment in the informal one.

G Robustness Checks

G.1 Alternative Migration Measures

Our benchmark specification explores the impact of immigration on labor regulation. Even though we test for the implications of the size and composition of the immigrant population, immigration is a complex phenomenon that can influence receiving countries in different ways through its effect on human capital, culture, productive knowledge, and other origin-specific factors (Borjas, 2016). In this section, we take into account alternative migration-specific dimensions, to minimize the likelihood that our results are driven by other factors.

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 the destination countries' economy relative to less educated immigrants (Docquier et al., 2014; Borjas, 2019). Investigating the skill-specific effect of immigration on countries' labor regulation would be intriguing, also given the different interactions that less educated and highly educated immigrants have on the labor markets. However, the only source of data that provides skill-specific bilateral migration stocks for a wide set of destination countries is Artuç et al. (2014), which combines several censuses for only two years: 1990 and 2000. Having only two years of data is insufficient to obtain GMM estimates in our dynamic panel specification.[38] To account for the skill composition of immigrants and the potential self-selection on education, we then follow Alesina et al. (2016) and compute an index of immigrant population skill selection for each country d at year t as follows:

$$Skill\ Selection_{d,t} = \sum_{o} \frac{\frac{HS\ TM_{o,2000}}{TM_{o,2000}}}{\frac{HS\ NAT_{o,2000}}{NAT_{o,2000}}} * \frac{MIG_{o,d,t}}{\sum_{o} MIG_{o,d,t}} = \sum_{o} MigSel_{o,2000} * \overline{mig}_{o,d,t} \qquad \text{(G-2)}$$

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 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 as weights, and proxies for immigrants' level of self-selection on education.

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 economic performance at different levels of aggregation (Ortega and Peri, 2014; Alesina et al., 2016; Docquier et al., 2020). More recently, Bahar et al. (2022) 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 as a result of immigration can also have implications for labor regulation. To account for the potential impact of migration diversity on labor regulation, we compute for each country of destination d an index of immigrant birthplace diversity as follows:

[38] We also followed Bahar et al. (2022) and 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.

$$Diversity_{d,t} = \sum_{o} \overline{mig}_{o,d,t}(1 - \overline{mig}_{o,d,t}), \tag{G-3}$$

where $\overline{mig}_{o,d,t}$ is the share of immigrants from country of origin o over the total immigrant population in destination country d at year t. This index ranges between 0 and 1 and measures the probability of randomly drawing two individuals born in different countries from the immigrant population. Including the immigrant birthplace diversity index in the main regression with the share of immigrants allows us to control for the size and the diversity of the immigrant population simultaneously.[39]

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, a polarized population is less cohesive, which could affect social trust, public good provision, and potential conflict (Montalvo and Reynal-Querol, 2005). 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 compute an immigrants' birthplace polarization index as follows:

$$Polarization_{d,t} = 1 - \sum_{o} \left(\frac{0.5 - \overline{m}_{o,d,t}}{0.5} \right)^2 \overline{m}_{o,d,t}. \tag{G-4}$$

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

[39] 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 highly correlated. Including the immigration share and the birthplace diversity index computed over the immigrant population will account for both overall diversity and diversity within the immigrant population.

G.2 Additional Results

Table G-1: Workers' Protection and Immigration - Contemporaneous Effect

	(1)	(2)	(3)
Estimation:	OLS	sGMM	sGMM
Time:	1970-2010	1970-2010	1970-2010
Dep var:	WPI	WPI	WPI
WPI_{t-1}	0.950***	0.841***	0.886***
	(0.018)	(0.073)	(0.075)
$Share\ Mig_t$	-0.001**	-0.003*	-0.004
	(0.000)	(0.002)	(0.004)
$Epid_t$	0.048***	0.097**	0.074*
	(0.013)	(0.043)	(0.041)
$ln(GDP)_t$			0.017
			(0.074)
$Polity2_t$			0.018
			(0.125)
$ln(HC)_t$			0.012
			(0.134)
Year FE		✓	✓
Country FE		✓	✓
AR1 p-val		0.00	0.00
AR2 p-val		0.60	0.57
Hansen		0.29	0.21
Diff-Hansen		0.19	0.31
Instruments		16	28
Countries	70	70	70
Observations	554	554	554

Note: Standard errors are clustered at the 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 at time t. Our main variables of interest are the share of immigrants and the epidemiological effect at time t: 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.

Table G-2: Robustness Checks: Additional Controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Estimation:	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM
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}	0.851***	0.807***	0.849***	0.849***	0.817***	0.833***	0.836***
	(0.082)	(0.077)	(0.074)	(0.069)	(0.077)	(0.086)	(0.067)
$Share\ Mig_{t-1}$	-0.007	-0.003	-0.006*	-0.009	-0.006	-0.006	-0.007
	(0.006)	(0.003)	(0.004)	(0.006)	(0.007)	(0.007)	(0.006)
$Epid_{t-1}$	0.080**	0.100**	0.099**	0.093**	0.094**	0.074**	0.095**
	(0.040)	(0.045)	(0.046)	(0.042)	(0.047)	(0.037)	(0.041)
$Rule\,Of\,Law_{t-1}$	-0.143						
	(0.320)						
$Civil\ Liberties_{t-1}$		0.137**					
		(0.059)					
$Shadow\ Econ_{t-1}$			0.001				
			(0.006)				
$Econ\ Freedom_{t-1}$				0.007			
				(0.040)			
EU					0.263*		
					(0.145)		
ILO						0.256	
						(0.669)	
WTO							0.086
							(0.096)
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	0.34	0.90	0.86	0.57	0.55	0.65
Hansen	0.75	0.85	0.70	0.64	0.06	0.39	0.18
Diff-Hansen	0.73	0.55	0.63	0.46	0.05	0.46	0.35
Instruments	32	31	32	32	31	32	31
Countries	70	70	65	67	70	70	70
Observations	554	487	504	499	554	554	554

Note: Standard errors are clustered at the 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, European Union membership, International Labour Organization membership, and World Trade Organization membership. See Appendix A for further information on the variables.

Table G-3: Alternative Estimations and Specifications

	OLS		FE		No lag dependent	
	(1)	(2)	(3)	(4)	(5)	(6)
Estimation:	OLS	OLS	FE	FE	sGMM	sGMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var:	WPI	WPI	WPI	WPI	WPI	WPI
WPI_{t-1}	0.946***	0.938***	0.453***	0.455***		
	(0.018)	(0.022)	(0.040)	(0.041)		
$Share\,Mig_{t-1}$	-0.001*	-0.004***	0.001	-0.000	-0.023***	-0.027
	(0.001)	(0.001)	(0.003)	(0.002)	(0.008)	(0.024)
$Epid_{t-1}$	0.051***	0.053***	0.067	0.062	0.479***	0.400***
	(0.014)	(0.015)	(0.080)	(0.079)	(0.108)	(0.131)
$ln(GDP)_{t-1}$		0.053**		0.009		0.142
		(0.026)		(0.097)		(0.336)
$Polity2_{t-1}$		-0.021		-0.041		0.389*
		(0.039)		(0.054)		(0.225)
$ln(HC)_{t-1}$		-0.024		-0.077		-0.436**
		(0.035)		(0.104)		(0.213)
Year FE			✓	✓	✓	✓
Country FE			✓	✓	✓	✓
AR1 p-val					0.13	0.23
AR2 p-val					0.22	0.54
Hansen					.	0.05
Instruments					10	22
Countries					70	70
Observations	554	554	554	554	554	554

Note: Standard errors are clustered at the 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: in columns (5) and (6) 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.

Table G-4: Workers' Protection and Immigration with all Time-varying Components of the Share of Immigrants

	(1)	(2)	(3)	(4)	(5)	(6)
Estimation:	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var:	WPI	WPI	WPI	WPI	WPI	WPI
WPI_{t-1}	0.894***	0.829***	0.829***	0.859***	0.841***	0.823***
	(0.057)	(0.080)	(0.078)	(0.060)	(0.063)	(0.058)
$Share\ Mig\ Tvar_{t-1}$	-0.003		-0.005**	-0.005	-0.008*	-0.010**
	(0.002)		(0.002)	(0.005)	(0.005)	(0.004)
$Epid_{t-1}$		0.108**	0.106**	0.093**	0.109**	0.104**
		(0.047)	(0.048)	(0.040)	(0.044)	(0.040)
$ln(GDP)_{t-1}$				0.004	0.057	0.096
				(0.073)	(0.063)	(0.062)
$Polity2_{t-1}$					-0.124	-0.064
					(0.110)	(0.097)
$ln(HC)_{t-1}$						-0.037
						(0.073)
Year FE	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00	0.00	0.00
AR2 p-val	0.57	0.59	0.59	0.58	0.52	0.55
Hansen	0.38	0.35	0.33	0.45	0.66	0.81
Diff-Hansen	0.31	0.26	0.22	0.39	0.46	0.61
Instruments	15	15	16	20	24	28
Countries	70	70	70	70	70	70
Observations	554	554	554	554	554	554

Note: Standard errors are clustered at the country level. * p<0.1, ** p<0.05, *** p<0.01. This table reproduces Table 1 while changing the epidemiological measure in which the WPI is time-varying. 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 epidemiological effect and the recalculated share of immigrants with all time-varying components: 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.

Table G-5: Workers' Protection and Immigration with all Time-varying Components of the Epidemiological Term

	(1)	(2)	(3)	(4)	(5)	(6)
Estimation:	sGMM	sGMM	sGMM	sGMM	sGMM	sGMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var:	WPI	WPI	WPI	WPI	WPI	WPI
WPI_{t-1}	0.895***	0.835***	0.836***	0.830***	0.830***	0.839***
	(0.056)	(0.084)	(0.080)	(0.069)	(0.068)	(0.056)
$Share\ Mig_{t-1}$	-0.002		-0.005*	-0.007	-0.009	-0.008*
	(0.002)		(0.003)	(0.005)	(0.005)	(0.004)
$EpidTvar_{t-1}$		0.107*	0.112**	0.118**	0.121**	0.118**
		(0.054)	(0.053)	(0.054)	(0.056)	(0.049)
$ln(GDP)_{t-1}$				0.023	0.049	0.042
				(0.055)	(0.053)	(0.051)
$Polity2_{t-1}$					-0.034	-0.046
					(0.114)	(0.094)
$ln(HC)_{t-1}$						0.020
						(0.069)
Year FE	✓	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00	0.00	0.00
AR2 p-val	0.57	0.56	0.58	0.56	0.52	0.52
Hansen	0.37	0.37	0.33	0.45	0.56	0.80
Diff-Hansen	0.27	0.33	0.22	0.27	0.35	0.53
Instruments	15	15	16	20	24	28
Countries	70	70	70	70	70	70
Observations	554	554	554	554	554	554

Note: Standard errors are clustered at the country level. * p<0.1, ** p<0.05, *** p<0.01. This table reproduces Table 1 while changing the epidemiological measure in which the WPI is time-varying. 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 recalculated epidemiological effect with a time-varying WPI: 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.

Table G-6: Workers' Protection and Immigration - Heterogeneity Analysis by Subsample

	(1)	(2)	(3)	(4)	(5)
Estimation:	sGMM	sGMM	sGMM	sGMM	sGMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var:	WPI	WPI	WPI	WPI	WPI
Subsample:	OECD	Non-OECD	CommonLaw	CivilLaw	WPIPos
WPI_{t-1}	0.792***	0.810***	0.828***	0.851***	0.860***
	(0.105)	(0.139)	(0.109)	(0.071)	(0.057)
$Share\ Mig_{t-1}$	-0.012	0.002	0.001	-0.008*	-0.007
	(0.009)	(0.003)	(0.010)	(0.004)	(0.005)
$Epid_{t-1}$	0.104*	0.086	-0.001	0.079	0.090**
	(0.055)	(0.082)	(0.034)	(0.069)	(0.037)
Controls	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓
AR1 p-val	0.03	0.00	0.01	0.00	0.00
AR2 p-val	0.41	0.26	0.86	0.55	0.56
Hansen	0.64	0.39	0.92	0.95	0.76
Diff-Hansen	0.50	0.39	0.85	0.95	0.57
Instruments	28	28	28	28	28
Countries	24	46	22	48	68
Observations	188	366	175	379	538

Note: Standard errors are clustered at the 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. We perform and heterogeneity analysis by looking at the subsample of the level of development (col. (1) and (2)), legal origin (col. (3) and (4)), and if a country increased WPI over the analyzed period (col. (5)). See Appendix A for further information on the variables.

Table G-7: Cross-sectional Determinants of Workers' Protection Index

	(1)	(2)	(3)	(4)	(5)
Estimation:	OLS	OLS	OLS	OLS	OLS
Dep var:	WPI	WPI	WPI	WPI	WPI
$Share\ Mig$	-0.036***	-0.022**	-0.026**	-0.038***	-0.037***
	(0.010)	(0.009)	(0.013)	(0.012)	(0.010)
$Epid$	0.324***	0.187**	0.313***	0.324***	0.323***
	(0.075)	(0.077)	(0.075)	(0.077)	(0.075)
$ln(GDP)$	0.506***	0.315*	0.447	0.507***	0.505***
	(0.160)	(0.165)	(0.295)	(0.158)	(0.160)
$Polity2$	0.525	0.601*	0.659*	0.610*	0.456
	(0.314)	(0.320)	(0.335)	(0.350)	(0.306)
$ln(HC)$	-0.726**	-0.516	-0.835	-0.788**	-0.673**
	(0.320)	(0.328)	(0.503)	(0.354)	(0.308)
$Common\ Law$		-0.727***			
		(0.229)			
TFP			-0.282		
			(0.777)		
$Unemp\ Rate$					-0.007
					(0.021)
Adj. R-Square	0.29	0.39	0.23	0.28	0.27
Observations	70	70	61	70	68

Note: Standard errors are clustered at the 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, the polity2 index, the logarithm of human capital, a dummy associated with country legal origin, total factor productivity, share of unemployed workers, and the inverse-distance weighting matrix of WPI. Our main variables of interest are the share of immigrants and the epidemiological effect. See A for further information on the variables.

Table G-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:	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10	1970-10
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 the country level. * p<0.1, ** p<0.05, *** p<0.01. The dependent variables are the unemployment rate, labor productivity per hours worked, annual hours worked per worker, and Gini index after tax. Each panel provides the estimates associated with the following variables of interest: industrial action laws ($IndAction$), worker representation laws ($WkrRepr$), dismissal laws ($WkrDismis$), working time laws ($WorkTime$), and employment forms laws ($EmptForm$). See Appendix A for further information on the variables.

H Mechanisms: Additional Results

Table H-1: WPI Subcomponents and Immigration - Subcomponent-Specific Epidemiological Term

	(1)	(2)	(3)	(4)	(5)
Estimation:	sGMM	sGMM	sGMM	sGMM	sGMM
Time:	1970-2010	1970-2010	1970-2010	1970-2010	1970-2010
Dep var: WPI Subcomponent	$IndAction$	$WkrRepr$	$WkrDismis$	$WorkTime$	$EmptForm$
WPI_{t-1}	0.878***	0.862***	0.833***	0.872***	0.888***
	(0.085)	(0.056)	(0.068)	(0.066)	(0.066)
$Share\ Mig_{t-1}$	-0.010	-0.000	0.004	-0.003	-0.002
	(0.007)	(0.003)	(0.006)	(0.003)	(0.005)
$Epid_{t-1}^{IndAction}$	-0.017				
	(0.044)				
$Epid_{t-1}^{WkrRepr}$		0.085**			
		(0.040)			
$Epid_{t-1}^{WkrDismis}$			0.008		
			(0.058)		
$Epid_{t-1}^{WorkTime}$				0.061**	
				(0.029)	
$Epid_{t-1}^{EmptForm}$					0.087**
					(0.043)
Controls	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓
Country FE	✓	✓	✓	✓	✓
AR1 p-val	0.00	0.00	0.00	0.00	0.00
AR2 p-val	0.70	0.85	0.40	0.11	0.83
Hansen	0.89	0.53	0.49	0.64	0.42
Diff-Hansen	0.82	0.39	0.37	0.52	0.46
Instruments	28	28	28	28	28
Countries	70	70	70	70	70
Observations	554	554	554	554	554

Note: Standard errors are clustered at the country level. * p<0.1, ** p<0.05, *** p<0.01. Each column has as a 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.

Table H-2: Horizontal Transmission - Natives' Attitudes Towards Migrants

	Immigrants good for the Economy	Country's cultural life enriched by immigrants	Immigrants make country a better place to live
	(1)	(2)	(3)
Estimation:	OLS	OLS	OLS
$\overline{Epid_d}$	0.924	9.589	3.356
	(3.633)	(5.680)	(3.699)
$\overline{ShareMig_d}$	0.770	–5.319	–2.599
	(4.022)	(6.776)	(4.152)
Observations	133107	133536	133603
Countries	19	19	19
R2	0.046	0.055	0.041
Ind. Controls	✓	✓	✓
Country Controls	✓	✓	✓
Year FE	✓	✓	✓

Note: Authors' calculations on ESS data. * p<0.1, ** p<0.05, *** p<0.01. Standard errors are clustered at the destination country level. The sample includes only natives. Our main variables of interest are the average Epidemiological term ($\overline{Epid_d}$) and Migration share ($\overline{ShareMig_d}$) computed over the 1970-2000 period. The dependent variable is respondent's attitudes towards migrants: whether immigrants are good for the economy (col. (1) and (2)), whether immigrants enrich country's cultural life (col. (3) and (4)) and whether immigrants make the destination country a better place to live (col. (5) and (6)). Each specification includes year fixed effects, a set of individual controls (age, gender, employment status, marital status, level of education and having a child dummy) and time-varying country controls (Polity2 index, logarithm of the human capital index, of the real GDP per capita, of the employed population, of the overall population). OLS estimates are presented in odd columns, while 2SLS estimates using the predicted average epidemiological term and migration share as IV are presented in even columns. Considering a 15% maximal IV relative bias means that the critical value for the F-stat is around 4.58 across specifications when two endogenous variables are instrumented.

Table H-3: Horizontal Transmission - Parties Robustness Checks

	1970 Values			EU Dummy		
	Labor Groups Positive	Labor Groups Negative	Labor Groups Net	Labor Groups Positive	Labor Groups Negative	Labor Groups Net
	(1)	(2)	(3)	(4)	(5)	(6)
Estimation:	2SLS	2SLS	2SLS	2SLS	2SLS	2SLS
$Epid_{d,1970}$	7.471**	–1.146	8.616**			
	(2.919)	(1.140)	(3.327)			
$ShareMig_{d,1970}$	–16.142***	2.068	–18.210***			
	(2.541)	(1.377)	(2.917)			
$\overline{Epid_d}$				9.032*	–0.560	9.592*
				(4.730)	(0.845)	(4.905)
$\overline{ShareMig_d}$				–15.729***	1.498	–17.227***
				(3.930)	(0.948)	(4.062)
Observations	1265	1265	1265	1265	1265	1265
Dest. Countries	28	28	28	28	28	28
KP F-stat	98.528	98.528	98.528	28.402	28.402	28.402
R2	0.038	0.037	0.043	0.038	0.040	0.044
Country Controls	✓	✓	✓	✓	✓	✓
Year FE	✓	✓	✓	✓	✓	✓
Europe FE				✓	✓	✓

*Note:*Authors' calculations on MPD data. * p<0.1, ** p<0.05, *** p<0.01. Standard errors are clustered at the destination country level. The sample includes parties running for elections between 1990 and 2018. Our main variables of interest are the Epidemiological Term and Migration share in the year 1970 in col. (1) to (3), and the average Epidemiological term ($\overline{Epid_d}$) and Migration share ($\overline{ShareMig_d}$) computed over the 1970-1990 period in col. (4) to (6). The dependent variable is parties' positive stance towards labor groups (col. (1) and (4)), parties' negative stance towards labor groups (col. (2) and (5)), and parties' net positive stance towards labor groups (col. (3) and (6)). Each specification includes year fixed effects and time-varying country controls (Polity2 index, logarithm of the human capital index, of the real GDP per capita, of the employed population, of the overall population). An EU dummy is included in columns (4) to (6). 2SLS estimates are presented using the predicted average epidemiological term and migration share as IV.