UNEQUAL DEMOCRACIES

Working paper n°5

March, 2019

Can Institutions Shape Immigration Policy Preferences?

The Conditioning Effects of Labor Market Policy Institutions on Unemployment Risks

Elif Naz Kayran
(Graduate Institute of International and Development Studies, Geneva)

elif.kayran@graduateinstitute.ch

FACULTÉ DES SCIENCES DE LA SOCIÉTÉ
DEPARTMENT OF POLITICAL SCIENCE AND INTERNATIONAL RELATIONS

European Research Council
Established by the European Commission

UNIVERSITÉ DE GENÈVE

ABSTRACT:

How do socio-economic inequalities in advanced post-industrial countries determine immigration policy preferences? To what extent labor market institutions condition the relationship between unemployment risks and immigration policy demands? I hypothesize that labor market institutions, namely compensation and protection regimes, significantly condition the positive relationship between unemployment risks and restrictiveness demands through their indirect effects. I apply multi-level estimations using the European Social Survey from 2002 to 2010 in 16 European countries. The findings reveal a significant job competition effect captured by workers' relative risk exposure associated with more restrictive immigration policy demands. Risk based attitudinal differences decrease with greater employment protection legislation. Only for workers with fixed contract, contexts with more expansive unemployment compensation policies increase the effect of relative unemployment risk. Overall, this paper contributes to the scholarly work on the determinants of political preferences in advanced post-industrial democracies.

ACKNOWLEDGEMENTS:

Work on this paper was supported by funding from the European Research Council under the European Union's Horizon 2020 research and innovation programme (grant agreement no. 741538). Earlier versions of this manuscript were presented at the 2018 IPSA World Congress, at the 2018 Neuchâtel Migration and Mobility Studies Conference, at the 2019 Swiss Political Science As-sociation Annual Conference, and at workshops in Geneva, Berlin, and Sheffield. I would like to thank the participants and discussants of these workshops and my co-panelists for their helpful feedback. I am especially grateful to Carsten Jensen, Richard Johnston, Konstantin Käp-pner, Melanie Kolbe, Paul Marx, Jonas Pontusson, David Rueda, and Beth Whitaker for their comments and suggestions for this paper.

1. Introduction

Immigration is deemed to be not only economically indispensable but has proven to be difficult to curb in advanced liberal democracies. Paradoxically, there is a pervasive trend for more intolerance towards permissive immigration policies, constraining the immigration policy-making capabilities of states that matches the labor market demands and skill shortages (Meuleman et al. 2009). This outcome is not so surprising if we consider that in this past two decades, workers in destination countries such as the UK, Germany, and France, not only face more risk-prone employment trajectories but have been exposed to widespread structural reforms that reduced the protection capacity of the post-war safety nets and status preservation institutions. These two dynamics have exacerbated the socioeconomic inequalities within states across differential labor market policy regimes (Anderson and Pontusson 2007). Therefore, discerning whether the attitudinal differences of immigration grounded in these unequal risk positions are curbed or aggravated by distinct labor market institutions are crucial questions to ask due to their relevance to the debates both within and outside the scope of academics.

Previous studies have found evidence for sociotropic explanations grounded on the potential or perceived negative impact of immigration on the functioning of welfare states (Gerber et al. 2017; Razin et al. 2011). However, while the direct relationships between material interests, welfare states, and immigration preferences have been extensively debated in the political economy of migration and the immigration attitudes literatures (Oorschot and Uunk 2007; Scheve and Slaughter 2001), surprisingly few studies have focused on understanding how institutions indirectly shape immigration policy demand differences based on material interest. In this paper, I advance our understanding of the comparative political economy of immigration by asking to what extent and in what direction national labor market

policy institutions alter the relationship between unemployment risks and immigration policy preferences?

Studies of institutional norms and social trust theories focusing on the direct effects of institutions reveal that inclusive and expansive welfare regimes are associated with more tolerance and favorability towards immigration (Crepaz and Damron 2009). From a different vein, the welfare chauvinism literature highlighting the fiscal exposure of the welfare states suggests that precisely due to the generous and protective nature of institutions, individuals develop adversity towards immigrants based on a perceived burden on their institutional regimes (Gerber et al. 2017; Naumann et al. 2018). Coupled with the inconsistent support found for the labor market competition hypothesis linking labor market conditions of natives to their immigrant attitudes (Hainmueller et al. 2015; Scheve and Slaughter 2001), there seems to be a disagreement regarding how institutions, immigrant attitude formation, and a potential effect of a labor market competition may be linked. Put differently, the evidence from previous work have not provided an answer as to whether generosity and protection promotes feeling of security and decrease intolerance or heighten the vulnerability of workers in how they shape immigration preferences.

The first aim of this paper is to test whether workers experiencing relatively higher unemployment risk than the average worker are more cautious towards liberal immigration policies. Next, instead of studying the effect of welfare state through an aggregation of social policies and norms, I delineate the effect of institutions focusing on two distinct dimensions of labor market institutions, protection from job dismissal and unemployment income replacement. I argue that the indirect effects of institutions operate through their ability to condition the unemployment risks of workers and may either dampen or heighten the differences in restrictiveness demands (Gingrich and Ansell 2012; Mau et al. 2012).

Citing evidence from the European Social Survey data from 2002 to 2010 and employing a random-slope hierarchical linear modelling strategy, I find that immigration policy demands are not only associated with job competition exposure, operationalized in the form of relative unemployment risks, but are significantly shaped by labor market institutions. I do not find evidence to suggest a statistically significant main and direct effect of labor market institutions. Instead, the findings support the argument that different contexts of institutional labor market regulations alter what it means to have a future risk of unemployment, thus, modifying the effect of unemployment risk on restrictiveness demands. The empirical results reveal that in contexts with more protective employment legislation, the effect of workers' relative risk exposure decreases. While this effect holds for the whole workforce, it is not directly applicable for better off workers with secure employment. Regarding unemployment compensation, results reveal that for temporary contracted workers, more generous compensation schemes, arguably signaling passive and status-preserving labor markets increase the effect of relative unemployment risk. Overall, I develop an original conceptual macro-micro link between labor market institutions, economic risks, and immigration policy demands.

These findings have important implications for both the public attitudes towards immigration and comparative welfare studies literatures. Firstly, I show that the contested effect of a job competition is robustly related to more restrictiveness demands by presenting an original conceptualization strategy. Secondly, I find evidence regarding how the effects of unemployment risk can be mitigated by labor market policy institutions. Contrary to the previous insights from the political economy of immigration literature, I focus on specific institutions targeted at mitigating labor market risks and indirect rather than direct effects. Thirdly, I present some of the first evidence regarding the ways in which the immigration aversion of natives stemming from a job competition effect may be altered. In the next

section, I start by presenting my approach to conceptualizing economic risks, introduce the theoretical model I propose, and formulate the hypotheses. Next, I outline my measurements and empirical strategy. The findings section presents the results of the multi-level analysis, followed by a discussion on the robustness and sensitivity of the results. I conclude the paper by discussing the implications of my results regarding the hypotheses and the central research question I examine in this paper.

2. Relative unemployment risks, job insecurities, and labor market competition

While a strong relationship holds between material interests and immigration policy demands (Facchini and Mayda 2009), the labor market competition hypothesis positing that workers whose jobs are threatened will have more adverse attitudes of immigration, has been challenged by recent studies in favor of cultural and socio-tropic explanations (Gerber et al. 2017; Hainmueller et al. 2015). Despite this, there is a robust effect of employment insecurity when it is conceptualized and measured using occupational and sectorial employment conditions, beyond solely looking at immigrant presence (Lancee and Pardos-Prado 2013; Pecoraro and Ruedin 2016). While the numbers and the characteristics of immigrants entering the labor markets comprise one side of the threat, the volatilities in national labor markets, other than immigrant flows, the skill composition of citizens, and other individual characteristics directly feed into shaping workers' real or perceived job competition insecurities (Finseraas et al. 2017).

Redistribution and social policy are *ex post* signals of a state's ability to correct for worker's worries over work and need for insurance (Esping-Andersen 1990). Empirical studies on welfare attitudes consistently demonstrate that individuals experiencing more unstable work conditions and those facing more risk exposure hold more pro-welfare attitudes (Alt and Iversen 2017; Rehm 2009). At the heart of this argument is the notion that

redistribution and social policy schemes protect workers from future risks (Anderson and Pontusson 2007). This understanding of policy demands can be extended to arguments about immigration policy preferences because, immigration policy is an essential way in which states control labor market demand and supply factors (Bearce and Roosevelt 2018; Mayda 2006). Immigration policies can shape economic risks through states' capacity to control foreign labor supply before subsequent risks such as job competition or wage downgrading have materialized. Thus, it relates to future risk reduction rather than a correction for realized risks. Even when income or skill levels are considered, workers experiencing higher unemployment risk and job precarity will draw utility from *ex ante* interventions to limit immigration and subsequent future economic risks (Finseraas et al. 2017). For them, limitation on the supply of workers prevents the occurrence of these risks and presents a way through which they receive a sense of protection from getting worse off in their employment conditions. Therefore, extending the labor market competition to the national market rather than solely competing with migrants and thinking of immigration policy as a way in which natives can demand protection in their status and future risk reduction form the theoretical foundations of my argument.

A liberal immigration policy, while satisfying labor shortages, impacts the labor equilibrium and employment rates in national labor markets (Borjas et al. 1996; Dustmann et al. 2013). These effects are more salient for occupations where immigrants are increasingly replacing the natives, but even more widely, instill worries over unemployment in work categories where employment growth is lagging (Pardos-Prado and Xena 2018). While the growing unequal distribution of risk and precarity across work categories hit the manual production and low and medium skill service workers the hardest (Oesch 2006; Rehm 2016), a potential rather than realized risk of immigration in the labor market concerns the future risk reduction for all workers. This means that workers who do not suffer from lack of

prosperity, have stable jobs, or have no direct competition with immigrants may also be prone to developing a harsher stance on immigration policy. In fact, there is ample evidence suggesting that adverse attitudes towards immigration are not exclusive to the poorest or the worst off (Mols and Jetten 2017: 55-58). In order to test a competition argument, we need to theorize and measure the vulnerability and risk position of not just the bottom but all the workers in relation to each other. What is crucial in determining the unemployment risk exposure and the subsequent job insecurities of workers, thus, lies in understanding how they are formed.

Conceptualization of unemployment risks in absolute terms, such as occupational unemployment rates or employment status has several drawbacks. While an absolute assessment of risk reflects economic interests (Rehm 2016), it is not informative of where the workers are placed within the labor market. For instance, in 2010 an unskilled manual worker in Finland was facing a 17.07 percent absolute unemployment rate in her occupation. Comparatively, someone in the same job category in Spain was facing a staggering 31.3 percent unemployment rate. Would these two workers experience the same type of worry? Put differently, would the worker in Spain have less tolerance for immigration given her higher absolute risk? I argue that while both workers are at risk, it is difficult to attribute the link between absolute unemployment risk and immigration preferences.

Unemployment risk, as a concept to capture potential job competition, becomes informative when relativized to the average employment performance. In the same year, 2010, the average unemployment rate in Finland was 8.39 percent and 19.83 percent in Spain. If the workers remain in their own national labor markets, the Finnish worker has far more reasons to experience job insecurity compared to the Spanish since she has double the risk of being unemployed given her national labor market conditions. While the Spanish worker experiences more risk in absolute terms, given the general state of her national labor market

captured by the average unemployment rate, her future position in the labor market seems to be less strikingly far behind than the Finnish. In other words, it is not the unemployment rate in absolute terms but rather the insecurity stemming from the knowledge that most people in her country are working under less risky conditions that motivate the demands for immigration restrictions (Vanneman and Pettigrew 1972). This simple demonstration is corroborated by recent studies on risk and political outcomes revealing that comparisons, benchmarks, and reference points do in fact differently and more precisely capture distinct interests and predict political participation (Kurer et al. 2018), voting behavior (Rooduijn and Burgoon 2018), welfare attitudes (Rehm 2016), and economic satisfaction (Mols and Jetten 2017: 105-07). This does not mean that an absolute measure of risk is not indicative of *any* risk position but rather that relative measures dependent on the country and year specific information is much more meaningful in a comparative understanding of what the workers can expect regarding their future and how they perceive risk exposure in their national labor markets.

Studies on income comparisons demonstrate that whatever their absolute position may be, how individuals place themselves compared to other groups determine the utility, or the disutility in case of under-performing, they derive from their position determining their status anxieties and political preferences (Clark and Senik 2010; Hyll and Schneider 2018). Workers experiencing relatively higher risks would, thus, have more interest in preventing a liberal immigration policy regime due to their already behind position (Mols and Jetten 2017: 108-09). In line with the job competition hypothesis, I expect workers with higher relative occupational unemployment risks to have a direct association with less favorable immigration preferences, formulated as follows:

Relative risk hypothesis: Individuals working in occupational groups with higher unemployment risks relative to the national average demand more restrictive immigration policies.

Occupation categories capture education, skill, and socialization characteristics of workers simultaneously (Dancygier and Walter 2015). They offer a cognitively facilitating manner of informing workers of their position both in absolute terms and in relation to the aggregate trends (Oesch 2006) and allow researchers to make arguments rooted in these occupational social group contexts (Kitschelt and Rehm 2014). One serious drawback of using occupations as indicators is their blindness to differential precarity within each occupation (Marx and Picot 2018), namely whether workers are permanent or temporarily contracted (Rueda 2005). Temporarily employed workers are often not eligible for some social benefits or can be governed under different, often more liberal, hiring and firing rules. Despite this trade-off, based on the paper's primary theoretical interest in a risk of losing job in the future rather than vulnerability at a given time point, I choose to employ occupational indicators and account for this heterogeneity using statistical controls, split samples, and interaction terms.

3. Indirect effects of institutions: What role for labor market policy institutions on unemployment risks and immigration policy demands?

Turning to the question on the effect of institutions, I investigate two distinct labor market policy institutions and focus on protection from dismissal and unemployment replacements. Firstly, contextual factors such as macro-economic conditions or institutions alter what it means to be an unemployed person in different contexts for each risk group rather than directly shape preferences (Bearce and Roosevelt 2018; Mau et al. 2012). In this regard, labor market policies change the context of being unemployment and the saliency of such a risk through their corrections both before and after the state of unemployment (Gingrich and

Ansell 2012; Halikiopoulou and Vlandas 2016). While there is a multitude of labor market policies and regulations, such as collective bargaining and social investment policies, I choose these labor market policies because of their direct relevance to the short to mid-term unemployment risk positions of workers. When it comes to political preferences and behavior, individuals tend to have a myopic view of their self-interests (Healy and Malhotra 2009). Thus, these institutions with immediate consequences for unemployment risks are more likely to influence how the relationship between preferences and economic risks are formed by altering what it means to be unemployed in a country and how likely it is that such an outcome may occur in the future.

Secondly, I argue that risk-related indirect effects of institutions need to be investigated instead of their average effects. Workers are asymmetrically affected by labor market risks and are subject to different conditions of access to benefits or protection depending on their positions (Rehm 2016). Therefore, this growing gap of rights and status security between workers make it unfruitful to theorize a wholesale effect of institutions on all workers (Rueda 2005). Put differently, the attitudinal differences of workers in the same labor market may be altered by the labor market regime. However, the effect of institutions is conditional on the labor market status and the position that the worker is situated in. Thus, the effects of labor market institutions on immigration policy preferences should be specific to each risk category in the workforce because unemployment risk inequalities not only determine workers' risk exposure but also mitigate an unequal access to the institutional benefits and protection due to their strong relationship to job tenure, wage rates, and rights (Gingrich and Ansell 2012). This means that the indirect effect of institutions on willingness to accept more immigrants as an *ex ante* insurance from future risks will be dependent on the relative risk exposure of workers rather than direct institutional effects.

To put this in simpler terms, essentially, I argue that there is a difference in having an expansive or frugal replacement rate regime and a rigid or flexible labour market policy that alters the effect of unemployment risks on preferred immigration level. Workers at similar levels of relative risk living in different contexts vary regarding the immigration policy liberalization that they are willing to tolerate. This variation in attitudinal differences, I argue, can be attributed to the indirect effects of labor market institutions. Turning back to the two workers, is there something about the institutional regime in Finland in 2010 that is different to Spain changing the effects of her worries over her relatively high unemployment risk? Could this not alter the effect of her risk on political preferences, in this case her aversion to accepting more immigration, and if so, in what direction? In this paper, I test whether we can answer yes to the former two questions and find some of the first evidence regarding the directionality of these indirect effects of on immigration preferences.

Drawing from the findings of welfare attitudes literature (Anderson and Pontusson 2007; Gingrich and Ansell 2012) and the political economy of migration (Crepaz 2008; Razin et al. 2011), the indirect effects of institutions can be hypothesized in two competing directions. More compensation and protection changes the meaning of being exposed to relatively higher unemployment risk by generous replacement that alleviates worries over wage loss and by strong legislation that prevents costless firings (Gingrich and Ansell 2012). Consequently, both who are above or below the average risk would feel more secure which decreases the effect of risk on restrictiveness demands within the scope of a job competition. If workers have the option to gain non-market wages even in the case of job loss or if the workers are in a context where their jobs are well protected, being unemployed will be less of a high saliency issue leading to a decrease in the effect of unemployment risk.

Rigid labour market policies can be argued to attenuate the effect of risk exposure on preferences for a more restrictive labor immigration policy on the grounds of status security

they provide. The ease into which permanent, and, more importantly, temporary workers can be fired and hired influences workers' willingness to accept more immigration depending on their risk categories. Since immigration introduces further labor supply and can potentially drive the job tenure downwards in the labor market (Bearce and Roosevelt 2018), both temporary and permanent workers will derive disutility from more flexibility. Overall, I formulate the following two hypotheses regarding the indirect effects of labor market institutions on immigration preferences based on a logic of protection and compensation security they provide to the workforce changing the effect of being at risk of unemployment:

Compensation security hypothesis: Higher levels of unemployment compensation generosity will decrease the positive effect of relative unemployment risk on demands for restrictive immigration policies.

Protected security hypothesis: Higher levels of protection from dismissal will decrease the positive effect of relative unemployment risk on demands for restrictive immigration policies.

However, the directionality of indirect institutional effects may be just the opposite. The challenges of economic transformations in advanced democracies have crystalized the tension between passive labor market policies, exemplified by high replacement rates, and activation measures in the form of social investment and re-training (Boeri 2011). Active labor market policies are arguably more adapt in matching the market demands for workers providing employment opportunities for a wider section of the workforce. Therefore, contexts with more passive interventions and rigid labor markets may heighten insecurity and increase risk-based differences on restrictiveness demands. One possible way this occurs is through the signaling mechanism of the labor market policies, where institutions are seen as prioritizing the traditional incumbent worker. Similarly, rigid labor market regimes are argued to be at odds with increased employment and have been found to disproportionately privilege the

incumbent workers in secure jobs (Rueda 2015). By the virtue of higher turnover rates and higher percentage of temporary work contracts, more flexible labor markets present more chances of re-entering the job market in case of a job loss, reducing the saliency of an unemployment risk (Boeri 2011). Thus, in case of a future unemployment scenario, workers would face significant challenges in re-entering the job market where there is high protection and low activation (Schwander and Häusermann 2013). Therefore, a positive indirect effect of protection legislation is also plausible, where more protection and rigidity in the labor markets increase the effect of risk on restrictiveness demands due to its implications on decreased rehiring opportunities.

Generous compensation may also increase the effect of risk on restrictiveness demands. This is because replacement rate calculations are made based on the income earned during employment. Workers who are in jobs that pay less not only receive insufficient rates of compensation in most cases but also find themselves in a context where 'insiders' are privileged and re-entry chances are lower. Due to the heterogeneity within each relative risk group, the meaningfulness of compensation depends on how likely somebody would be fired. This makes compensation less important for permanent workers and, conversely, triggers this vulnerability mechanism for temporary workers. In the latter case, workers with temporary contracts may derive disutility and vulnerability from more protective legislation increasing the effect of risk. In sum, I formulate the following two hypotheses regarding the indirect effect of labor market institutions on immigration preferences based on a logic of vulnerability derived from high protection and expansive compensation altering the effect of being at risk of unemployment:

Compensation vulnerability hypothesis: Higher levels of unemployment compensation generosity will increase the positive effect of relative unemployment risk on more demands for restrictive immigration policies.

*Protected vulnerability hypothesis***:** Higher levels of protection from dismissal will increase the positive effect of relative unemployment risk on more demands for restrictive immigration policies.

4. Research Design and Methodology

The individual level data come from the five consecutive waves of the European Social Survey (ESS 2018). The pooled cross-sectional data is from 2002 to 2010, surveyed every two-years, with a total of 64 country-year units at the aggregate level. The average number of observations in each country-year cluster is 989 (min: 573, max: 1,482). I select country-year cases based on the paper's focus on advanced industrialized democracies and previous experience with immigration flows. All available country-years are included except for where comparative data on the key measurement indicators were unavailable.[1] Given the theoretical interest in active workers' position in the labor market and the risk of being unemployed instead of current status of unemployment, I select all the respondents who are in paid employment at the given survey wave.

I measure citizens' preferred level of immigration with an index of the following three items available across all waves in ESS: 'To what extent do you think [country] should allow people of the same race or ethnic group as most [country] people to come and live here?', 'How about people of a different race or ethnic group from most [country] people?', and 'How about people from the poorer countries outside Europe?' Respondents were given four options: (1) 'allow many to come and live here', (2) 'allow some', (3) 'allow a few', (4) 'allow none'. I construct the dependent variable as a continuous additive index from 0 to 3 (scale mean: 1.293, SD: 0.742); higher values indicating a preference for more restrictive immigration policy (Cronbach's alpha: 0.904).

I calculate unemployment risks through a relative measure of objective labor market insecurity using disaggregated occupational unemployment data from the European Labor Force Survey series (Eurostat 2018). Following the work by Rehm, I construct the absolute risk by calculating the occupational risk rates in each of the nine one-digit ISCO code work categories (2016). I calculate absolute unemployment risk by obtaining the rate of unemployment in an occupation at a given time point *t*. The nine occupations I consider are 'Managers' (1), 'Professionals' (2), 'Technicians and associate professionals' (3), 'Clerical support workers' (4), 'Service and sales workers' (5), 'Skilled agriculture, forestry, and fishery workers' (6), 'Craft related trades workers' (7), 'Plant operators and assemblers' (8), and 'Elementary occupations' (9). I divide each nine occupational unemployment percentage rates at time *t* to the national unemployment percentage rate at *t* obtaining ratios of risk for each of the occupations relative to the national employment performance. Empirically, instead of using absolute unemployment rates, a relative ratio or distance measure also allows the paper to have a comparable measure for this pooled panel data.

The relative risk measure is on a continuous scale where 1 indicates no difference between the occupational and national unemployment rates.[2] Values higher than 1 indicate more relative risk and values less than 1 indicate a better off position in the labor market (mean: 0.705, SD: 0. 373). Figure 1a demonstrates the variation of relative risk across countries pooled by years and occupations. Portugal, followed by Finland and Sweden, has the highest relative unemployment risk whereas Netherlands and Norway have the lowest. Figure 1b reveals that the average relative risk across occupations are higher for work groups requiring less education and skills, in line with the previous research on the topic (Rehm 2016). As expected, pooled across all country-years in the sample, elementary occupations have, on average, the highest relative unemployment risk, whereas occupations requiring more education such as managers and professionals have the lowest.

Figure 1a: Distribution of relative risk across countries

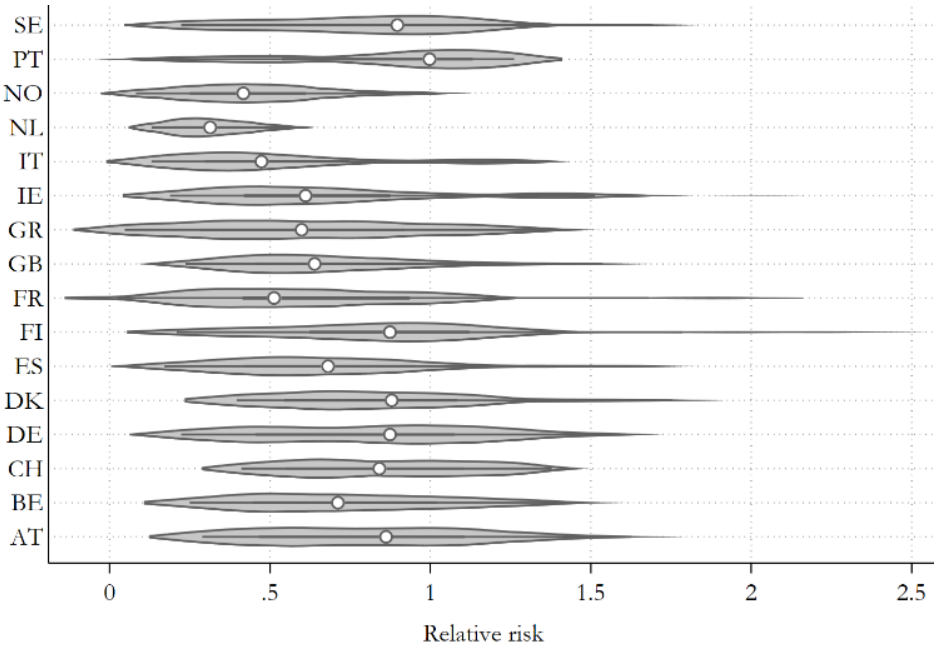
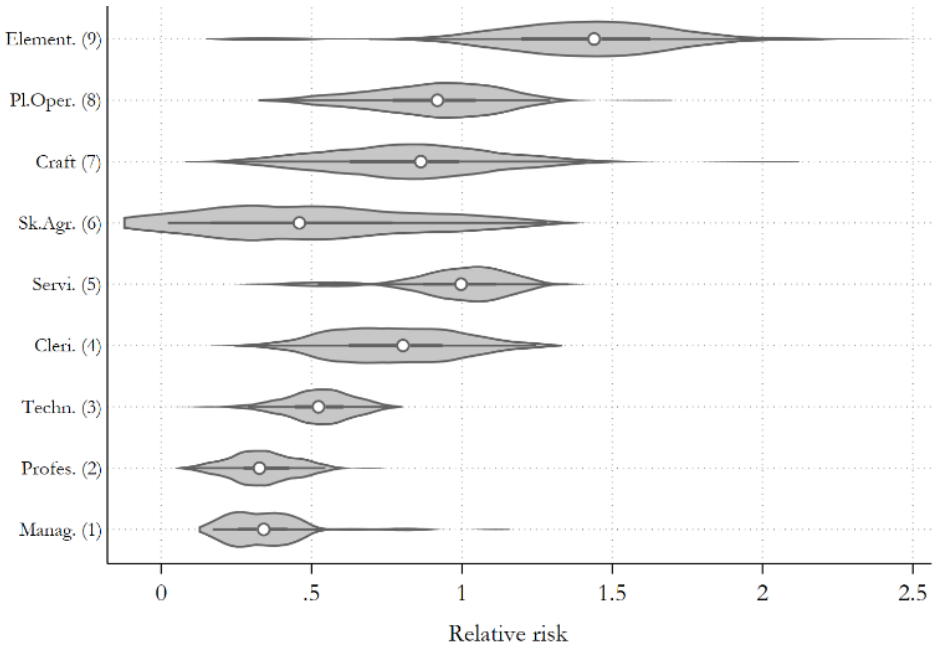


Figure 1b: Distribution of relative risk across occupations



Turning to the country-year level explanatory variables, I measure the level of *unemployment compensation generosity (UCG)* using the index variable from the Comparative Welfare Entitlements Dataset available for a temporal coverage up to 2010 (Scruggs et al. 2017). The

measure indicates national insurance provisions with items for generosity of replacement rates, qualification periods, entitlement duration, waiting period before reception, and workforce coverage. Higher values on the index mean more generosity (mean: 11.01 SD: 2.01). The highest compensation generosity in the sample is observed in Norway in 2002 (14.5) and the lowest in Italy from the same year (4.9).

The rigidity in the labor markets is measured by the *employment protection legislation (EPL)* indices taken from the OECD (2018). OECD provides measures for the EPL for both regular and temporary contracts. The EPL index for regular contracts captures the procedures, repercussions, and costs involved in dismissals. EPL index for temporary workers captures regulations for fixed work with respect to the types of contracts and duration that are allowed. This measure also informs on the extent to which the temporary workers' rights need to be closer to an equivalent permanent worker. Given that contract regulations for either contract type can affect the supply-demand equilibrium in both types of employment, in order to measure the EPL in the labor markets, I aggregate these two indices. Higher values on the index reflect more rigidity and protection (mean: 4.14, SD: 1.44). In the sample, the most protected labor market context is Greece in 2002 and 2004 (7.55) and the least is United Kingdom in 2002 (1.51).

Other theoretically relevant individual level covariates are included taking stock of previous studies on immigration attitudes (Gerber et al. 2017; Mayda 2006). First, I account for whether respondents' jobs are under real or perceived competition with immigrants. Given the scarcity of comparative occupationally disaggregated data on immigrant employment rates, instead of a direct measure of immigrant employment rates, I take the measures constructed by Ortega and Polavieja using the O*NET dataset targeting the task content of the respondent's occupation (2012: 300-01).[3] The first one reflects the extent to which physical skills (manual and finger dexterity, control precision, and arm-hand

steadiness) are important to perform the tasks of an occupation. The second measure focuses on how much communication related tasks (written and oral comprehension and expression, speech clarity, and speech recognition) are important in an occupation. Both the *manual* and *communication skill* variables are matched with the respondent's occupation category at the two-digit ISCO level. Ortega and Polavieja find that occupations requiring more communication skills are protected from competition effect whereas occupations requiring more manual skills experience higher competition (2012). Since these two measures are highly correlated, in main model specifications I only use the variable capturing manual skill intensity, but the results hold if this measure is replaced with communication skill measure.

Next, I account for *education* level measured by total years spent studying. I account for whether the respondent holds a *permanent employment contract* as opposed to having a temporary contract or no contract, her *gender*, *religiosity,* whether the respondent is a *member of a trade union,* and her *citizenship* status. Respondents' *age* is distinguished in three categories: 'between 18 to 34 years old', 'between 35 to 50 years old' and 'between 51 to 65 years old'. Given the inconsistent measurement of household income variable across countries in the ESS, I account for respondent's *economic well-being* using the reported subjective income by the respondents, following the work by Rooduijn and Burgoon (2018). The question asks the respondents how they feel about living with their current income ranging from 'very difficult' to 'living comfortably'. Next, I account for the respondent's *satisfaction with the current state of the country's economy* (0-extremely dissatisfied to 10-extremely satisfied) and self-reported ideological position using the *left-right scale* item higher values indicating a more right-wing position. And lastly, I control for the general well-being of respondents by using the question item capturing *happiness* (0-extremely unhappy to 10-extremely happy).

At the contextual level I include a series of theoretically relevant covariates using the Comparative Political Data Set as well as other comparative data sources (Armingeon et al. 2017). I control for the *gross domestic product (GDP) growth* and the *unemployment rate* at a given country-year unit as measures of economic performance. I account for the *union density* based on unions' potential role in protection and benefit bargaining. Traditionally right-leaning governments are found to have a stricter stance on immigration whereas the opposite holds true for the left (Lahav 1997). In order to hold this constant at the country-year level, I control for *government's ideological composition*. The variable is an ordinal scale with five categories (1) right-wing dominance, (2) right-wing hegemony, (3) balanced, (4) left-wing hegemony, and (5) left-wing dominance calculated using the Schmidt-index of cabinet composition. I account for supply of immigration policy controlling for the *overall migration policy restrictiveness* at a given country-year unit from the Immigration Policies in Comparison - IMPIC dataset where higher values indicate more restrictive immigration policy regulations (Helbling et al. 2017). This allows me to control for the baseline of immigration policy restrictiveness in a country at a given time point. Lastly, I also measure the *share of immigrant stock* in the aggregate as a percentage of the total population (OECD 2018). All context level covariates are lagged by one-year.

I estimate a random-slope hierarchical linear regression using an asymptotic maximum likelihood approach. The multi-level modelling strategy allows to partition the residual variance at both within and between the country-year level units and to analyze the micro and the macro levels simultaneously (Rabe-Hesketh and Skrondal 2012). More crucially, it allows the random effects of occupational relative unemployment risk to vary across country-year units and to test the cross-level interaction associations theorized in the paper. This approach produces more reliable standard errors at each level avoiding both the ecological and atomistic fallacies, which could be a cause for concern if the research is

confined to data analysis at either micro or macro level (Gelman 2012). To check whether the results are sensitive to different estimation procedures and to account for potential confounding, I estimate my model specifications on alternative estimations and models with additional control variables, as well as country and year fixed effects. These robustness procedures are discussed below, and detailed results are available in the appendix.

In a null random-intercept model, the variance partition coefficient indicates that 10.4% of the variance in immigration policy demands is due to differences between country-year units. Likelihood ratio tests demonstrate that the models estimating the effect of relative risk varying randomly across country-years are a better fit for the data strengthening the argument to use a random-slope model in line with the theoretical interest of the paper. I start the analysis with restricted random intercept models and move to random slope specifications stepwise adding individual covariates, contextual level variables, and lastly, the interaction terms one by one. Overall, the following model will be estimated alternating the interaction term between UCG and EPL to test the hypotheses:

$$\begin{aligned}\text{Immigration policy preferences}_{ij} = {} & \beta_1 \text{ relative risk}_{ij} + (\beta_2 \ldots + \beta_{13} \text{ Level-1 Covariates}_{ij}) \\ & + \beta_{14} \text{EPL}_j + \beta_{15} \text{UCG}_j + (\beta_{16} \ldots + \beta_{21} \text{ Level-2 Covariates}_j) \\ & + \beta_{22} \text{ relative risk x UCG}_{ij} + u_{0j} + u_{1j} \text{ relative risk} + e_{ij}\end{aligned}$$

5. Empirical findings

Table 1 presents the results of the multi-level analysis estimations. Here, it is most important to highlight that higher relative unemployment risk is positively associated with higher demands for restrictiveness in immigration policy at $p<0.001$ level as hypothesized. Model 1 estimates a partial random intercept model, Model 2 includes all the individual level covariates, and Model 3 fits the same model with a random slope specification. The introduction of the additional individual covariates reduces the residuals at the individual level and improves the model fit (Moehring and Schmidt 2013). Model 4 adds the UCG and

Model 5 adds the EPL variables to the random slope specification whereas Model 6 demonstrates both parameters estimated simultaneously, and the full Model 7 includes all relevant country-year level covariates. Table 1 only presents covariates with significant associations.[4]

As a way investigating the substantive significance of relative unemployment risk exposure, using Model 7, I predict the marginal effect of a change in the restrictiveness demands by an increase in relative risk exposure.[5] An increase of 0.5 to a worker's risk exposure is predicted to have an average marginal effect of 1.40 on restrictiveness demands. Given that the dependent variable is on a scale from 0 to 3, this is a considerably important substantive relationship. Predicted marginal effects of a relative risk exposure of 1, meaning equal risk to the average, the effect of risk is 1.36, whereas, relative risk's effect is 1.55 on more restrictive immigration preferences for workers experiencing double the risk to the average, holding all other covariates at means.[6]

Results in Table 1 also demonstrate that respondents whose occupation relies more on physical skills, with permanent work contracts, women, older workers, with more right-wing political views, and with worse subjective assessment of their economic well-being are associated with more demands for restrictive immigration policies. Conversely, workers with more years of education, union members, non-citizen immigrants, more religious respondents, happier, and who are more satisfied with the economy are statistically associated with less restrictiveness. To examine the between country-year variation further and to test the security vs. vulnerability hypotheses, in the next step I add the contextual variables to the models. The introduction of contextual level variables in models 4 through 6 does not alter the individual level covariates.

Table 1: Determinants of immigration policy preferences, multilevel estimations

	(M1)	**(M2)**	**(M3)**	**(M4)**	**(M5)**	**(M6)**	**(M7)**
Relative Risk	0.19***	0.19***	0.19***	0.19***	0.19***	0.19***	0.19***
	(0.011)	(0.011)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Dexterity	0.36***	0.35***	0.34***	0.34***	0.34***	0.34***	0.34***
	(0.023)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)
Permanent contract	0.02*	0.02**	0.02**	0.02**	0.02**	0.02**	0.02**
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Female	0.01*	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Age (ref: 18-34 y/o)							
35-50 y/o	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
51-65 y/o	0.04***	0.04***	0.04***	0.04***	0.04***	0.04***	0.04***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Education (in years)	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Union member	-0.05***	-0.02**	-0.02**	-0.02**	-0.02**	-0.02**	-0.02**
	(0.008)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Non-citizen	-0.25***	-0.22***	-0.22***	-0.21***	-0.22***	-0.21***	-0.22***
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
Left-right position		0.07***	0.07***	0.07***	0.07***	0.07***	0.07***
		(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Religiosity		-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Economic well-being (ref: Comfortable)							
Coping		0.03***	0.03***	0.03***	0.03***	0.03***	0.03***
		(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Difficult		0.03*	0.03*	0.03*	0.03*	0.03*	0.03*
		(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Very difficult		0.05t	0.05t	0.05t	0.05t	0.05t	0.04t
		(0.025)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)
Happiness		-0.02***	-0.02***	-0.02***	-0.02***	-0.02***	-0.02***
		(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Economic satisfaction		-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***
		(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
EPL					0.01	0.01	0.02
					(0.015)	(0.015)	(0.017)
UCG				-0.02t		-0.02t	0.00
				(0.011)		(0.011)	(0.013)
Immigration policy							1.71***
							(0.351)
Immigrant stock							-0.02*
							(0.007)
Union density							-0.00***
							(0.001)
Observations	45,196	45,196	45,196	45,196	45,196	45,196	45,196

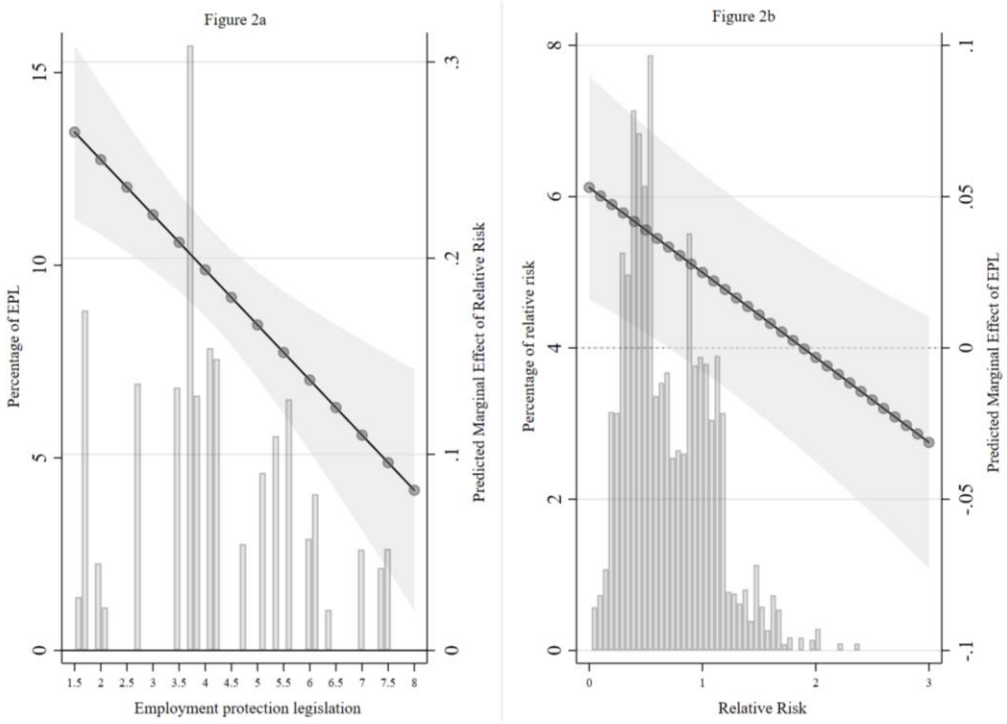
Note: Standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, t p<0.1

The results show no significant direct average effect of EPL. In Model 4 and 6, more UCG is statistically associated with less restrictiveness at the $p<0.1$. However, the effect of UCG drops below conventional levels of significance when other country-year level covariates are added. Table 1 also reveals that higher immigration restrictiveness is associated with more restrictiveness demands, at $p<0.001$ level. While beyond the scope of this research, this robust relationship calls for further research into investigating the causal direction of policy congruence or the influence of a restrictive immigration policy context on immigration attitudes. Lastly, higher union density and higher immigrant stock as a share percentage of the population are demonstrated to be associated with less restrictiveness demands. Overall, while I have robust evidence to suggest that workers experiencing higher levels of unemployment risk compared to average worker in their country, I do not find evidence to suggest direct effects of labor market institutions.

5.1 The conditioning role of labor market institutions

Next, I am interested in the question of whether the effect of relative risk varies under specific labor market regime conditions. I add 2-way cross-level interaction terms for UCG and EPL to the random slope model specification of Model 7 with the relative unemployment risk, respectively. Firstly, the results demonstrate no significant indirect or direct effect of UCG on immigration preferences. In contrast, I find a statistically significant, at $p<0.001$ level, negative indirect effect of EPL on immigration preferences. For an interpretation of this interaction effect, Figure 2a plots the predicted marginal effects of relative risk at different values of EPL and Figure 2b shows *vice versa* to simultaneously inspect whether EPL has an effect at different relative risk levels.

Figure 2: Predicted marginal effects of EPL and relative risk on immigration preferences, 90% CI

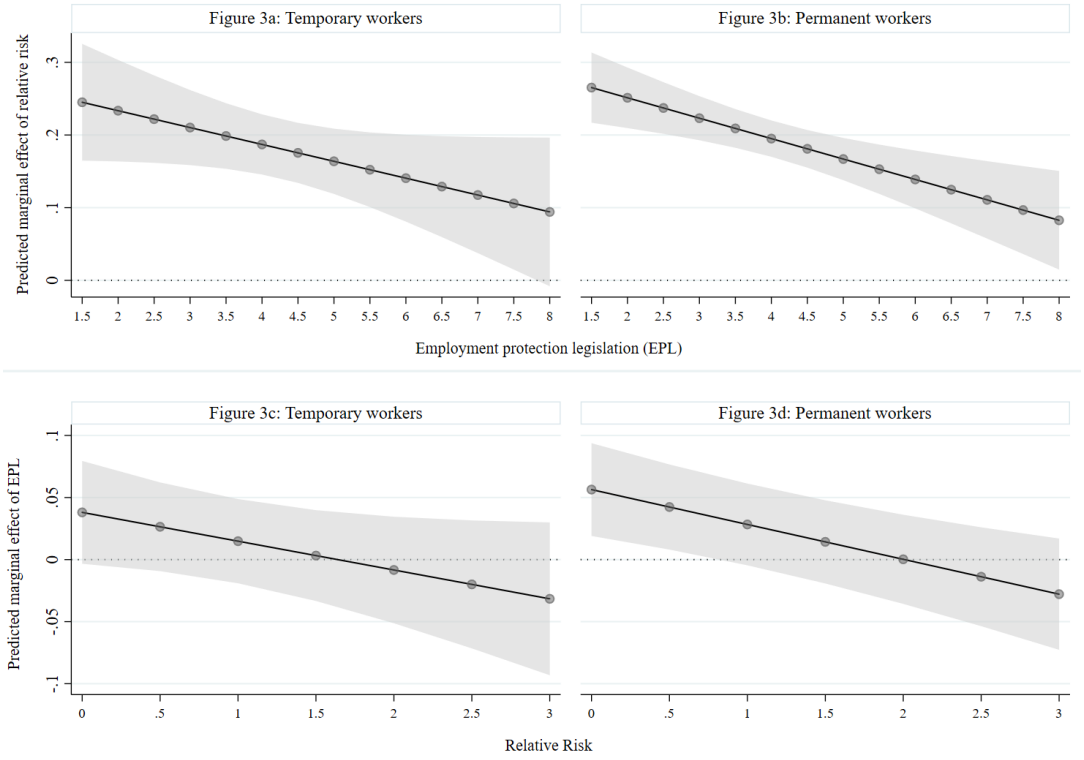


Looking at Figure 2a, the results reveal that relative unemployment risk has a positive effect on more restrictive demands at every level of EPL. However, the predicted effects decrease and are attenuated at country-year contexts with more protectiveness. These results seem to suggest that protective EPL reduces the differences in immigration policy preferences based on relative risk finding evidence for the protected security hypothesis. Inspecting the effect of EPL across different levels of relative risk in Figure 2b, a positive effect of EPL on restrictiveness demands seems to be statistically significant only for individuals with less than average risk. However, at relative risk levels beyond about 0.5 confidence intervals of the marginal effect of EPL includes zero. In sum, while there is a decrease in the effect of relative risk at higher levels of EPL, Figure 2b reveals that for those that are better off, higher EPL seems to have a positive direct relationship with their restrictiveness demands. This suggests that while the differences of restrictiveness demand across relative risk groups

decrease at higher EPL, for those that are doing better off than the average, higher level of EPL have a modest positive effect on increasing restrictiveness demands. These findings improve our understanding of how EPL can is associated immigration preferences and demonstrates the importance of focusing on different social groups with regards to their interactions with institutions and preference formation.

As argued in the theory section, it is crucial to account for the intra-occupational precarity with regards to the differences in contract types (Rueda 2005). To deal with this, first, I split my sample into temporary and permanent workers estimating the same two-way interaction models, and secondly, use 3-way cross-level interaction models between contract type, relative risk, and institutions. Starting with the EPL, as demonstrated in the full sample 2-way interactions, I find further evidence to support the protected security hypothesis. For both permanent and temporary worker samples, and in the three-way interaction estimation, I find evidence suggesting a decreasing effect of relative risk at higher EPL levels, visualized in Figures 3a and 3b. Corroborating the findings from the Figure 2b, Figures 3c and 3d plot the effect of EPL which is statistically significant at less than average relative risk exposure only for permanent workers. This means that regardless of the work contract type there is a decreasing effect of risk at higher EPL. However, for permanent workers with less than 0.5 relative risk exposure, EPL has a positive effect on restrictiveness demands in immigration policy. This effect drops to $p<0.1$ level significance in the temporary worker sample indicating that the hypothesized protected security hypothesis for EPL may be supported by all but permanent workers that are better off than the average worker in the labor market.

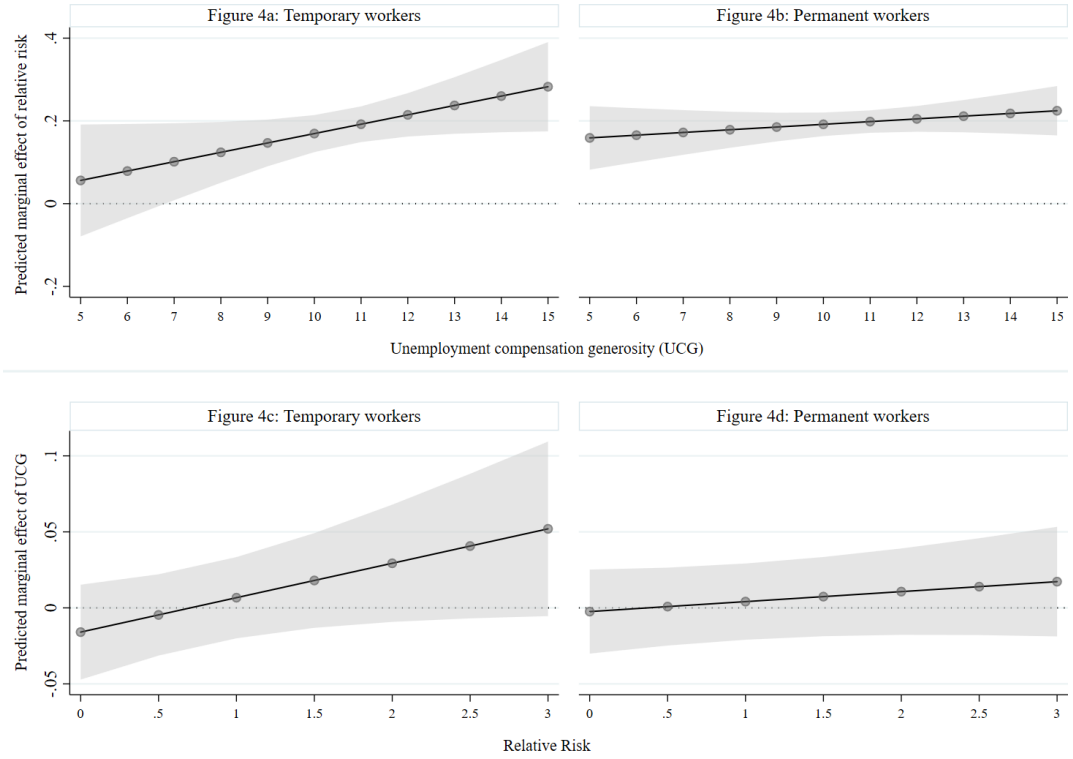
Figure 3: Predicted marginal effects of EPL and relative risk on immigration preferences in 3-way cross-level interactions *by contract type*, 90% CI



Turning to compensation generosity, split sample results and the 3-way interactions reveal that UCG has a conditioning effect on the relationship between relative risk exposure and immigration policy preferences *only* for temporary workers. Figures 4a and 4b demonstrate that the predicted marginal effect of relative risk increases as UCG level increases. However, for permanent workers the relationship is flat and not statistically significant as Figure 4b presents. For both temporary and permanent workers, as presented in Figure 4c and 4d respectively, the confidence intervals of marginal effect predictions of UCG include zero at all risk levels. In other words, while compensation policy has no direct effect on workers, expansive compensation regulations heighten the effect of employment competition, captured by relative risk, on restrictiveness demands for workers that do not have stable work arrangements. Overall, I find that more generous compensation regimes contribute to the

differences at the level of occupational relative unemployment risk for temporary workers in line the compensation vulnerability hypothesis.

Figure 4: Predicted marginal effects of UCG and relative risk on immigration preferences in 3-way cross-level interactions *by contract type*, 90% CI



5.2 Robustness and Extension

All models pass relevant diagnostic tests for the multi-level and cross-level interaction estimations (Rabe-Hesketh and Skrondal 2012).[7] In terms of random effects, Sweden stands out as an outlier negatively association with more restrictiveness demands. To account for this, I exclude Sweden from the sample and re-estimate the models. While there are no changes in the effect of relative risk and the indirect effects of institutions, when Sweden is excluded from the sample, the negative effect of union density drops below conventional significance levels and EPL's average direct effect changes in significance. Based on this, I check whether the omission of union density from model estimations alter the findings. All

models excluding the union density variable reveal the same results. Second, as robustness and sensitivity checks, I include additional individual level subjective and objective characteristics of the workers, including but not limited to being on welfare benefits and personal attitudes towards risk, equality, and helping others.

Third, even though the country-year level sample is of acceptable size, I use restricted maximum likelihood estimations and clustered standard errors to account for potential heterogeneity and to check the reliability of my estimates. Fourth, to check for potential threats of spurious associations and bias in my estimations due to unobserved factors at the country-year level, I add country and year fixed effects to remove this potential confounding across units. All results are in line with the main findings. Lastly, there are no substantive changes in the results when additional potentially influential country-year covariates such as trade openness, budget deficit, public spending on compensation policy, active labor market policies, total social expenditure as percentages of the GDP are considered (Bearce and Roosevelt 2018; Meuleman et al. 2009).

As an exploratory extension, another way to think about how labor market institutions alter immigration policy preferences, directly or indirectly, is though their *changing levels*. Even though these regulations are hard to reform and are slow-moving, there have been compensation policy reforms decreasing the generosity of replacement rates and a wider liberalization of the employment regulations regarding temporary work within the temporal and geographical scope of this paper's coverage. To calculate the changing levels of EPL and UCG, I take the level of each institutions at the time point *t*, the year respondents were surveyed, and subtract the level of the indicator from a previous time point *t-k* at the country-year specific aggregate level, from k=1 to k=5. Positive values indicate increases in compensation or protection.

After inspecting the results, I corroborate that the levels of EPL and UCG do not have direct effects on preferences. While I find no robust significant indirect effects for either EPL or UCG change, only the direct main effect of increasing UCG is positively associated with more restrictiveness suggesting that increases in compensation generosity has a contextual effect of increasing restrictiveness demands.[8] Although all evidence point to supporting the compensation vulnerability hypothesis, these results find some preliminary evidence to suggest that changing levels of institutions need to be theorized differently from their level effects in future work. However, the results should be taken with caution given that the paper's sample does not study same individuals over time and capturing reforms of these slow-moving regulations are difficult in this temporal scope.

6. Conclusion

While previous research has extensively studied how politics shape labor market institutions, this paper investigated the role of labor market institutions on political preferences of workers regarding immigration policy. Based on a multi-level analysis of five waves of ESS covering 16 countries from 2002 to 2010, this paper has shown that relative occupational unemployment risks significantly relate to more demands for restrictiveness. Testing two competing logics of indirect effects; security and vulnerability, I find that labor market institutions have conditioning effects on immigration policy preferences. However, these indirect effects are distinct depending on the institution in question and worker groups that they are affecting.

The results revealed evidence in line with the compensation vulnerability hypothesis but only for workers with limited work contracts. Immigration policy preferences of workers who are employed with unlimited work contracts are not affected by the unemployment compensation generosity available in their country. For workers in precarious employment

relations, however, higher levels of generosity increase restrictiveness demands. This evidence falls in line with the previous findings of the insider-outsider literature (Rueda 2005). Given that these generous benefits and entitlements are highly dependent on the job tenure and rights attached to the current employment, temporary employees have more to gain from active labor markets with more social investment and employment growth-oriented policies rather than the passive interventions in the form of unemployment replacement.

Higher employment protection significantly reduces the differences in immigration restrictiveness demands due to relative risk. This evidence supporting the protected security hypothesis holds for workers who have both temporary and permanent work contracts. The results also demonstrate that for relatively better off permanent workers, with the lowest risk exposure, EPL seems to be directly associated with more restrictiveness demands. Giving insight into the preference formation of not only for the lowest part of the socio-economic distribution, this paper finds evidence suggesting that promotion of rigid legislation in labor markets while decreasing the effect of relative risk, may be more important for the 'outsiders' of the labor market in terms of improving their tolerance for liberal immigration policies adding to the current studies on risk and its political consequences.

In sum, employment protection decreases the effect of relative risk by instilling security in status, whereas more compensation generosity increases the effect of relative risk-based attitudinal differences for the temporary workers by highlighting their vulnerability. While the findings suggest that it is possible to devise labor market policies attenuating the adversity towards immigration from the native workforce based on job competition, striking this balance seems to be one of the most immediate policy-making challenges of today's advanced democracies. Ultimately, nurturing grounds for a permissive immigration policy seems to be dependent on states' ability to protect the jobs of the workforce, while at the same time signaling activation and employment growth towards outsiders in the labor

markets. These findings once more find support for the widening gap of interests within and across different strata of the workforce. As revealed, permanent workers that are better off than the rest, have a positive association with higher protection at odds with the rest of the workforce. The theorization of the interest formation of insiders and the well-off should be explored in much more detail in future work.

There are, however, several limitations of the analysis and the results presented in this paper. Firstly, while the direct level effects of institutions may not be effective in shaping preferences, changing levels of compensation generosity may have direct effects on the entire workforce. While the changing effects are beyond the scope of the paper, future studies should aim at gauging the difference in the effects of levels and changing levels of institutions of political preferences. Secondly, given the correlational evidence presented, the paper does not make causal arguments and do not test the underlying psychological arguments between unemployment risks, job insecurities, and how precisely institutions modify political preferences. In this regard, experimental research designs could further develop the evidence found in this paper by testing causal arguments regarding these relationships more precisely.

Despite its shortcomings, the paper advances the existing literature in several different ways. First, I find a robust association between immigration preferences and unemployment risks but in a unique way. I propose and test an original measure of understanding the job competition and insecurities workers experience by focusing on relative rather than absolute labor market risks across occupations. To operationalize the concept of relative unemployment risks, I construct a dataset of relative occupational unemployment risks for 16 countries from 2000 to 2010 using the European Labor Force Survey series as primary data source. Next, the analysis of the effects of labor market institutions focuses on the specific functions adding to the scholarly on how welfare regimes and their transformations shape

European societies. The findings contribute to the debate on whether generosity and protection nurture or endanger tolerance towards immigration. Finally, I contribute to the growing literature on the political implications of economic inequalities showing that while institutions can in fact mitigate how economic concerns affect political preferences, they are strongly status and risk specific depending on where the workers are placed in the risk distribution.

References

Alt, J and Iversen, T. (2017), 'Inequality, Labor Market Segmentation and Preferences for Redistribution', *American Journal of Political Science,* 61 (1), 21-36.

Anderson, C.J. and Pontusson, J. (2007), 'Workers, Worries, and Welfare States: Social Protection and Job Insecurity in 15 OECD Countries', *European Journal of Political Research* 46 (2), 211-35.

Armingeon, K., et al. (2017), 'Comparative Political Data Set 1960-2014', in University of Berne Institute of Political Science.

Bearce, D. H. and Roosevelt, M. (2018), 'A Sometimes Hidden Economic Dimension to Individual Immigration Preferences: Cross-National Evidence in Support of the Labor Competition Hypothesis', *Political Research Quarterly,* Forthcoming.

Bischof, D. (2018), 'New Graphic Schemes for Stata: Plotplain and Plottig', *The Stata Journal,* Forthcoming.

Boeri, T. (2011), 'Institutional Reforms and Dualism in European Labor Markets', in O. Ashtenfelter and D. Card (eds.), *Handbook of Labor Economics* (4B; Amsterdam: Elsevier), 1173-236.

Borjas, G. J., Freeman, R. B., and Katz, L. F. (1996), 'Searching for the Effect of Immigration on the Labor Market', *American Economic Review,* 86 (2), 246-51.

Clark, A. E. and Senik, C. (2010), 'Who Compares to Whom? The Anatomy of Income Comparisons in Europe', *The Economic Journal* 120 (May), 573-94.

Crepaz, M. (2008), *Trust Beyond Borders: Immigration, Identity and the Welfare State in Modern Societies* (Ann Arbor: The University of Michigan Press).

Crepaz, M. and Damron, R. (2009), 'Constructing Tolerance: How the Welfare State Shapes Attitudes About Immigrants', *Comparative Political Studies* 42 (3), 437-63.

Dancygier, R. M. and Walter, S. (2015), 'Globalization, Labor Market Risks, and Class Cleavages', in P. Beramendi, et al. (eds.), *The Politics of Advanced Capitalism* (Cambridge: Cambridge University Press), 133-57.

Dustmann, C., Frattini, T., and Preston., I. P. (2013), 'The Effect of Immigration along the Distribution of Wages', *Review of Economic Studies,* 80, 145-73.

Esping-Andersen, G. (1990), *The Three Worlds of Welfare Capitalism* (Princeton, NJ: Princeton University Press).

ESS (2018), *European Social Survey Rounds 1-7*.

Eurostat (2018), *European Union Labor Force Survey (ELFS)*.

Facchini, G. and Mayda, A. M. (2009), 'Does the Welfare State Affect Individual Attitudes towards Immigrants? Evidence across Countries', *The Review of Economics and Statistics,* 91 (2), 295-314.

Finseraas, H., Roed, M., and Schone, P. (2017), 'Labor Market Competition with Immigrants and Political Polarization', *Quarterly Journal of Political Science,* 12 (3), 347-73.

Gelman, A. (2012), 'Multilevel (Hierarchical) Modeling: What it Can and Cannot Do', *Technometrics* 48 (3), 432-35.

Gerber, A. S., et al. (2017), 'Self Interest, Beliefs, and Policy Opinions: Understanding how Economic Beliefs Affect Immigration Policy Preferences', *Political Research Quarterly,* 70 (1), 155-71.

Gingrich, J. and Ansell, B. (2012), 'Preferences in Context: Micro Preferences, Macro Contexts, and the Demand for Social Policy', *Comparative Political Studies,* 45 (12), 1624-54.

Hainmueller, J., Hiscox, M. J., and Margalit, Y. (2015), 'Do Concerns about Labor Market Competition Shape Attitudes toward Immigration? New Evidence', *Journal of International Economics,* 97 (1), 193-207.

Halikiopoulou, D. and Vlandas, T. (2016), 'Risks, Costs and Labor Markets: Explaining Cross-national Patterns of Far Right Party Success in European Parliament Elections', *Journal of Common Market Studies,* 54 (3), 636-55.

Healy, A. and Malhotra, N. (2009), 'Myopic Voters and Natural Disaster Policy ', *American Political Science Review,* 103 (3), 387-406.
Helbling, Marc, et al. (2017), 'Measuring Immigration Policies: The IMPIC Database', *European Political Science,* 16 (1), 79-98.
Hintze, Jerry L. and Nelson, Ray D. (1998), 'Violin Plots: A Box Plot-Density Trace Synergism', *The American Statistician,* 52 (2), 181-84.
Hox, J. (2010), *Multilevel Analysis: Techniques and Applications* (2nd edn.; New York: Routledge).
Hyll, W. and Schneider, L. (2018), 'Income Comparisons and Attitudes towards Foreigners - Evidence from a Natural Experiment', *Journal of Comparative Economics,* 46 (2), 634-55.
Kitschelt, H. and Rehm, P. (2014), 'Occupation as a Site of Political Preference Formation', *Comparative Political Studies,* 47 (12), 1670-706.
Kurer, T., et al. (2018), 'Economic Grievances and Political Protest', *European Journal of Political Research,* Forthcoming.
Lahav, G. (1997), 'Ideological and Party Constraints on Immigration Attitudes in Europe', *Journal of Common Market Studies,* 35 (3), 377-406.
Lancee, B. and Pardos-Prado, S. (2013), 'Group Conflict Theory in a Longitudinal Perspective:Analyzing the Dynamic Side of Ethnic Competition', *International Migration Review,* 47 (1), 106-31.
Marx, P. and Picot, G. (2018), 'Three Approaches to Labor Market Vulnerability and Political Preferences', *Political Science Research and Methods,* Forthcoming.
Mau, S., Mewes, J., and Schöneck, N. M. (2012), 'What Determines Subjective Socio-economic Insecurity? Context and Class in Comparative Perspective', *Socio-Economic Review,* 10, 655-82.
Mayda, A. M. (2006), 'Who is Against Immigration? A Cross-Country Investigation of Individual Attitudes Toward Immigrants', *Review of Economics and Statistics,* 88 (3), 510-30.
Meuleman, B., Davidov, E., and Billiet, J. (2009), 'Changing Attitudes toward Immigration in European Societies, 2002-2007: A Dynamic Group Conflict Theory Approach', *Social Science Research,* 38 (2), 352-65.
Moehring, K. and Schmidt, A. (2013), 'MLT: Stata Module to Provide Multilevel Tools', (Boston College Department of Economics: Statistical Software Components S457577).
Mols, F. and Jetten, J. (2017), *The Wealth Paradox: Economic Prosperity and the Hardening of Attitudes* (Cambridge: Cambridge University Press).
Naumann, E., Stoetzer, L., and Pietrantuono, G. (2018), 'Attitudes Towards Highly Skilled and Low Skilled Immigration in Europe–A Survey Experiment in 15 European Countries', *European Journal of Political Research,* Forthcoming.
OECD (2018), *OECD.Stat Database*.
Oesch, Daniel (2006), *Redrawing the Class Map. Stratification and Institutions in Britain, Germany, Sweden and Switzerland* (Basingstoke: Palgrave Macmillan).
Oorschot, Wim van and Uunk, Wilfred (2007), 'Welfare Spending and the Public's Concern for Immigrants: Multilevel Evidence for Eighteen European Countries', *Comparative Politics,* 40 (1), 63-82.
Ortega, Francesc and Polavieja, Javier G. (2012), 'Labor-market Exposure as a Determinant of Attitudes towards Immigration', *Labor Economics,* 19, 298-311.
Pardos-Prado, S. and Xena, C. (2018), 'Skill Specificity and Attitudes towards Immigration', *American Journal of Political Science,* Forthcoming.
Pecoraro, M. and Ruedin, D. (2016), 'A Foreigner Who Does Not Steal My Job: The Role of Unemployment Risk and Values in Attitudes toward Equal Opportunities', *International Migration Review,* 50 (3), 628-66.
Rabe-Hesketh, S. and Skrondal, A. (2012), *Multilevel and Longitudinal Modeling Using Stata - Volume I* (Third Edition edn.; Texas, USA: Stata Press).
Razin, A., Sadka, E., and Suwankiri, B. (2011), *Migration and Welfare State: Political-Economy Policy Formation* (MIT Press: Cambridge, MA).

Rehm, P. (2009), 'Risks and Redistribution an Individual-Level Analysis', *Comparative Political Studies* 42 (7), 855-81.
--- (2016), *Risk Inequality and Welfare States* (Cambridge: Cambridge University Press).
Rooduijn, M. and Burgoon, B. (2018), 'The Paradox of Well-being: Do Unfavorable Socioeconomic and Sociocultural Contexts Deepen or Dampen Radical Left and Right Voting Among the Less Well-Off?', *Comparative Political Studies,* 51 (13), 1720-53.
Rueda, D. (2005), 'Insider–Outsider Politics in Industrialized Democracies: The Challenge to Social Democratic Parties', *American Political Science Review* 99 (1), 61-73.
--- (2015), 'The State of the Welfare State - Unemployment, Labor Market Policy, and Inequality in the Age of Workfare', *Comparative Politics,* 47 (3), 296.
Scheve, K. and Slaughter, M. J. (2001), 'Labor Market Competition and Individual Preferences over Immigration Policy', *Review of Economics and Statistics,* 83 (1), 270-89.
Schwander, H. and Häusermann, S. (2013), 'Who is in and who is out? A Risk-based Conceptualization of Insiders and Outsiders ', *Journal of European Social Policy,* 23 (3), 248-69.
Scruggs, L., Jahn, D. , and Kuitto, K. (2017), *Comparative Welfare Entitlements Dataset 2. Version 2017-09*. (08.03.2017).
Vanneman, R. D. and Pettigrew, T. F. (1972), 'Race and Relative Deprivation in the Urban United States', *Race,* 13, 461-86.

NOTES

[1] See Table A1 in the appendix for further details on the sample.

[2] See Figures A1-A4 in the appendix demonstrating the pooled distribution of the risk the measurement.

[3] The measures are from Ortega and Polavieja's calculations (2012). For details on the O*NET task-content indices, see: https://www.onetonline.org/.

[4] For the full results of the model specifications, see appendix Tables A4, A5, and A6.

[5] See Figure A9 in the appendix for a visualisation of the predicted average marginal effects of relative risk.

[6] See Table A8 for the prediction results.

[7] For details on the null model results, model choice, and results of the diagnostic tests, see the appendix below.

[8] See appendix Table A12 for the results of the changing effects of institutions on immigration preferences.

Online Appendix

(This online appendix provides supporting information for the manuscript *'Can Institutions Shape Immigration Policy Preferences? The Conditioning Effects of Labour Market Policy Institutions on Unemployment Risks*'. Please contact the author if you are interested in further details of the analysis and empirical discussion presented in the manuscript.)

Table A1: Country-year sample information (European Social Survey waves 1-5)

	Year					
Country	**2002**	**2004**	**2006**	**2008**	**2010**	**TOTAL**
Austria	657	641	817	0*	0*	2,115
Belgium	628	648	720	717	689	3,402
Switzerland	761	867	739	725	623	3,715
Germany	968	906	893	997	1,126	4,890
Denmark	640	643	693	674	657	3,307
Spain	389	518	676	815	612	3,010
Finland	843	852	796	938	693	4,122
France	0**	0**	867	867	713	2,447
United Kingdom	759	653	947	942	883	4,284
Greece	406	464	0*	690	596	2,289
Ireland	0**	0**	0**	552	638	1,190
Italy	292	391	0*	0*	0*	683
Netherlands	0**	0**	0**	727	709	1,436
Norway	1,035	899	580	434	653	3,601
Portugal	414	464	584	497	402	2,361
Sweden	0*	912	928	930	656	3,426
TOTAL	7,792	8,858	9,190	10,378	8,978	45,196

*Not surveyed by the ESS. **Dropped due to missingness.

Table A2: Summary statistics of variables used in the analysis – Level 1 covariates

Variables	**Mean**	**Standard deviation**	**Min**	**Max**
Immigration policy preferences	1.293322	.7421974	0	3
Relative risk	.7045317	3734048	.0496905	2.388836
Dexterity	0.5109395	.162779	.244	.86
Permanent	0.8405169	.3661301	0	1
Left-right ideology	4.906894	1.969118	0	10
Religiosity	4.246858	2.811435	0	10
Female	.4827861	.4997091	0	1
Education	13.57392	3.855815	0	56
Union membership	.5293168	.4991453	0	1
Non-Citizens	.0470174	.2116785	0	1
Happiness	7.688534	1.579634	0	10
Economic satisfaction	5.053943	2.392795	0	10
Absolute risk	5.129119	3.894989	.2891566	31.27677
Communication	.4960611	.212715	.09	.807

Note: Age and subjective well-being variables are treated as categorical variables. The frequency tables for the categories in these variables are below:

Age	Frequency	Percentage
18-34 y/o	13,601	30.09
35-50 y/o	20,278	44.87
51-65 y/o	11,317	25.04
Total	45,196	100

Economic well-being	Frequency	Percentage
Comfortable	19,223	42.53
Coping	20,673	45.74
Difficult	4,534	10.03
Very difficult	766	1.69
Total	45,196	100

Table A3: Summary statistics of variables used in the analysis – Level 2 covariates

Variables	**Mean**	**Standard deviation**	**Min**	**Max**
Unemployment compensation generosity	11.01107	2.018163	4.9	14.5
Employment protection legislation	4.218712	1.563739	1.51	7.55
Immigration policy restrictiveness	.3912477	.0566285	.3030754	.5582639
Immigrant stock share as % of population	7.433383	4.641893	1.900096	21.69723
Union density	39.01641	22.44165	7.55	77.21
Economic growth (real GDP growth)	1.021621	2.938175	-8.27	5.8
Unemployment rate	6.949958	2.669744	2.24	17.9
Additional country covariates accounted for robustness				
Active labour market policy spending	.8014446	.3268215	.09	1.8
Compensation policy spending	1.226863	.68466	.19	3.33
Total public social expenditure spending	24.28136	3.134811	15.76	30.85
Budget deficit	-.7010194	5.326393	-13.82	17.12
Openness to trade	81.06333	28.66649	46.25	173.68

Note: Government ideology is treated as a categorical variable.

Ideological composition of government	Frequency	Percentage
Right-wing dominance	12,102	26.78
Right-wing hegemony	8,824	19.52
Balanced	8,036	17.78
Left-wing hegemony	4,239	9.38
Left-wing dominance	11,995	26.54

Full estimation results of the main findings presented in the paper

Table A4: Results of the multilevel estimations of immigration policy preferences (Full results of Table 1)

	(M1) RI	**(M2)** RI	**(M3)** RS	**(M4)** RS	**(M5)** RS	**(M6)** RS	**(M7)** RS
Relative risk	0.19***	0.19***	0.19***	0.19***	0.19***	0.19***	0.19***
	(0.011)	(0.011)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Dexterity	0.36***	0.35***	0.34***	0.34***	0.34***	0.34***	0.34***
	(0.023)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)	(0.022)
Unlimited contract	0.02*	0.02**	0.02**	0.02**	0.02**	0.02**	0.02**
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Female	0.01*	0.02***	0.02***	0.02***	0.02***	0.02***	0.02***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Age (*ref: 18-34 y/o*)							
35-50 y/o	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
51-65 y/o	0.04***	0.04***	0.04***	0.04***	0.04***	0.04***	0.04***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Education (in years)	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Union member	-0.05***	-0.02**	-0.02**	-0.02**	-0.02**	-0.02**	-0.02**
	(0.008)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Non-citizen	-0.25***	-0.22***	-0.22***	-0.21***	-0.22***	-0.21***	-0.22***
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
Political ideology		0.07***	0.07***	0.07***	0.07***	0.07***	0.07***
		(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Religiosity		-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Economic well-being *(ref: Comfortable*)							
Coping		0.03***	0.03***	0.03***	0.03***	0.03***	0.03***
		(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Difficult		0.03*	0.03*	0.03*	0.03*	0.03*	0.03*
		(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Very difficult		0.05t	0.05t	0.05t	0.05t	0.05t	0.04t
		(0.025)	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)
Happiness		-0.02***	-0.02***	-0.02***	-0.02***	-0.02***	-0.02***
		(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Economic satisfaction		-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***
		(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
EPL					0.01	0.01	0.02
					(0.015)	(0.015)	(0.017)
UCG				-0.02t		-0.02t	0.00
				(0.011)		(0.011)	(0.013)
Immigration policy							1.71***
							(0.351)
Economic growth							-0.00

							(0.006)
Immigrant stock share							-0.02*
							(0.007)
Gov't ideology (*ref: Right-wing dominance*)							
Right-wing hegemony							0.06
							(0.059)
Balanced							0.08
							(0.061)
Left-wing hegemony							0.11
							(0.071)
Left-wing dominance							0.02
							(0.049)
Unemployment rate							-0.01
							(0.008)
Union density							-0.00***
							(0.001)
Constant	1.45***	1.37***	1.37***	1.58***	1.32***	1.52***	0.84***
	(0.037)	(0.040)	(0.043)	(0.125)	(0.079)	(0.143)	(0.241)
Observations	45,196	45,196	45,196	45,196	45,196	45,196	45,196
Number of groups	64	64	64	64	64	64	64
Within country-year variance	.454675	.4323117	.4319251	.431937	.4319254	.4319365	.4319579
Between country-year variance	.047267	.0405416	.0532166	.0494479	.0507045	.0470653	.0298751
Slope variation	-	-	.0033649	.0032434	.0033516	.0032433	.0030584
Intercept-slope covariance	-	-	-.0100967	-.0093479	-.0093294	-.0086104	-.0071565
AIC	92932.0	90660.08	90639.22	90638.27	90640.76	90639.75	90624.28
BIC	93019.2	90808.3	90787.44	90795.2	90797.7	90805.4	90868.4
Bryk/Raudenbush R^2 level 2	0.177	0.294	0.294	0.342	0.333	0.374	0.636
Bryk/Raudenbush R^2 level 1	0.0835	0.129	0.129	0.129	0.129	0.129	0.129
Snijders/Bosker R^2 level 2	0.176	0.292	0.292	0.339	0.330	0.371	0.630
Snijders/Bosker R^2 level 1	0.0933	0.146	0.146	0.151	0.150	0.154	0.181
Log likelihood	-46456	-45313	-45303	-45301	-45302	-45301	-45284

RI: Random intercept estimation, RS: Random slope estimation.
Standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, t p<0.1.

Table A5: Determinants of immigration policy preferences: two-way and three-way cross-level interaction results

	Two-way cross level interactions		**Three-way cross-level interactions**	
Relative risk	0.09	0.31***	-0.06	0.28***
	(0.066)	(0.033)	(0.125)	(0.058)
Dexterity	0.34***	0.34***	0.34***	0.34***
	(0.022)	(0.022)	(0.022)	(0.022)
Unlimited contract	0.02**	0.02**	-0.13	-0.06
	(0.009)	(0.009)	(0.098)	(0.054)
Female	0.02***	0.02***	0.02***	0.02***
	(0.007)	(0.007)	(0.007)	(0.007)
Age (*ref: 18-34 y/o*)				
35-50 y/o	0.00	0.00	0.00	0.00
	(0.008)	(0.008)	(0.008)	(0.008)
51-65 y/o	0.04***	0.04***	0.04***	0.04***
	(0.009)	(0.009)	(0.009)	(0.009)
Education (in years)	-0.03***	-0.03***	-0.03***	-0.03***
	(0.001)	(0.001)	(0.001)	(0.001)
Union member	-0.02**	-0.02**	-0.02**	-0.02**
	(0.007)	(0.007)	(0.007)	(0.007)
Non-citizen	-0.22***	-0.22***	-0.22***	-0.21***
	(0.015)	(0.015)	(0.015)	(0.015)
Political ideology (left-right)	0.07***	0.07***	0.07***	0.07***
	(0.002)	(0.002)	(0.002)	(0.002)
Religiosity	-0.00***	-0.00***	-0.00***	-0.00***
	(0.001)	(0.001)	(0.001)	(0.001)
Economic well-being *(ref: Comfortable*)				
Coping	0.03***	0.03***	0.03***	0.03***
	(0.007)	(0.007)	(0.007)	(0.007)
Difficult	0.03*	0.03*	0.03*	0.03*
	(0.012)	(0.012)	(0.012)	(0.012)
Very difficult	0.05t	0.05t	0.05t	0.05t
	(0.025)	(0.025)	(0.025)	(0.025)
Happiness	-0.02***	-0.02***	-0.02***	-0.02***
	(0.002)	(0.002)	(0.002)	(0.002)
Satisfaction w/ economy	-0.03***	-0.03***	-0.03***	-0.03***
	(0.002)	(0.002)	(0.002)	(0.002)
EPL	0.02	0.05**	0.02	0.04t
	(0.017)	(0.019)	(0.017)	(0.021)
UCG	-0.00	0.01	-0.02	0.01
	(0.014)	(0.013)	(0.016)	(0.013)
Immigration policy	1.72***	1.65***	1.74***	1.65***
	(0.352)	(0.348)	(0.352)	(0.350)
Economic growth	-0.00	-0.00	-0.00	-0.00
	(0.006)	(0.006)	(0.006)	(0.006)

Immigrant stock share	-0.02*	-0.02*	-0.02*	-0.01*
	(0.007)	(0.007)	(0.007)	(0.007)
Gov't ideology (*ref: Right-wing dominance*)				
Right-wing hegemony	0.06	0.05	0.06	0.05
	(0.060)	(0.059)	(0.060)	(0.059)
Balanced	0.07	0.07	0.07	0.07
	(0.061)	(0.060)	(0.062)	(0.061)
Left-wing hegemony	0.11	0.09	0.11	0.09
	(0.072)	(0.071)	(0.072)	(0.071)
Left-wing dominance	0.02	0.01	0.02	0.01
	(0.050)	(0.049)	(0.050)	(0.049)
Unemployment rate	-0.01	-0.01	-0.01	-0.01
	(0.008)	(0.008)	(0.008)	(0.008)
Union density	-0.00***	-0.00***	-0.00***	-0.00***
	(0.001)	(0.001)	(0.001)	(0.001)
Relative risk*UCG	0.01			
	(0.006)			
Relative risk*EPL		-0.03***		
		(0.007)		
Temporary*Relative risk			0.00	0.00
			(0.000)	(0.000)
Permanent*Relative risk			0.18	0.03
			(0.131)	(0.063)
Temporary*UCG			0.00	
			(0.000)	
Permanent*UCG			0.01	
			(0.009)	
Temporary*Relative risk*UCG			0.02t	
			(0.012)	
Permanent*Relative risk*UCG			0.01	
			(0.006)	
Temporary*EPL				0.00
				(0.000)
Permanent*EPL				0.02
				(0.012)
Temporary*Relative risk*EPL				-0.02t
				(0.013)
Permanent*Relative risk*EPL				-0.03***
				(0.008)
Constant	0.94***	0.72**	1.06***	0.79**
	(0.253)	(0.242)	(0.265)	(0.245)
Observations	45,196	45,196	45,196	45,196
Number of groups	64	64	64	64
AIC	90623.85	90613.08	90627.34	90611.65
BIC	90876.69	90865.93	90906.34	90890.65
Within country-year variance	.029554	.0284127	.0292829	.0285256
Between country-year variance	.431931	.4319481	.4319112	.4318767
Slope variation	-.006921	-.0057812	-.0067669	-.0057417

Intercept-slope covariance	.0030164	.0016717	.0029516	.0016252
Bryk/Raudenbush R^2 level 2	0.635	0.635	0.636	0.633
Bryk/Raudenbush R^2 level 1	0.129	0.129	0.129	0.129
Snijders/Bosker R^2 level 2	0.629	0.628	0.629	0.626
Snijders/Bosker R^2 level 1	0.181	0.181	0.181	0.181
Log likelihood	-45283	-45278	-45282	-45274

Standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, t p<0.1.

Table A6: Determinants of immigration policy preferences – split sample results

	Permanent workers		**Temporary workers**	
Relative risk	0.11	0.29***	-0.04	0.31***
	(0.073)	(0.039)	(0.134)	(0.062)
Dexterity	0.34***	0.34***	0.35***	0.34***
	(0.024)	(0.024)	(0.060)	(0.061)
Female	0.02*	0.02*	0.05**	0.05**
	(0.007)	(0.007)	(0.018)	(0.018)
Age (*ref: 18-34 y/o*)				
35-50 y/o	-0.01	-0.01	0.04*	0.04*
	(0.008)	(0.008)	(0.019)	(0.019)
51-65 y/o	0.04***	0.04***	0.07**	0.07**
	(0.010)	(0.010)	(0.024)	(0.024)
Education (in years)	-0.03***	-0.03***	-0.03***	-0.03***
	(0.001)	(0.001)	(0.002)	(0.002)
Union member	-0.02*	-0.02*	-0.03	-0.03
	(0.008)	(0.008)	(0.020)	(0.020)
Non-citizen	-0.19***	-0.19***	-0.28***	-0.27***
	(0.017)	(0.017)	(0.032)	(0.032)
Political ideology (left-right)	0.07***	0.07***	0.07***	0.07***
	(0.002)	(0.002)	(0.004)	(0.004)
Religiosity	-0.00***	-0.00***	-0.00	-0.00
	(0.001)	(0.001)	(0.003)	(0.003)
Economic well-being *(ref: Comfortable*)				
Coping	0.04***	0.04***	-0.00	-0.00
	(0.008)	(0.008)	(0.020)	(0.020)
Difficult	0.05***	0.05***	-0.04	-0.04
	(0.013)	(0.013)	(0.028)	(0.028)
Very difficult	0.04	0.04	0.03	0.03
	(0.031)	(0.031)	(0.047)	(0.047)
Happiness	-0.02***	-0.02***	-0.03***	-0.03***
	(0.002)	(0.002)	(0.005)	(0.005)
Economic satisfaction	-0.03***	-0.03***	-0.03***	-0.03***
	(0.002)	(0.002)	(0.004)	(0.004)
EPL	0.03	0.05*	0.03*	0.06**
	(0.018)	(0.020)	(0.017)	(0.021)
UCG	-0.00	0.01	-0.02	-0.00
	(0.014)	(0.013)	(0.015)	(0.013)
Immigration policy	1.68***	1.65***	2.01***	1.92***
	(0.373)	(0.371)	(0.360)	(0.359)
Economic growth	0.00	0.00	-0.00	-0.00
	(0.007)	(0.007)	(0.007)	(0.007)
Immigrant stock share %	-0.02*	-0.01*	-0.01t	-0.01t
	(0.007)	(0.007)	(0.007)	(0.007)
Gov't ideology (*ref: Right-wing dominance*)				

Right-wing hegemony	0.03	0.02	0.08	0.08
	(0.063)	(0.062)	(0.063)	(0.063)
Balanced	0.05	0.04	0.13*	0.14*
	(0.065)	(0.065)	(0.064)	(0.064)
Left-wing hegemony	0.08	0.07	0.16*	0.15*
	(0.075)	(0.075)	(0.074)	(0.074)
Left-wing dominance	-0.00	-0.01	0.06	0.06
	(0.053)	(0.053)	(0.052)	(0.051)
Unemployment rate	-0.01	-0.01	-0.01	-0.01
	(0.009)	(0.009)	(0.009)	(0.009)
Union density	-0.00***	-0.00***	-0.00**	-0.00**
	(0.001)	(0.001)	(0.001)	(0.001)
Relative risk*UCG	0.01		0.02t	
	(0.007)		(0.013)	
Relative risk*EPL		-0.02**		-0.03t
		(0.009)		(0.014)
Constant	0.92***	0.76**	0.84**	0.62*
	(0.265)	(0.257)	(0.273)	(0.262)
Observations	37,988	37,988	7,208	7,208
Number of groups	64	64	64	64
AIC	75343.89	75337.75	15295.05	15294.75
BIC	75583.15	75577.01	15487.77	15487.47
Within country-year variance	.0295726	.0293292	.0181656	.0201892
Between country-year variance	.4221444	.4221454	.4784548	.4784206
Slope variation	-.0065098	-.00609	-.0012876	-.0027065
Intercept-slope covariance	.0037219	.0028812	.0000913	.0003628
Bryk/Raudenbush R^2 level 2	0.612	0.613	0.725	0.724
Bryk/Raudenbush R^2 level 1	0.127	0.127	0.142	0.142
Snijders/Bosker R^2 level 2	0.604	0.605	0.672	0.671
Snijders/Bosker R^2 level 1	0.178	0.179	0.198	0.198
Log likelihood	-37644	-37641	-7620	-7619

Standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, t p<0.1.

Relative Occupational Unemployment Risk Measure Distribution

Figure A1: Gaussian kernel density plot of relative risk exposure, pooled by occupation-year

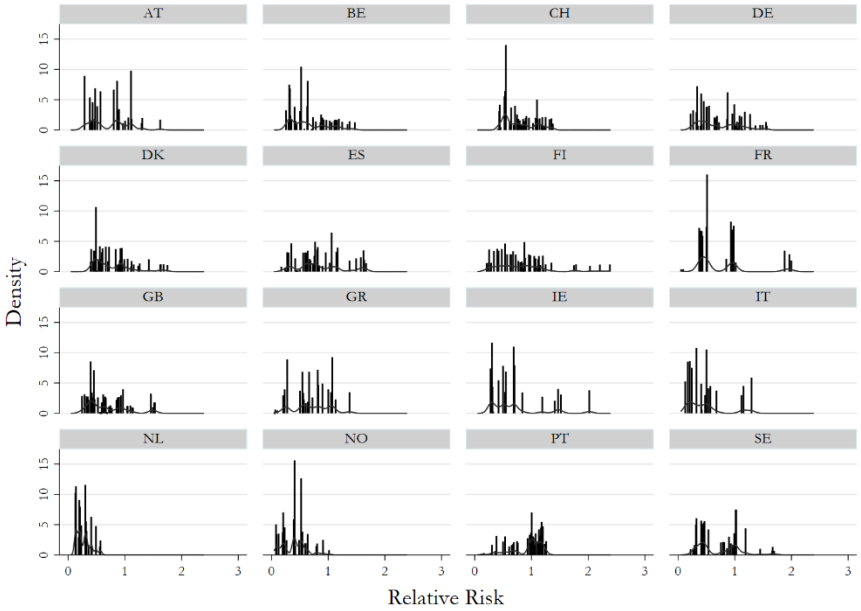


Figure A2: Gaussian kernel density plot of absolute risk exposure, pooled by occupation-year

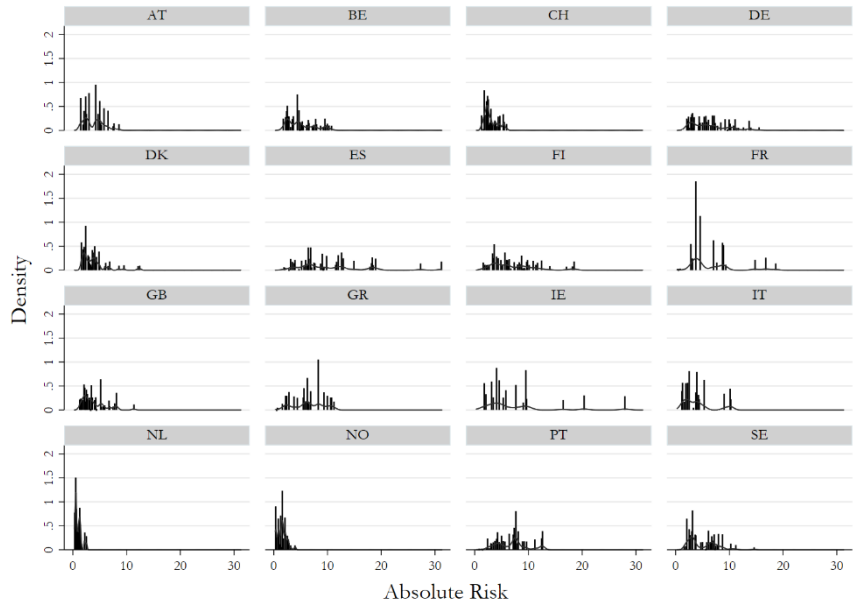


Figure A3: Gaussian kernel density plot of relative risk exposure, pooled by country-year

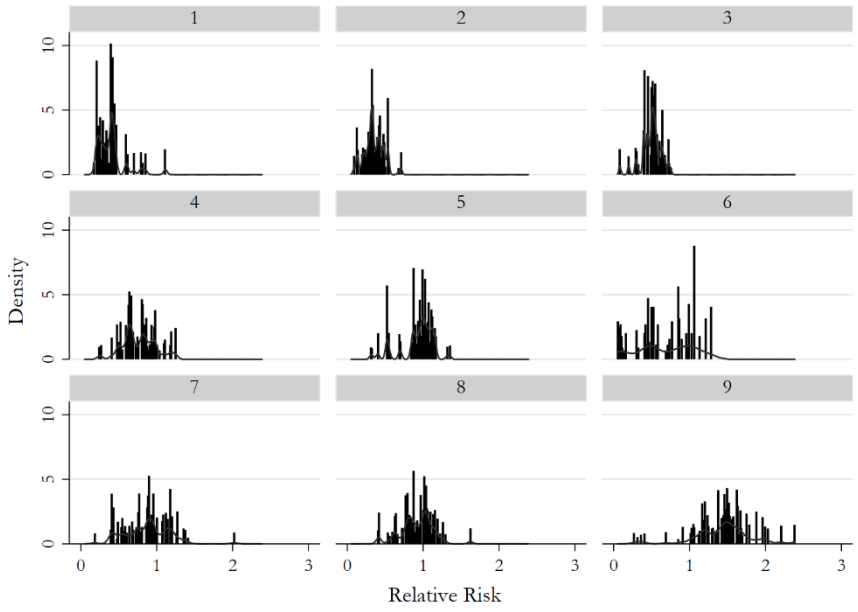
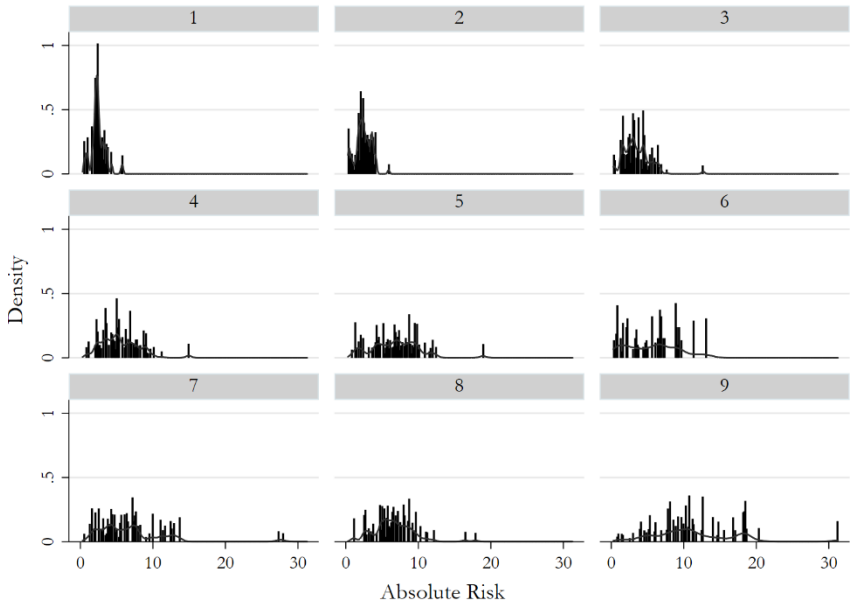


Figure A4: Gaussian kernel density plot of absolute risk exposure, pooled by country-year



Presentation of Null Models and Diagnostics

Table A7: Result of the null model of immigration policy preferences

	Null MLM	**Null Non MLM**	**Random intercept**	**Random slope**
Relative Risk			0.41***	0.44***
			(0.010)	(0.020)
Constant	1.31***	1.29***	1.02***	1.01***
	(0.030)	(0.003)	(0.029)	(0.033)
Observations	45,196	45,196	45,196	45,196
Number of groups	64		64	64
Within country-year variance	0.0574624	-	0.0512979	0.0649043
Between country-year variance	0.4961164	0.5508448	0.476519	0.4746607
Slope variation	-	-	-	-0.0157048
Intercept-slope covariance	-	-	-	0.0171921
Log likelihood	-48431	-50655	-47514	-47470

Standard errors in parentheses. *** p<0.001, ** p<0.01, * p<0.05, t p<0.1.

Centering the relative risk variable, Figure A5 plots the intercept-slope covariance in the null model. Further inspecting the random effects of country-year contexts in the null random slope model, the ranked residuals presented in Figure A6 show that on average being at a country context at a given year has some influence on preferences.

Figure A5: Intercept-slope covariance of the null model – Centred relative risk

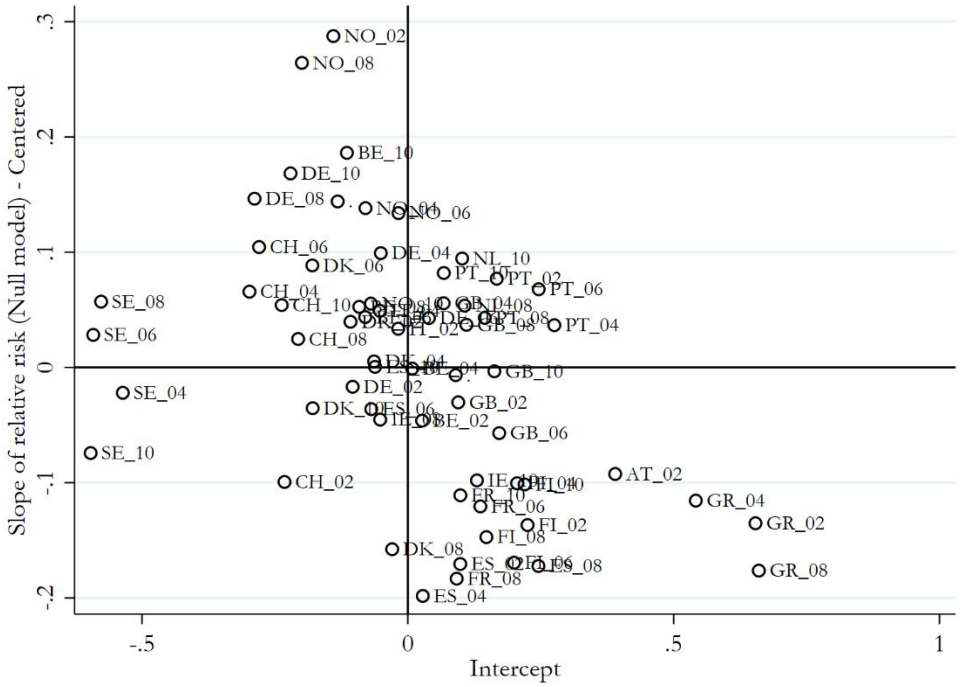


Figure A6: Rank ordered random effects of country-year contexts

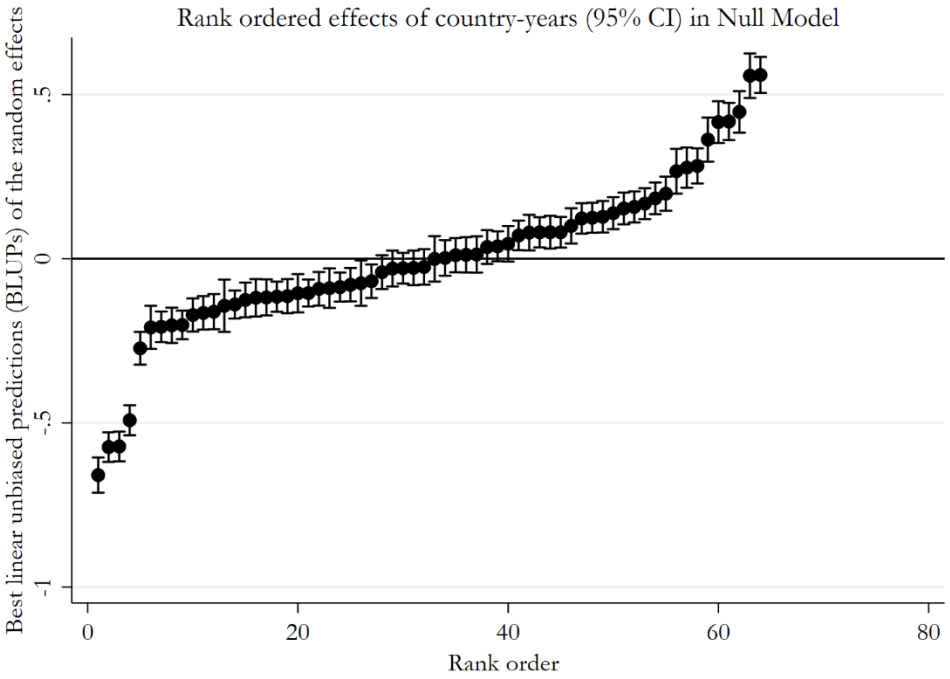


Figure A7: Influential outlier detection on two-way cross-level interaction model with EPL

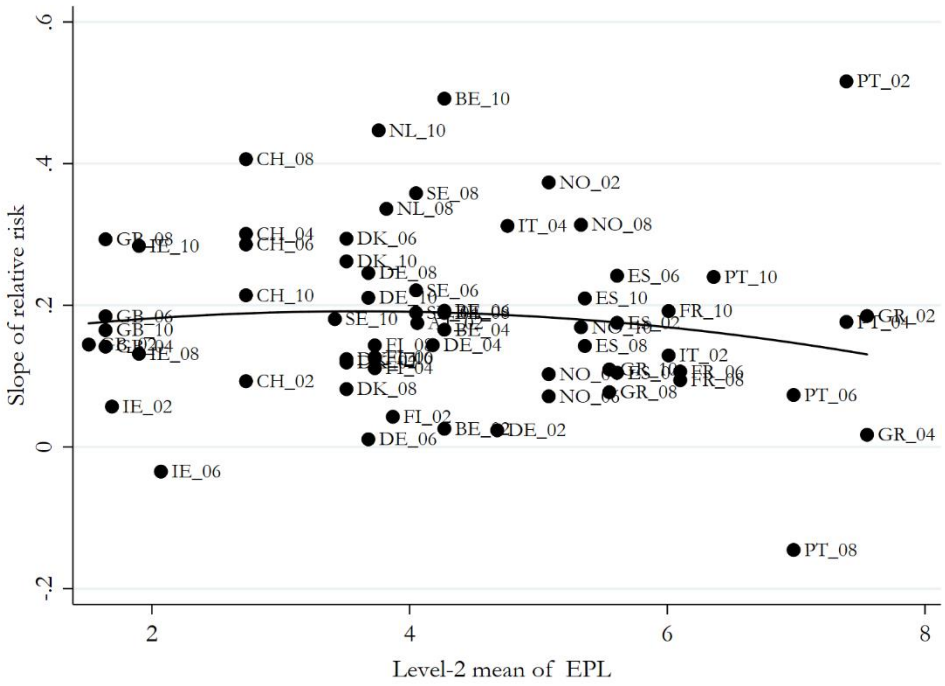


Figure A8: Influential outlier detection on two-way cross-level interaction model with UCG

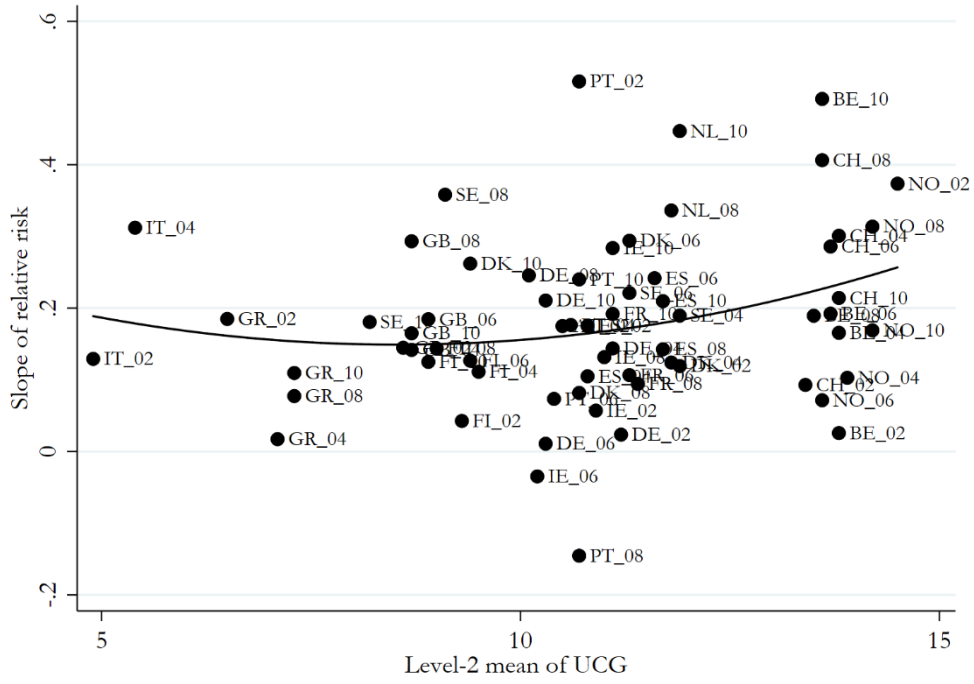
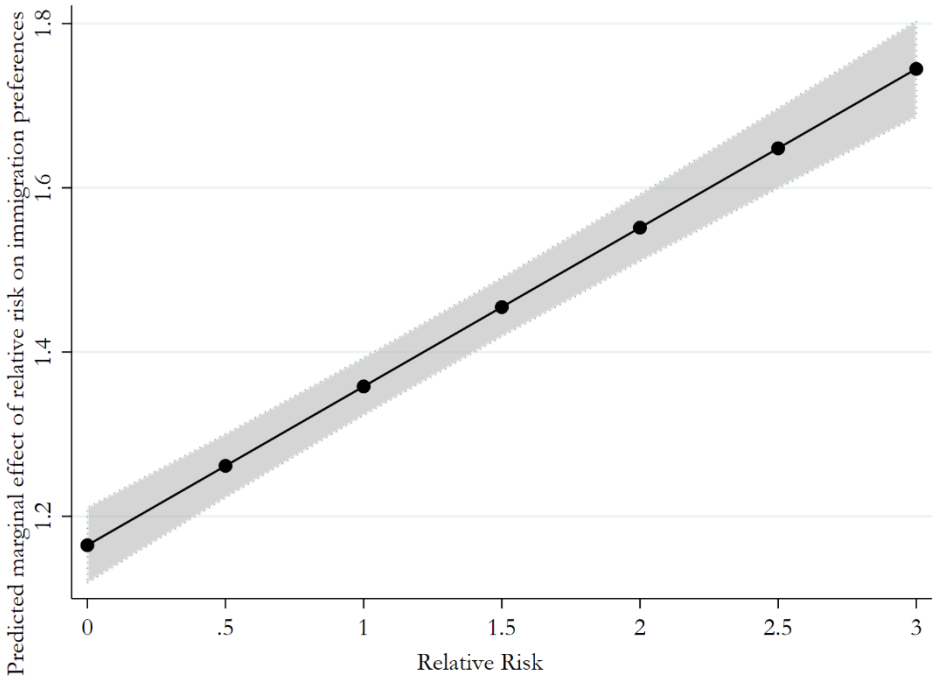


Table A8: Predicted marginal effects of relative risk on immigration policy preferences (estimated from Model 7)

Values of relative risk at…	Margin	Standard error	z	p>z	95%CI	
0	1.164744	.0233705	49.84	0.000	1.118939	1.210549
0.5	1.261418	.0197427	63.89	0.000	1.222723	1.300113
1	1.358092	.0178506	76.08	0.000	1.323105	1.393078
1.5	1.454766	.0182425	79.75	0.000	1.419011	1.49052
2	1.551439	.0207896	74.63	0.000	1.510693	1.592186
2.5	1.648113	.0248375	66.36	0.000	1.599433	1.696794
3	1.744787	.0297804	58.59	0.000	1.686419	1.803156

Figure A9: Marginal effect of relative risk (Model 7)



Alternative Estimation Methods

Table A9: Restricted maximum likelihood estimation of multilevel estimations of immigration preferences, cross-level interactions

	(1)	(2)	(3)	(4)
	Two-way interaction		**Three-way interaction**	
Relative risk	0.09	0.31***	-0.06	0.28***
	(0.067)	(0.033)	(0.126)	(0.059)
Unlimited contract	0.02**	0.02**	-0.13	-0.06
	(0.009)	(0.009)	(0.098)	(0.054)
EPL	0.02	0.05**	0.02	0.04t
	(0.019)	(0.020)	(0.019)	(0.023)
UCG	-0.00	0.01	-0.02	0.01
	(0.015)	(0.014)	(0.017)	(0.014)
Relative risk*UCG	0.01			
	(0.006)			
Relative risk*EPL		-0.03***		
		(0.008)		
Temporary*Relative risk			0.00	0.00
			(0.000)	(0.000)
Permanent*Relative risk			0.18	0.02
			(0.131)	(0.063)
Temporary*UCG			0.00	
			(0.000)	
Permanent*UCG			0.01	
			(0.009)	
Temporary*Relative risk* UCG			0.02*	
			(0.012)	
Permanent*Relative risk* UCG			0.01	
			(0.006)	
Temporary*EPL				0.00
				(0.000)
Permanent*EPL				0.02
				(0.012)
Temporary*Relative risk*EPL				-0.02t
				(0.013)
Permanent*Relative risk*EPL				-0.03***
				(0.008)
Constant	0.94***	0.71**	1.06***	0.78**
	(0.278)	(0.267)	(0.289)	(0.270)
Observations	45,196	45,196	45,196	45,196
Number of groups	64	64	64	64
Bryk/Raudenbush R^2 level 2	0.556	0.555	0.557	0.553
Bryk/Raudenbush R^2 level 1	0.128	0.129	0.128	0.129
Snijders/Bosker R^2 level 2	0.550	0.550	0.551	0.547
Snijders/Bosker R^2 level 1	0.173	0.174	0.173	0.173
Log likelihood	-45392	-45387	-45402	-45393

Full set of control variables included in each of the models. Standard errors in parentheses.
*** p<0.001, ** p<0.01, * p<0.05, t p<0.1

Table A10: Restricted maximum likelihood estimation of multilevel estimations of immigration preferences, split sample results

	(1)	(2)	(3)	(4)
	Permanent workers		**Temporary workers**	
Relative risk	0.11	0.29***	-0.04	0.31***
	(0.074)	(0.039)	(0.134)	(0.062)
EPL	0.03	0.05*	0.04t	0.06*
	(0.020)	(0.022)	(0.019)	(0.022)
UCG	-0.00	0.01	-0.02	-0.00
	(0.016)	(0.015)	(0.017)	(0.015)
Relative risk*UCG	0.01		0.02t	
	(0.007)		(0.013)	
Relative risk*EPL		-0.02**		-0.03t
		(0.009)		(0.014)
Constant	0.93**	0.76**	0.83**	0.62*
	(0.291)	(0.284)	(0.299)	(0.289)
Observations	37,988	37,988	7,208	7,208
Number of groups	64	64	64	64
Bryk/Raudenbush R^2 level 2	0.527	0.528	0.647	0.645
Bryk/Raudenbush R^2 level 1	0.126	0.126	0.140	0.140
Snijders/Bosker R^2 level 2	0.521	0.522	0.601	0.600
Snijders/Bosker R^2 level 1	0.170	0.170	0.190	0.189
Log likelihood	-37747	-37744	-7710	-7710

Full set of control variables included in each of the models. Standard errors in parentheses.
*** p<0.001, ** p<0.01, * p<0.05, t p<0.1

Table A11: Determinants of immigration policy preferences, multilevel estimations with country and year fixed effects

	(M7)	**Two-way interaction**		**Three-way interaction**	
Relative Risk	0.19***	0.07	0.30***	-0.09	0.28***
	(0.013)	(0.065)	(0.033)	(0.125)	(0.059)
Unlimited work contract	0.02**	0.02**	0.02**	-0.13	-0.05
	(0.009)	(0.009)	(0.009)	(0.098)	(0.054)
EPL	0.06t	0.06t	0.08*	0.06t	0.06t
	(0.032)	(0.032)	(0.032)	(0.032)	(0.034)
UCG	0.03	0.02	0.03	0.01	0.03
	(0.025)	(0.025)	(0.025)	(0.026)	(0.024)
Relative risk*UCG		0.01t			
		(0.006)			
Relative risk*EPL			-0.03***		
			(0.007)		
Temporary*Relative risk				0.00	0.00
				(0.000)	(0.000)
Permanent*Relative risk				0.20	0.01
				(0.131)	(0.063)
Temporary*UCG				0.00	
				(0.000)	
Permanent*UCG				0.01	
				(0.009)	
Temporary*Relative risk*UCG				0.03*	
				(0.012)	
Permanent*Relative risk*UCG				0.01	
				(0.006)	
Temporary*EPL					0.00
					(0.000)
Permanent*EPL					0.02
					(0.012)
Temporary*Relative risk*EPL					-0.02t
					(0.013)
Permanent*Relative risk*EPL					-0.03**
					(0.008)
Constant	0.74*	0.84*	0.65t	0.97**	0.71*
	(0.347)	(0.350)	(0.347)	(0.359)	(0.348)
Observations	45,196	45,196	45,196	45,196	45,196
Number of groups	64	64	64	64	64
Country and Year FE	Yes	Yes	Yes	Yes	Yes
Bryk/Raudenbush R^2 level 2	0.967	0.968	0.967	0.968	0.967
Bryk/Raudenbush R^2 level 1	0.129	0.129	0.129	0.129	0.129
Snijders/Bosker R^2 level 2	0.957	0.957	0.956	0.957	0.956
Snijders/Bosker R^2 level 1	0.216	0.216	0.216	0.216	0.216
Log likelihood	-45219	-45217	-45213	-45216	-45209

Full set of control variables included in each of the models. Standard errors in parentheses.
*** p<0.001, ** p<0.01, * p<0.05, t p<0.1

Table A12: *Changing effects* of institutions on immigration policy preferences

	(1) **t-1**	(2) **t-2**	(3) **t-3**	(4) **t-4**	(5) **t-5**
Relative risk	0.19***	0.19***	0.19***	0.19***	0.19***
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Unlimited contract	0.02**	0.02**	0.02**	0.02**	0.02**
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
EPL	0.02	0.02	0.02	0.01	0.01
	(0.017)	(0.015)	(0.016)	(0.017)	(0.016)
UCG	0.01	0.01	-0.01	0.00	0.00
	(0.013)	(0.012)	(0.015)	(0.012)	(0.012)
UCG t-1	0.07				
	(0.074)				
EPL t-1	0.03				
	(0.363)				
UCG t-2		0.10***			
		(0.028)			
EPL t-2		0.06			
		(0.245)			
UCG t-3			0.05*		
			(0.022)		
EPL t-3			0.10		
			(0.218)		
UCG t-4				0.07*	
				(0.030)	
EPL t-4				-0.04	
				(0.184)	
UCG t-5					0.06**
					(0.025)
EPL t-5					-0.03
					(0.167)
Constant	0.86***	0.78***	1.18***	0.95***	0.94***
	(0.242)	(0.225)	(0.286)	(0.239)	(0.234)
Observations	45,196	45,196	45,196	45,196	45,196
Number of groups	64	64	64	64	64
Log likelihood	-45284	-45279	-45282	-45281	-45281

Full set of control variables included in each of the models. Standard errors in parentheses.
*** p<0.001, ** p<0.01, * p<0.05, t p<0.1