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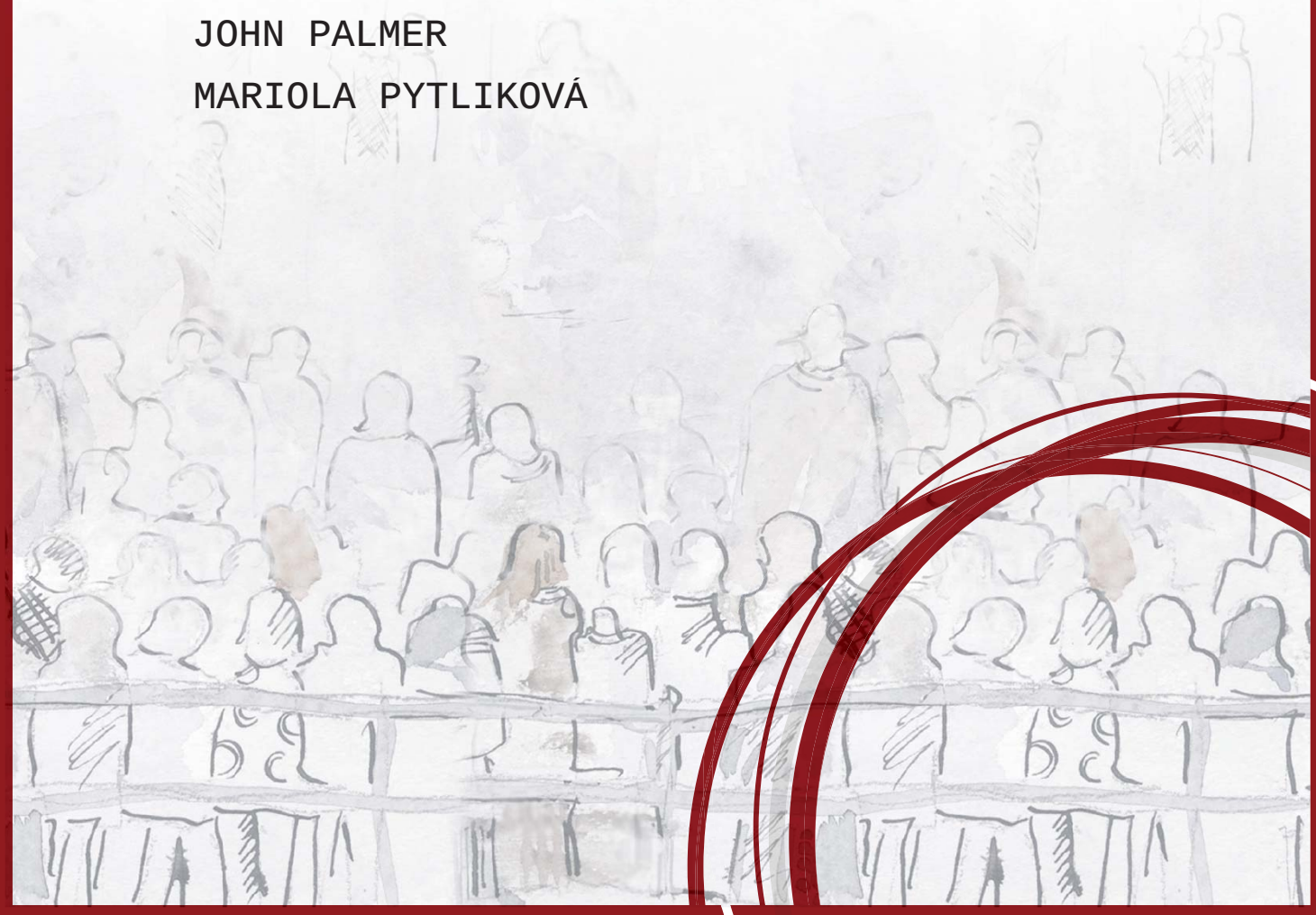

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ABSTRACT

Labor Market Laws and Intra-European Migration: The Role of the State in Shaping Destination Choices*

This article investigates the relationship between migrants' destination choices and the formal labor market access afforded by multiple potential host countries in the context of the EU's eastward enlargement. We use an index of labor market access laws combined with data on migration from new EU member states into the existing states of the EU and EFTA from 2004 through 2010 to test whether (1) migrants are attracted to destinations that give them greater formal labor market access, and (2) migration flows to any given destination are influenced by the labor market policies of competing destinations. Our data support both propositions: Migration between origin/destination pairs was positively associated with the loosening of destination labor market restrictions while negatively associated with the loosening of competing destinations' labor market restrictions. These relationships hold even when economic indicators, social welfare spending, and existing immigrant stocks are modeled. By combining rich EU data with a unique approach to evaluating competing legal regimes, the analysis helps us better understand how law shapes migration in a multidestination world.

Keywords: International migration, labor market access laws, EU enlargement

JEL Classification: J61, F22, O15

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1 Introduction

Of all the social processes that governments seek to regulate, immigration is in many ways unique. On one hand, immigration is deffined by the state and can exist only in a world with states and borders (Zolberg, 1989). On the other hand, immigration is a process over

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which states are often unable to exert significant control (Cornelius, Martin, and Hollifield, 1994). As with other areas of human behavior, immigration is driven by strong social and economic forces that are bound to compete with state regulation. Unlike most other areas of government regulation, however, governing immigration means influencing people who are often outside of the state's territory, who may have few ties to the state, and who normally have little or no voice in the creation of the laws aimed at them. Moreover, potential immigrants come into contact with a given state's laws only to the extent that they choose to enter that state's territory; they may choose instead to subject themselves to a different state's laws, or simply to stay at home.

These unique qualities make it important for policymakers to look beyond their own borders when formulating immigration laws. Not only must they anticipate the effects of these laws on immigrants generally, they must also anticipate the consequences of other states' simultaneous attempts to regulate immigration (Shachar, 2006; Cobb-Clark and Connolly, 1997). Unfortunately, there are gaps in our understanding of both of these issues, and particularly the second one. There exist well-developed theories and a large body of empirical research on the social and economic determinants of migration, but not about the role of the state, let alone the role of multiple states acting at the same time with varying policies (Massey et al., 2002; Portes, 1997).

This article adds to a growing body of work aimed at addressing these gaps. It exploits the particular circumstances surrounding the enlargement of the European Union (EU) in order to investigate the influence of labor market laws on migrants' destination choices. As Pedersen and Pytlikova (2008) demonstrate, the eastward expansion of the EU in 2004 and 2007 created a natural experiment that is useful in evaluating the influence of these laws. Of particular importance is that the expansion makes it possible to separate, to some extent, the influence of labor market laws from that of admissions and residence restrictions: Citizens of the new member states were given the right to travel and reside in any of the old member states of the EU or European Free Trade Association (EFTA) with few restrictions; their employment, however, was subject to potentially significant restrictions that each of the old member states had the option of imposing for up to seven years. Some of the old members imposed no restrictions, some imposed but later lifted restrictions, and some continued to maintain restrictions during the entire period. This article examines the relationship between these varying labor market regulations and the destinations chosen by immigrants from the new member states. Because of the relative absence of admissions and residence restrictions, the expansion of the EU provides a setting in which the effects of labor market policies may be isolated more fully than would otherwise be the case.

The article addresses the hypotheses that (1) immigrants are attracted to destinations that give them greater formal labor market access, and (2) increasing labor market access in one country can draw migrants away from other potential destinations. In other words, we propose that the influence of law on migration is polycentric[1] and that the alignment of rules on formal labor market access that emerges from the multiple centers of decision-making influences the magnitude and direction of migrant flows.

[1]We use this term in the sense of Ostrom, Tiebout, and Warren (1961) to connote multiple centers of decision-making that are formally independent but may end up in competitive or cooperative relationships. This is related to the notion of polycentric problems, discussed in the context of adjudication by Fuller (1978), Henderson (1975), and others.

The first hypothesis assumes that most migrants prefer open formal labor markets to formally restricted markets, and that they act on these preferences. Although these might seem like obvious propositions, our empirical knowledge of the world does not provide a clear basis for their acceptance. Formal labor market laws are capable of operating on migration decisions only through social and economic mediators: What matters are questions like how the laws are perceived, whether they are enforced and obeyed, and how they affect markets and social networks (Schuck, 2000). Even assuming that formal rights to access labor markets translate in practice to better access and thus higher expected earnings, it is not clear that simple wage expectations are as influential to migration decisions as factors like local market failures, relative deprivation, or social capital accumulation (Massey and Espinosa, 1997; Stark and Taylor, 1991; Stark and Bloom, 1985).

The second hypothesis requires that migrants have some degree of choice among multiple potential destinations, that they have information about the law in these states, and that they consider this information in reaching their migration decisions. This hypothesis draws on Ayelet Shachar's 2006 work on inter-jurisdictional competition for immigrants, but extends her idea beyond the realm of highly skilled migrants to encompass all types of migration, and shifts the focus from policymakers to the migrants themselves. Whereas Shachar examines the motives and actions of policymakers trying to attract workers who will benefit their economies, we explore the reactions of the migrants to the legal playing fields placed before them, irrespective of whether or not those playing fields are designed with an eye to competition. We ask simply whether a given state's immigration flow is influenced by other states' laws.

To address these hypotheses we combine (1) annual data on intra-European migration flows and stocks from 2004 through 2010 compiled by Mariola Pytlikova (Adsera and Pytlikova, 2012, see) with (2) an index of labor market rights based on an analysis of EU and member state law (Palmer, 2010) and (3) a set of control variables drawn from the World Bank, the European Commission's Statistical Office (EuroStat) and the Organization for Economic Cooperation and Development (OECD). We fit a series of negative binomial regressions relating migration rates to the destination country's labor market index value and the weighted mean labor market index value of all other destinations (weighted by GDP), while controlling for country pair and year effects and a set of origin and destination economic and social characteristics.

The results support both hypotheses. Increases in destination state index scores are associated with increasing migration rates within each country pair, while increases in the mean index score of competing destinations are associated with decreasing migration rates within each country pair. These relationships hold even when controlling for origin and destination GDP, unemployment, and social welfare spending, and the stock of origin state migrants already residing in the destination. In addition, the relationship between migration rates and the control variables in these models is largely consistent with the predictions of existing migration theories and the findings of other studies. On the other hand, overall model fit is poor and results are likely biased by unobserved variables. Overall, more research is needed to further explore these hypotheses, but the data generated by this instance of European expansion clearly add to our understanding of the complicated ways in which states influence migration patterns.

Part 2 provides background on the use of migrant flow data to investigate the deter-

minants of migration and Part 3 lays out the hypotheses and the theoretical assumptions on which they rest. Part 4 discuses the specific context of migration within the EU and EFTA, Part 5 describes the data used to test the hypotheses and Part 6 discusses the variables and provides descriptive statistics. Part 7 presents the statistical models, and Parts 8 and 9 discuss the results and their limitations. Part 10 concludes.

2 Untangling the determinants of migration in a multi-destination world

There are a variety of theories to explain why, when, and where people migrate. In some circumstances, migrants may act as economically rational individuals seeking to maximize their material utility in light of differences in wage expectations between sending and receiving countries (Borjas, 1989; Todaro, 1969). In other circumstances, however, the migration decision is more likely made at the level of the family and absolute expected wages may be less important than considerations of relative deprivation or the need to manage risk or make up for temporary market failures in the home country (Massey et al., 2002; Stark and Bloom, 1985; Stark and Taylor, 1991). Social networks, social capital, and cultural changes may also play important roles (Waldinger and Lichter, 2003), and they can help explain the cumulative nature of migration, which often seems to act as its own catalyst (Massey, 1990; Fussell and Massey, 2004). At a macro level, migration has been explained in terms of segmented labor markets (Piore, 1979), and at the broadest scale in terms of the historical-structural notion of world systems (Wallerstein, 1974; Portes and Walton, 1981).[2]

Empirically, much of what we know about the determinants of migration comes from studies of migrants moving from one sending country to one receiving country (Massey and Espinosa, 1997; Fussell and Massey, 2004; Palloni et al., 2001).[3] These studies have the advantage of focusing in depth on the particular qualities of the countries involved, and they are often able to utilize detailed data at the level of individual migrants or households. Expanding the scope to multiple pairs of sending and receiving countries, however, increases the quantity of data (albeit, often with a loss in quality), allows for more generalizable results, and leads to models that may better reflect the choices migrants face.

A number of recent studies have taken this approach. Grogger and Hanson (2008) and Belot and Hatton (2008) use migrant stock data from multiple origin-destination country pairs to examine the sorting of migrants based on education. Both studies find a positive relationship between skill-related earning differentials and the education level of migrants relative to non-migrants, consistent with the income maximization model of migration. Belot and Hatton, however, find that this relationship holds only when origin country poverty constraints are accounted for, and also that other factors play just as much a role in migrant sorting as do wage-related ones.

Mayda (2009) uses multiple country pairs to examine the relationship between origin country emigration rates and neoclassical economic factors, as well as the interaction between

[2] All of these theories are discussed in detail in (Massey et al., 2002).

[3] Theoretical models are also often simplified in this respect to avoid the mathematical complications introduced by multiple origins and destinations (Borjas, 1989).

these factors and destination country laws on the admission of immigrants. She finds a strong positive relationship between destination country GDP and emigration rates, a more complicated one with origin country GDP, and a strengthening of the influence of both factors when destination country immigration laws become less restrictive. Similarly, Ortega and Peri (2009) find a strong relationship between migrant flows and both wage differentials and destination country laws on immigrant admissions.

Pedersen, Pytlikova, and Smith (2008) use migrant flow data from multiple country pairs to analyze the extent to which emigration rates are influenced by destination state welfare policies or other social factors. While they find strong relationships between emigration rates and country pairs' cultural and linguistic distances (the former measured as whether the countries share past colonial ties, and the latter as whether they share a common language) as well as their accumulated social networks, they do not find a clear connection to welfare policies.

Of most relevance to the present study, Pedersen and Pytlikova (2008) examine the relationship between labor market access and migrant flows in the context of EU expansion. They focus specifically on migration from new member states to the Nordic countries between 1985 and 2007. Using a difference-in-differences approach, they find no significant effect of the opening of labor markets on migration from the states that entered the EU in 2004, but a positive effect when it comes to migration from the 2007 entrants.

The present study builds on Pedersen and Pytlikova (2008) but makes a unique contribution by including eighteen of the nineteen pre-2004 EU and EFTA member states as destinations in the analysis, by relying on an index of labor market access rights to capture greater variation in destination state laws, and by relying on a new analytical approach to explore the ways in which migration patterns are shaped by simultaneous changes in multiple legal regimes.

3 Hypotheses

Our first hypothesis is that, all else equal, destinations that give migrants greater formal labor market access will receive larger flows of migrants. This hypothesis does not depend on any one specific theory of migration, but it assumes that migration decisions are influenced by the perceived availability of employment in the destination state. This could be the case for migrants who themselves wish to be employed or for those moving as part of a family unit in which at least one member wishes to be employed. The assumption does not rule out the possibility of non-economic motivations, but it does require that employment availability be the decisive factor for some migrants, either because they rank it higher in importance or because their choice sets are such that other higher ranked factors are non-limiting.

The hypothesis also assumes that migrants believe greater formal labor market access will mean better employment options. This depends, in part, on whether migrants intend to comply with employment laws—or, at the least, whether they prefer destinations in which they will be able to work in compliance with such laws. It also depends on whether migrants are able to obtain employment authorization even under restrictive regimes. Our assumption is that most migrants prefer to work in compliance with the law if they can, and that, even if they could obtain employment authorization under a more restrictive regime, they prefer

to avoid the costs and possible instability of having to seek and maintain authorization in the first place.

The second hypothesis is that the flow of migrants to a given destination is influenced by the immigrants' rights laws of other destinations that these migrants might choose instead. This hypothesis rests on a number of assumptions about migrants' preferences, information, and behavior. The hypothesis assumes migrants have the ability to choose among multiple potential destinations, that they have information about the law in these destinations, and that they consider this information and form preferences about different laws that influence their migration decisions. These assumptions appear increasingly plausible in today's highly mobile and interconnected world, and they appear to be shared by at least some policy-makers devising strategies for luring highly skilled migrants to their countries (Shachar, 2006). There is also some empirical support for the hypothesis. Cobb-Clark and Connolly (1997), for instance, find that increases in skilled migrants arriving in the United States are associated with decreases in the number of skilled migrants applying for Australian visas.

4 Evolving rights of migrants within the EU and EFTA

Contemporary Europe presents a favorable context in which to study migrants' choices among multiple destinations and, in particular, the role of the state in influencing these choices through policies related to immigrants' economic and social rights. This is due to the dismantling of most barriers to entry and residence for EU and EFTA citizens within the EU and EFTA states combined with the temporary maintenance of restrictions on labor market access that vary by state and over time. Whereas admissions and residence laws often obscure the influence of immigrants' rights laws on migration flows, intra-European migration offers the chance to view the latter in isolation from the former.

The idea of giving people the right to move freely between states has been one of the cornerstones of the project of European integration since its inception. The starting point was labor mobility, with the guarantee of "free movement of workers" enshrined in article 48 of the 1957 Treaty Establishing the European Economic Community (Treaty of Rome). Through a combination of EU legislation and court decisions, this concept evolved over time to form the basis of what is now considered to be EU citizenship. The citizens of each member state now have the right to move and reside throughout the EU with few restrictions, and to enjoy key social, economic and political rights on an equal basis with the citizens of whatever member state they choose to make home (Hailbronner, 2007; Joppke, 2001; European Commission, 2008, 2002).

The precise nature of these rights has changed over time, as has the territory in which they are applicable. The grouping of states currently known as the EU began with six members: Belgium, France, Germany, Italy, Luxembourg, and the Netherlands. By 1995 it had undergone several rounds of enlargement, adding Austria, Denmark, Finland, Greece, Ireland, Spain, Sweden, Portugal, and the United Kingdom and thereby bringing the total membership to 15. In addition, the zone of free movement and residence had expanded to include three members of the EFTA, Iceland, Liechtenstein, and Norway, which entered into an agreement with the EU to form the European Economic Area (EEA) in 1994. In 2002 the

fourth EFTA member, Switzerland, entered into a bilateral agreement with the EU ensuring that it too became part of the free movement zone after a transitional period.[4]

Of most relevance to this article are the EU's latest rounds of expansion, in which membership was extended to Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia in May 2004, and to Bulgaria and Romania in January 2007. The treaties of accession with Cyprus and Malta provide that these countries' citizens must be treated essentially the same as any of the existing EU citizens immediately upon accession with respect to freedom of movement. The treaties with the remaining countries, however, give each existing member state the option of imposing its own transitional arrangements restricting new member state citizens' access to their labor markets for up to seven years.[5] The restrictions may not be greater than those already in place for these citizens and they must ensure that new member state citizens receive more favorable treatment than that accorded to citizens of countries outside of the EU and EFTA. In addition, once new member state citizens are given access to a member state's labor market for an uninterrupted period of at least a year, they must then be given access to that market for as long as they remain in it either employed or involuntarily unemployed (see Treaty of Accession to the European Union 2003, Annexes V-XIV, O.J. L 236 (Sept. 23, 2003)). Most importantly, the possible restrictions are related specifically to labor market access, not freedom of residence, which is guaranteed to all EU and EFTA citizens equally—at least formally (see European Parliament and Council Directive 2004/38/EC of 29 April 2004, O.J. L 158 (Apr. 30, 2004)). At the same time, this formal guarantee of equal treatment with regard to freedom of residence is not always respected in practice. Moreover, the freedom is not without conditions: EU and EFTA citizens may be expelled from other member states for certain crimes, on grounds of public order or security, or in certain situations for becoming dependent on social welfare.[6]

For the countries joining the EU in 2004, open access was immediately granted by Ireland, Sweden, and the UK,[7] but restrictions were imposed (except in the case of citizens of Cyprus and Malta) by the other existing members of both the EU and the EFTA. Finland, Greece, Iceland, Italy, Portugal, and Spain all lifted their restrictions in 2006, Luxembourg and the Netherlands in 2007, France in 2008 (after first loosening them in 2006), and Bel-

[4]Switzerland had been part of the negotiations on the EEA agreement but its electorate rejected the agreement in 1992 and its government decided to pursue a bilateral relationship with the EU instead (Swiss Federal Department of Foreign Affairs, 2009). In 1999 Switzerland and the EU signed a package of bilateral agreements, including one on the free movement of persons that entered into force in 2002 (O.J. L 114, Apr. 30, 2002). The agreement contained two transitional periods: EU states could continue to place restrictions on Swiss workers until 2004, and Switzerland could continue to place restrictions on EU workers until 2007 (Swiss Federal Department of Foreign Affairs, 2007).

[5]Transitional arrangements for labor mobility had also been used in previous rounds of EU enlargement, when Greece, Spain, and Portugal entered the Union. These prior arrangements, unlike the most recent ones, however, were applied uniformly by all of the existing member states, rather than being left to the discretion of each state.

[6]These latter issues appear to be the bases on which France is attempting to defend its recent large-scale expulsion of Romanian and Bulgarian citizens of Roma ethnicity, although the law in this area remains unsettled and the legality of France's action (which also calls into question the guarantee of equality) is open to serious question (Castle, 2010; Cendrowicz, 2010).

[7]The UK put in place a mandatory workers registration scheme for monitoring purposes, but did not restrict access in substantive ways (European Commission, 2009, p. 123).

Table 1 – Dates on which labor market restrictions on new EU member were lifted.

Member State	2004 entrants*	2007 entrants
Austria	May 2011	still in place
Belgium	May 2009	still in place
Denmark	May 2009	May 2009
Finland	May 2006	no restrictions
France	July 2008 (but loosened from March 2006)	still in place (but loosened in 2007)
Germany	May 2011	still in place
Greece	May 2006	2009
Iceland	2006	still in place
Ireland	no restrictions	July 2012
Italy	May 2006	January 2012
Liechtenstein	May 2011	still in place
Luxembourg	Nov. 2007	still in place
Netherlands	May 2007	still in place
Norway	May 2009	June 2012
Portugal	May 2006	2009
Spain	May 2006	2009 (but partly reimposed in 2011)
Sweden	no restrictions	no restrictions
Switzerland	May 2011	still in place
UK	no restrictions	still in place

*Excluding Cyprus and Malta, which were not subject to restrictions under the enlargement treaty.

gium, Denmark, and Norway in May 2009. By contrast, Austria, Germany, Lichtenstein, and Switzerland maintained their restrictions during the full transitional period—until May 2011 (European Commission, 2009; EurActiv, 2009; Norwegian Labor Inspection Authority, 2012).

For the countries joining in 2007 (Bulgaria and Romania), open access was immediately granted by Finland and Sweden, but restrictions were placed by the other existing EU and EFTA members. Greece, Spain, Portugal, and Denmark lifted their restrictions in 2009, France partly loosened them in 2007, and Iceland, Ireland, Italy, and Norway lifted them in 2012. Austria, Belgium, France, Germany, Lichtenstein, Luxembourg, the Netherlands, Switzerland and the UK all continue to maintain their restrictions and Spain partly reimposed them on Romania in July 2011 (EurActiv, 2012a; Beesley, 2012; EurActiv, 2012b; Sofia Globe, 2012; El País, 2012; Minder, 2011; European Commission, 2009; EurActiv, 2009). Table 1 summarizes the history of restrictions for both rounds of enlargement and Figure 1 illustrates this history with a color-coded map of Europe.

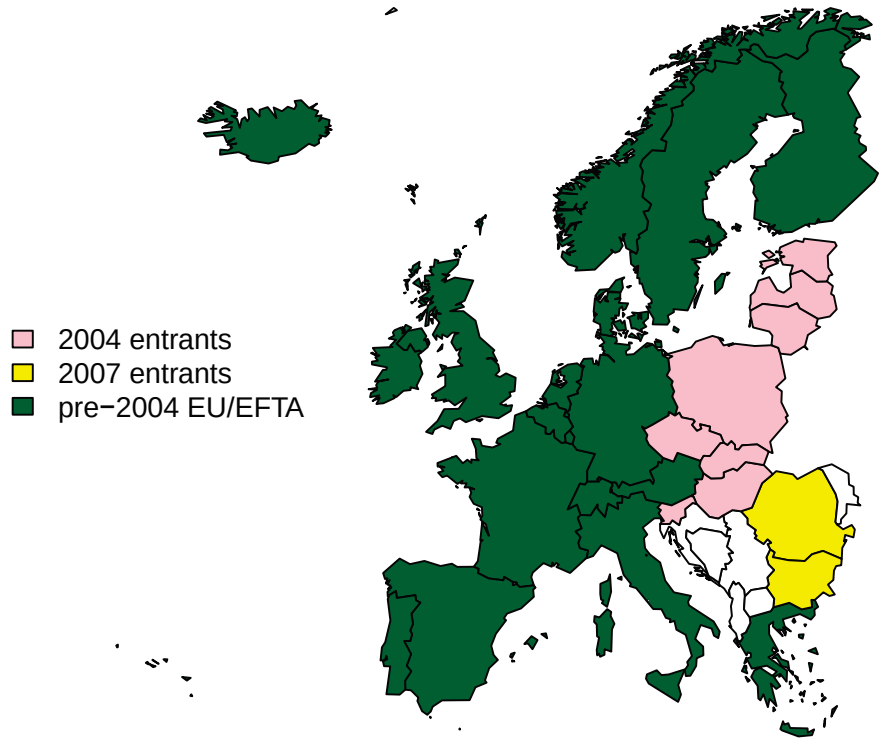

Figure 1 – EU/EFTA Enlargement

5 Data

This article relies on data about migration from the eight states that joined the EU in 2004 subject to labor market restrictions to eighteen of the states that were already members of the EU or EFTA in that year, and from the two states that joined the EU in 2007 (also subject to labor market restrictions) to those same eighteen existing member states. The data fall into three categories: (1) annual flows and stocks of migrants and total population sizes of the origin states; (2) an annual index of private sector labor market access enjoyed by sending state citizens in each destination state; and (3) a set of time-varying destination and sending state economic and social indicators.

The dataset on migration flows and stocks was compiled by Mariola Pytlikova based on information she collected from national statistical offices in each country (Adsera and Pytlikova, 2012, see).[8] It is currently available through 2010 and it is the most comprehensive dataset of its type. One limitation of this type of cross-national migration data is that there are differences in how the destination countries register and define (and thus count) their immigrants. Some states use data from their general population registers, while others rely on special registers of foreigners or administrative data on residence permits; some states define immigrants in terms of the amount of time the person intends to stay, while others use different definitions (or do not explain their definitions).

The data are organized by origin-destination pairs and years. Our basic approach is

[8]This dataset is an updated and expanded version of that used in Pedersen and Pytlikova (2008) and Pedersen, Pytlikova, and Smith (2008).

	CZE	EST	HUN	LTU	LVA	POL	SVK	SVN	BGR	ROM
AUT	7	7	7	7	7	7	7	7	4	4
BEL	6	6	6	6	6	6	6	6	3	3
CHE	7	7	7	7	7	7	7	7	4	4
DEU	7	7	7	7	7	7	7	7	4	4
DNK	7	7	7	7	7	7	7	7	4	4
ESP	7	6	7	7	6	7	7	6	4	4
FIN	7	7	7	7	7	7	7	7	4	4
FRA	5	5	5	5	5	4	5	5	2	2
GBR	2	2	2	2	2	6	3	0	0	1
GRC	2	2	2	2	2	2	2	2	1	1
IRL	3	3	3	3	3	3	3	3	3	3
ISL	7	7	7	7	7	7	7	7	4	4
ITA	6	6	6	6	6	6	6	6	3	3
LUX	7	7	7	7	7	7	7	7	4	4
NLD	7	7	7	7	7	7	7	7	4	4
NOR	7	7	7	7	7	7	7	7	4	4
PRT	7	7	7	7	7	7	7	7	4	4
SWE	7	7	7	7	7	7	7	7	4	4

Table 2 – Number of years analyzed for each origin (columns) and destination (rows) pair. The maximum number of years is 4 (2007-2010) for Bulgaria and Romania, and 7 (2004-2010) for the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia

to analyze only migration from new EU/EFTA member states into old ones during the years following expansion. However, we exclude Liechtenstein as a destination state because of its small size, and Malta and Cyprus as origin states because of the small sizes of their migrant flows and their special treatment under the enlargement treaty. In addition, data are missing for some countries during specific years. Table 2 shows the number of years analyzed for each pair of origin and destination states, and the specific years for which there are missing data can be seen in the time series charts in Appendix 10.

The data on each destination country's laws on immigrants' employment rights come from an index we have created based on available legal texts and commentary. The index attempts to quantify, for each year in question, the employment rights accorded in each destination state to residents who are citizens of new member states. The index values range between 0 and 1, with 0 indicating that immigrants are given no rights at all, and 1 indicating that they are given the same rights as citizens. The index values and explanations are provided in Table 7 in Appendix 10, and they are drawn from a larger project on immigrants' rights quantification described in (Palmer, 2010).

The third group of data is the set of destination and origin country characteristics used as control variables. For each destination and origin state, annual per capita GDP measured in current U.S. dollars is taken from the World Bank,[9], and the the percentage of GDP spent on welfare is taken from EuroStat.[10] Unemployment rates are taken from the

[9]http://data.worldbank.org/.

[10]http://epp.eurostat.ec.europa.eu.

EuroStat as well, with the exception of Switzerland's unemployment, which is taken from the OECD.

6 Variable selection and descriptive statistics

The outcome of interest in these data is the annual migration flow from each origin state to each destination state. We focus specifically on migration rates, estimated as the gross number of people migrating from origin i to destination j divided by the total population of origin i. This is a traditional occurrence-exposure rate, and it has been used in prior cross-country studies of migration patterns (Hatton and Williamson, 2002; Clark, Hatton, and Williamson, 2007; Pedersen and Pytlikova, 2008; Hanson and McIntosh, 2010; Mayda, 2010; Adsera and Pytlikova, 2012). We use gross migration flows, rather than net flows, in calculating this rate because data on gross flows are typically more accurate and also relate more directly to the underlying questions and social processes (Bijak, 2010).

Variable	**n**	**Min**	$\mathbf{q_1}$	$\widetilde{\mathbf{x}}$	$\bar{\mathbf{x}}$	$\mathbf{q_3}$	**Max**	**s**	**IQR**	**#NA**
rate_ijt	984	0.0	0.0	0.1	0.3	0.2	12.1	0.8	0.2	0
Index_$ijt-1$	984	0.2	0.7	0.8	0.8	1.0	1.0	0.2	0.3	0
WMCI_$ijt-1$	984	6.5	7.6	8.1	8.2	8.9	9.6	0.8	1.3	0
GDP_$it-1$	984	4.3	7.9	11.2	11.7	14.6	27.0	4.9	6.7	0
GDP_$jt-1$	984	15.5	33.9	41.5	45.9	53.0	118.2	19.1	19.0	0
unempl._$it-1$	984	4.3	6.0	7.5	9.0	10.4	19.7	4.0	4.4	0
unempl._$jt-1$	984	2.3	4.2	6.2	6.4	8.4	18.0	2.7	4.2	0
welf._$it-1$	984	11.3	13.6	17.2	17.4	20.4	24.3	3.7	6.9	0
welf._$jt-1$	974	18.8	23.9	27.1	26.6	29.2	33.4	3.5	5.3	10
stock_$ijt-1$	945	0.0	0.1	0.4	1.6	1.1	36.9	3.6	1.0	39

Table 3 – Summary statistics of variables used in the primary analysis. Rate is measured in number of migrants per 1,000 persons in origin i's population; Index is constructed such that 0 represents no labor market rights and 1 represents the same rights as citizens; WMCI is the weighted mean index score of competing destinations (weighted by GDP); GDP is per capita GDP expressed in thousands of current USD; unempl. is the unemployment rate, welf. is the proportion of GDP spend on social welfare, and stock is the number of immigrants from origin i residing in destination j per thousand persons in origin i's population.

In addition to including each destination state's labor market index score with respect to each origin state in the given year, we also calculate the mean score of all other destinations (within the dataset) with respect to the same origin in the same year, weighted by destination state GDP. This provides a simple and rough measure of the formal labor market access in competing destinations, taking into account the sizes of these destinations' economies. We also rank each destination by index score and calculate the total GDP and total population of all destinations with equal or higher ranks for each country-pair-year as an alternate way of measuring competing labor market access laws.

As control variables, we use the three economic indicators discussed above—per capita GDP, unemployment, and welfare expenditure—measured for both origin and destination states. Per capita GDP, unemployment, and welfare expenditure serve as proxies for absolute expected income. Neoclassical economic theories of migration predict that the gap

between origin and destination state expected income should be a significant determinant of migration, with migrants moving out of individual, material self-interest (Borjas, 1989; Todaro, 1969). Although these theories focus on the gap in expected income, we use origin and destination state GDP, unemployment, and welfare as separate variables in the models reported here because they are only very rough proxies for expected income, and measuring their gaps may make their relationships to wages only rougher. The expectation according to neoclassical theory is that origin state GDP and welfare, and destination state unemployment will be negatively associated with migration rates, while destination state GDP and welfare and origin state unemployment will be positively associated with migration rates.

We control for the stock of migrants from each origin state residing in each destination in order to capture rough information about social networks and social capital accumulation. Individual-level studies of migration behavior have found that people are much more likely to migrate to a given destination if they know someone who has already migrated there (Massey et al., 2002; Massey and Espinosa, 1997; Massey, 1990; Fussell and Massey, 2004). Such an acquaintance can provide vital information and social connections to help with travel, settlement, and jobs, all of which lowers the costs of migration and increases potential benefits (Waldinger and Lichter, 2003). Since a larger stock of co-national migrants in a given destination state suggests possibilities for stronger or larger social networks, the expectation is that migrant stocks will be positively associated with migration rates.

For all of the above variables, we use values lagged by one year in the primary models to avoid potential problems of endogeneity. Following Pedersen, Pytlikova, and Smith (2008), we assume that migrants make their decisions and move countries in any given year after first observing conditions in these countries during the previous year. As described below, however, we also fit alternate models without the time lags to check the robustness of the results.

For all of the above variables, we use values lagged by one year in our models to avoid potential problems of endogeneity. From an economics point of view, we assume that migrants make their decisions and change countries in any given year after first observing conditions in these countries during the previous year (Pedersen, Pytlikova, and Smith, 2008).[11]

Table 3 presents summary statistics of the variables used in the primary analysis. Figures 4 through 9 in Appendix 10 show changes over time for each country pair, with the dates on which destinations lifted their labor market restrictions indicated with vertical lines.

7 Models of migration rates

To test the hypotheses we analyze the relationship between migration rates and labor market access, as quantified in the index scores. If the first hypothesis is accurate, we would expect to see a positive association between migration rates and index scores, even controlling for the other variables. If the second hypothesis is true, we would expect to see a negative

[11] However, we also fit alternate models without the time lags to check the robustness of the results. Results from the alternate models are very similar to the main results presented here, and they are available from the authors upon a request.

association between migration rates and the variable that captures the mean index score of the competing destinations.

We test these expectations primarily using two sets of negative binomial regressions[12] with country-pair and year dummies. These models treat the count (f_{ijt}) of migrants flowing from origin i to destination j in year t as a random variable drawn from a negative binomial distribution, with mean specified by the model equation and theta estimated along with the other parameters. We include sending state population as an offset on the right-hand side so that the results may be interpreted in terms of rates.

The general specification for the first set of models is:

$$\log(f_{ijt}) = \log(n_{it}) + \alpha_{ij} + \beta_t + \delta_1 \text{Index}_{ijt-1} + \mathbf{X}^\mathsf{T}\boldsymbol{\lambda} \tag{7.1}$$

where n_{it} is the origin state population in year t, α_{ij} is the fixed effect estimate for each country pair, β_t is the fixed effect estimate for each year, Index_{ijy} is the labor market rights index value for destination j with respect to citizens of origin i in year t with δ_1 as its estimated coefficient, and $\mathbf{X}$ is a vector of covariates with $\boldsymbol{\lambda}$ as their corresponding coefficients.

The general specification for the second set of models is the same, but with an additional term, $\delta_2 \text{WMCI}_{ijt-1}$, representing the weighted mean of j's competing index scores (meaning scores for all destinations other than j) with respect to citizens of origin i in year t, with δ_2 as its estimated coefficient.

For each set of models we fit four different specifications: Model 1 includes no covariates other than counry pair and year dummy variables, and thus $\mathbf{X} = 0$ in equation 7.1. Model 2 adds the economic indicator variables, Model 3 adds welfare spending, and Model 4 adds the stock variables. We fit both sets of models with the glm.nb function in R's MASS package, and we have analyzed deviance residuals to test model assumptions.

8 Discussion of results

The estimates from the primary models support both hypotheses. In the first series of negative binomial models (those without weighted mean competing index scores), there is a statistically significant and positive relationship between the destination state's labor market access and the rate of migration to it from each origin state (Table 5 in Appendix 10). In other words, as destination states lifted restrictions on new member state citizens' employment, they tended to receive more migrants from these states. This relationship holds even when economic indicators, social welfare spending, and existing immigrant stocks are modeled (Table 5 in Appendix 10).

When the weighted means of competing destination index scores (WMCI) are added to the models, the coefficient on the target destination state index score drops slightly and we see a significant negative relationship between the mean competing index score variable and the target destination's migrant flow (Table 6 in Appendix 10). In other words, controlling for their own labor market access scores, destination states tended to receive less immigrants as competing destinations lifted their labor market restrictions. This relationship holds

[12] We initially fit models using Poisson regressions, but shifted to negative binomial models to avoid problems of over-dispersion. Parameter estimates were similar in both cases, but the negative binomial models produced a better fit based on an analysis of deviance.

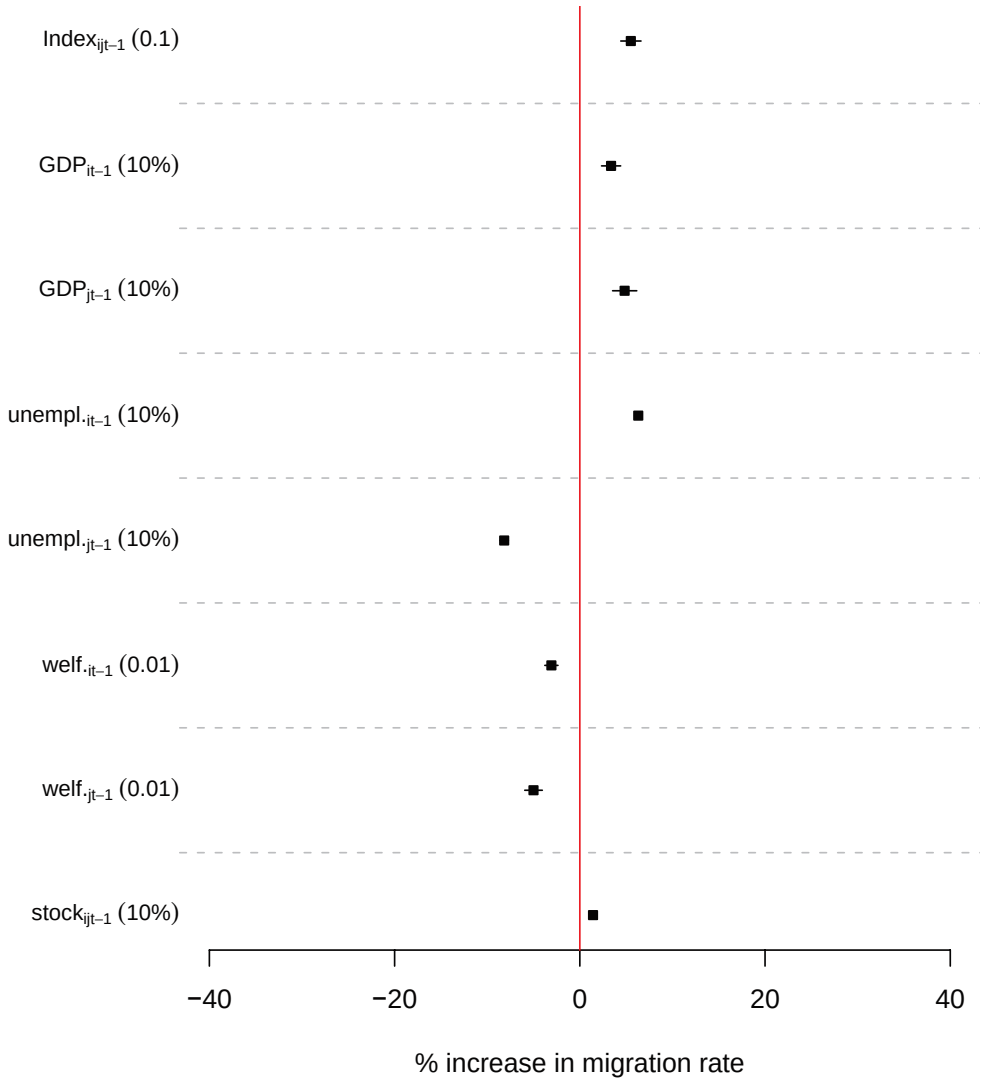

Figure 2 – Estimated increase in migration rate associated with each increase of 0.1 in destination index score, 10 percent in origin and destination state per capita GDP and unemployment rates, and 1 percentage point in the proportion of origin and destination state GDP spent on welfare, and 10 percent in stock of origin state migrants living in the destination state. Squares indicate point estimates and horizontal lines indicate 95% confidence intervals. Estimates are from a negative binomial regression shown as Series 1, M4 in Appendix B.

even when economic indicators, social welfare spending, and existing immigrant stocks are modeled.

In addition to the index variables of interest, the relationships in these models between migration rates and the other covariates also largely track theoretical predictions. In all of the time-lagged negative binomial models, there is a significant positive relationship between migration rates and destination state per capita GDP, origin state unemployment, and the stock of origin state immigrants already residing in the destination state. There is also a significant negative relationship between migration rates and origin state welfare spending as well as destination state unemployment. These results are consistent with theoretical predictions. The relationship for destination state social welfare spending, on the other hand, is negative, and the relationship for origin state per capita GDP is positive, both of which run counter to theoretical expectations. However, the welfare result is less surprising given the findings of Giulietti et al. (2013), Pedersen, Pytlikova, and Smith (2008), Pedersen and Pytlikova (2008), and Massey and Espinosa (1997) that there is little evidence of immigrants being drawn more to destination states with generous social welfare benefits, and also given the likelihood that welfare spending is correlated with various omitted variables that may be driving the sign of the coefficient. The GDP result may reflect the classic "immigration hump" that many countries go through as their economies develop (Massey et al., 2002).

To illustrate the magnitude of the relationships at issue here, Figures 2 and 3 plot parameter estimates expressed as percentage increases in migration rates associated with each variable. In model 4 of the first series (without mean competing index score), each 0.1 unit increase in the employment rights index is associated with a 5.51% increase in the immigration rate, with a 95% confidence interval of 4.42% to 6.61%. In model 4 of the second series (with mean competing index score), each 0.1 unit increase in the employment rights index is associated with a slightly smaller increase in the immigration rate (4.83% with a 95% confidence interval of 3.71% to 5.96%), but each 0.1 unit increase in weighted mean competing index score is associated with a 11.61% decrease in the immigration rate, with a 95% confidence interval of 7.43% to 15.60%.

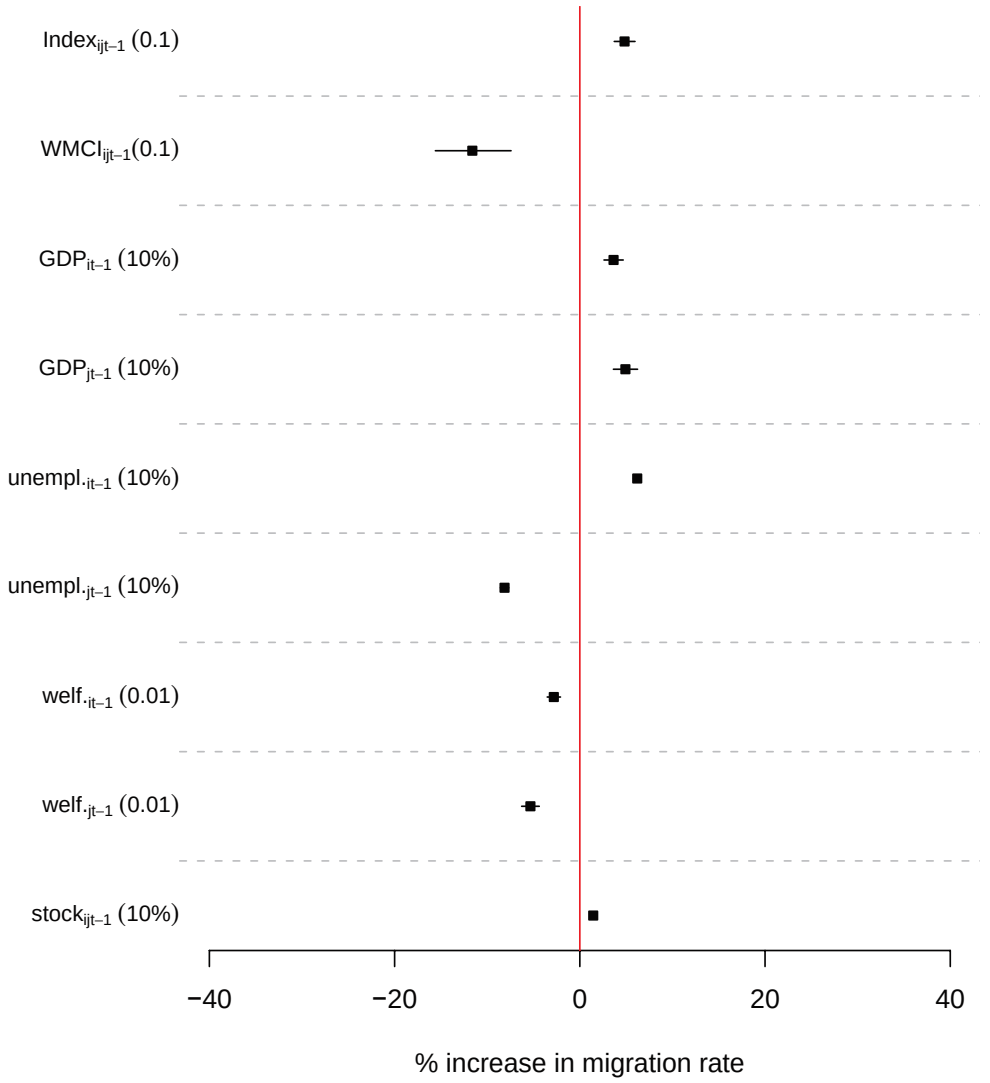

Figure 3 – Estimated increase in migration rate associated with each increase of 0.1 in destination index score and weighted mean competition index (WMCI) score, 10 percent in origin and destination state per capita GDP and unemployment rates, and 1 percentage point in the proportion of origin and destination state GDP spent on welfare, and 10 percent in stock of origin state migrants living in the destination state. Squares indicate point estimates and horizontal lines indicate 95% confidence intervals. Estimates are from a negative binomial regression shown as Series 2, M4 in Appendix B.

9 Limitations

There are a number of reasons to be cautious about these findings. First, the models do not fit the data well, which is to be expected when modeling aggregate migration flows with only a small number of available covariates. There are very likely a wide range of additional variables that contribute to explaining the observed migration rates. To the extent that any of these additional variables is correlated with the variables of interest, estimates may be biased.

Second, these models assume errors are independent, yet there are many reasons to expect correlations between individuals based on clustering that cannot be modeled in the absence of more detailed information about each migrant. For instance, we know that many migrants travel as families, not independent individuals, and there is simply no way to account for this with the available information. Similarly, the same individuals are presumably counted in the data multiple times if they do not migrate in the first observed year, but there is no way to link these observations.

The models also make the assumption that migrants base their decisions to migrate in a given year on origin and destination conditions in the previous year (or, in the alternate specifications, in the same year), yet there are reasons to think that some migrants anticipate conditions farther in advance. In particular, migrants may have made decisions based on their knowledge that EU law required destination states to lift labor market restrictions after a maximum of seven years.

Even with these limitations, however, the data on intra-European migration are important and cannot be dismissed. Migration is particularly hard to model, and there do not appear to be good solutions to the problems noted above. Moreover, it is rare to find as good a natural experiment for investigating migration as the one created by European expansion. Making the most out of this example is therefore important, even if it is far from perfect.

10 Conclusions

What can we take from these results? We can conclude, at least provisionally, that the labor market restrictions imposed by the EU member states as part of the Union's 2004 and 2007 enlargement influenced the magnitude of intra-European migrant flows, but that the influence of each state's policy in this regard was overshadowed by the influence of all the other states' policies. All else equal, states that opened their labor markets ended up with somewhat larger migrant flows than those that did not, but these flows were heavily reduced by other states also opening their markets.

These are important conclusions and they are worth exploring further with additional data. A great deal of attention was paid to predicting, prior to Europe's enlargement, the migrant flows that would result. The decisions states made about the imposition and subsequent lifting of restrictions carried important costs. It is worthwhile, therefore, to examine what ultimately transpired, and to make our best guesses as to how each state's decision influenced its own immigrant flows and also those of other member states.

More broadly, our understanding of migration following the 2004 and 2007 enlarge-

ments can help European governments make better decisions about labor market rules in any subsequent rounds of enlargement. As Shachar (2006) suggests, states should recognize that in making immigration policy they are engaged in a multilevel game, looking inward toward their own electorates, but also outward toward the other potential destinations that are also setting rules. This game appears to hold even outside the context of highly skilled immigration, but it is not clear that policy-makers often realize this and take into account the effects of inter-state competition.

The observed European data also may tell us something about the influence of multiple destination states and labor market laws on migration more generally. The role of the state has been a gap in much of the existing social science research and theory into the determinants of international migration. Here we have an example of the state playing a significant role, even if one that may not be entirely recognized. We do not yet know how far these findings may be extended beyond Europe or even beyond the specific situation of the 2004 and 2007 enlargements. Even if they cannot be extended, however, that would itself raise interesting questions about why labor market regulation had such an effect in this situation and not in others. Perhaps the absence of admissions controls changes the system to such an extent that the influence of labor regulation is not just unmasked but actually changed.

Finally, exploring the situation in Europe as a problem of multiple sending and receiving states acting at the same time helps to illuminate the complexity of migration and point toward new ways of thinking about it. To view migration solely in terms of a single pair of states is to miss out on the variety of choices and incentives migrants face as they look out over the many destinations to which they may travel. While the migrant's view of the world is a complicated one, it is the view that policy makers and legal scholars must ultimately adopt if we wish to understand the consequences of our laws.

Appendix A: Time Series Charts

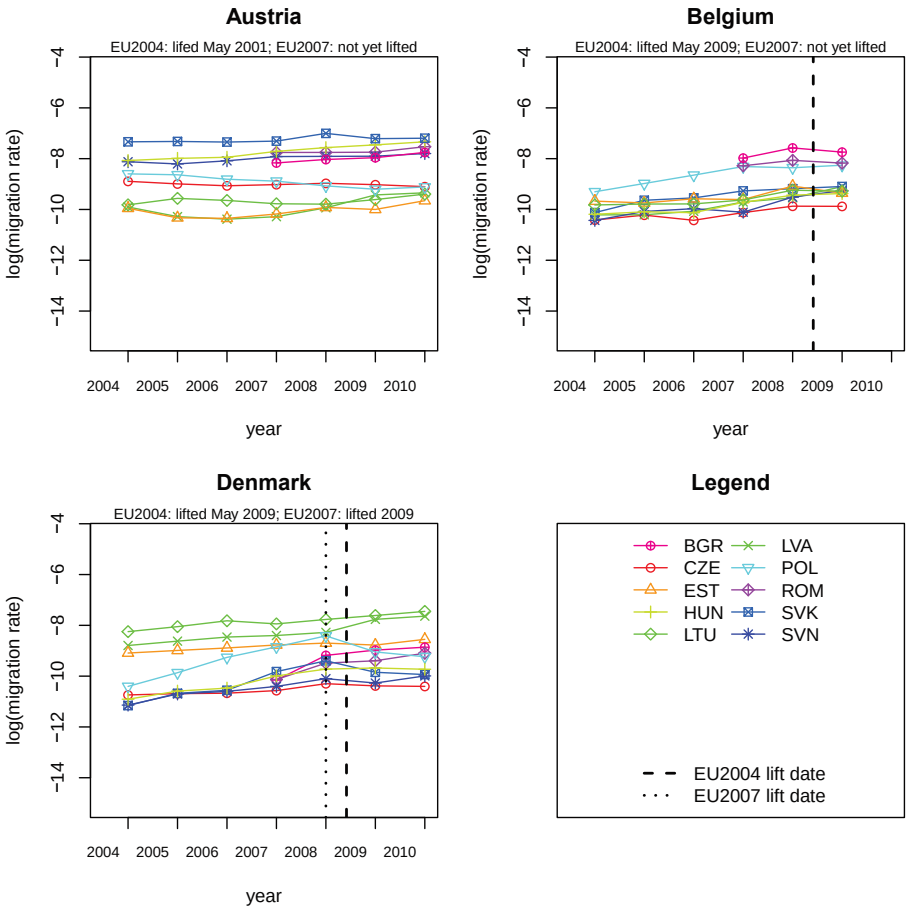

Figure 4 – Immigration rates from 2004-2010. Dotted lines mark dates on which restrictions were lifted for 2004 and 2007 entrants, and destinations are ordered by their 2004 lift-dates.

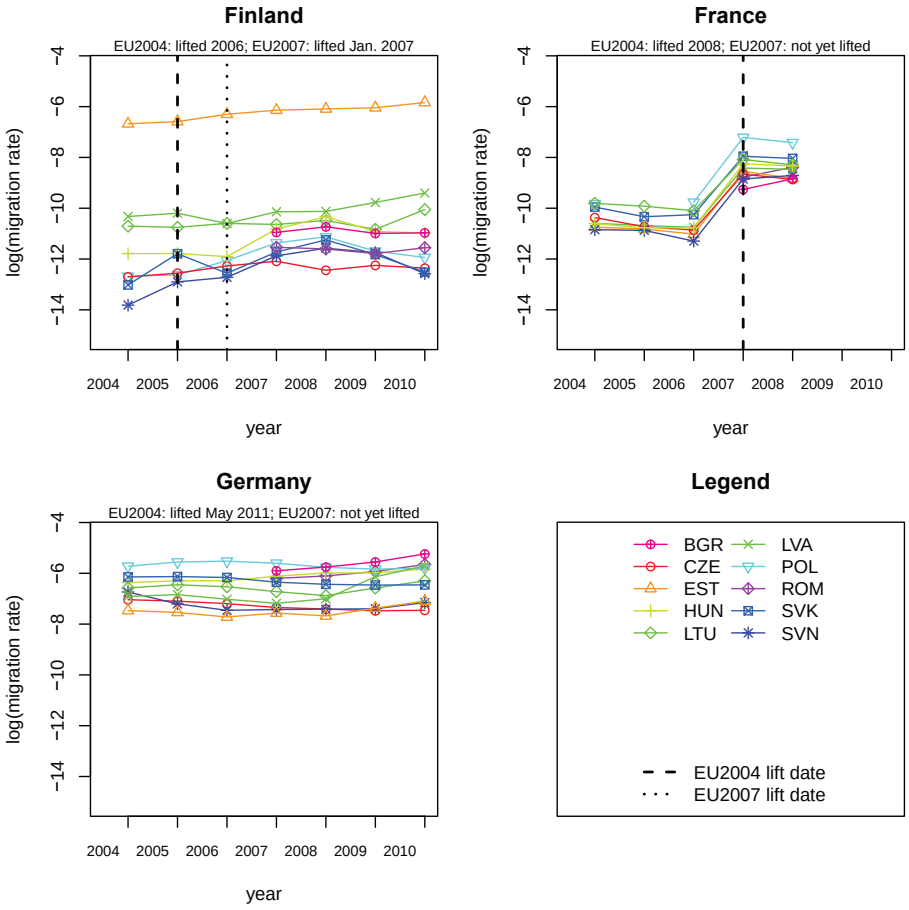

Figure 5 – Immigration rates from 2004-2010. Dotted lines mark dates on which restrictions were lifted for 2004 and 2007 entrants, and destinations are ordered by their 2004 lift-dates.

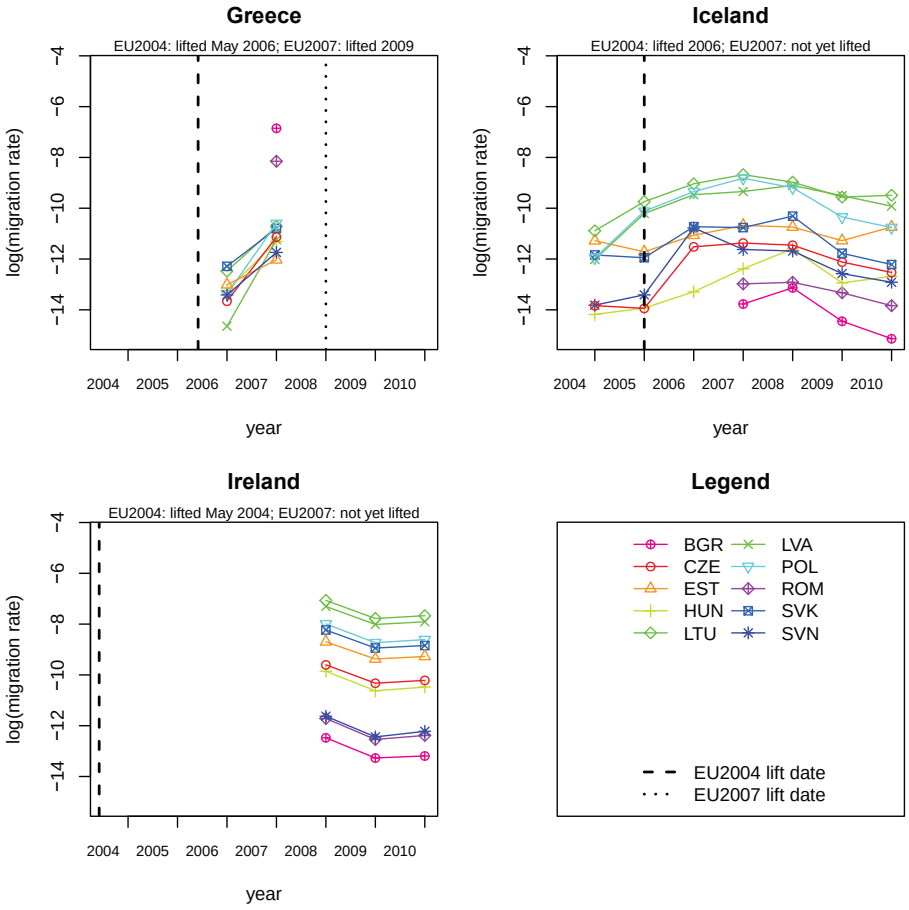

Figure 6 – Immigration rates from 2004-2010. Dotted lines mark dates on which restrictions were lifted for 2004 and 2007 entrants, and destinations are ordered by their 2004 lift-dates.

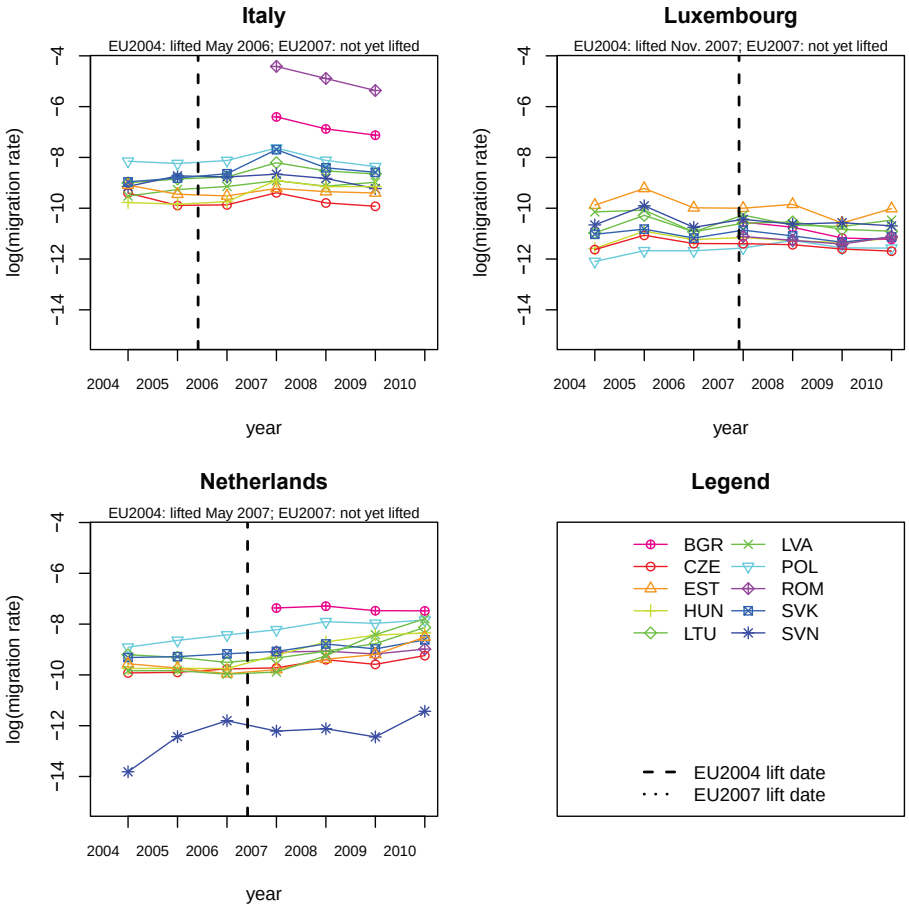

Figure 7 – Immigration rates from 2004-2010. Dotted lines mark dates on which restrictions were lifted for 2004 and 2007 entrants, and destinations are ordered by their 2004 lift-dates.

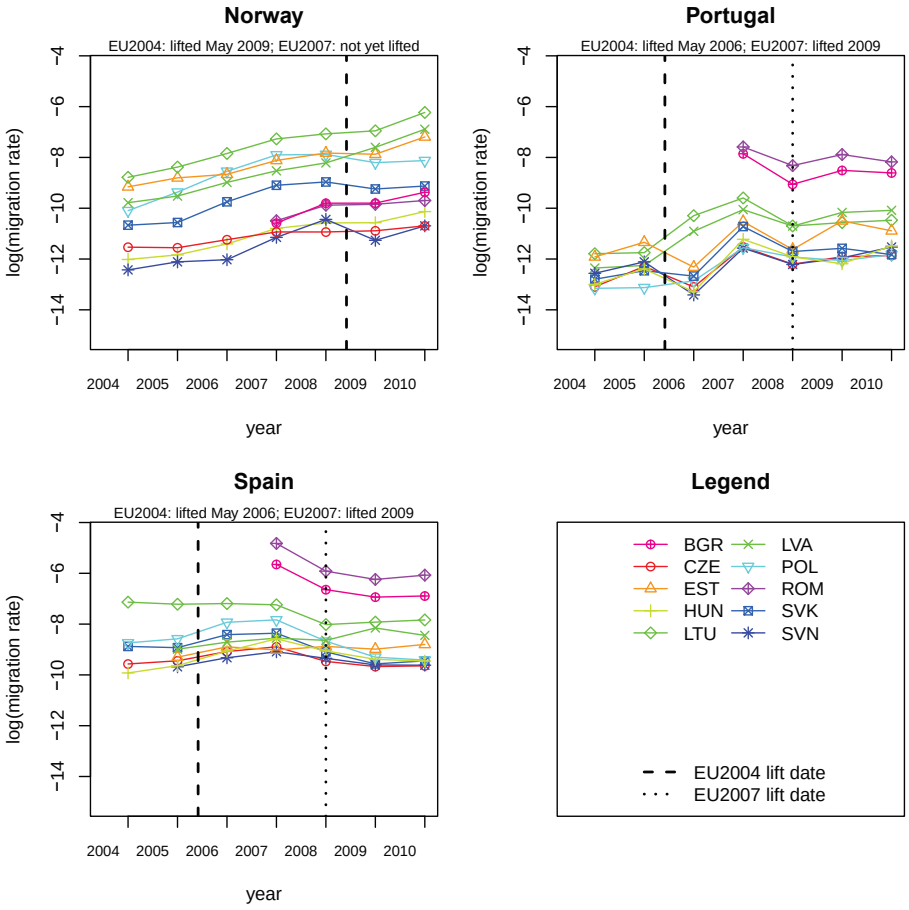

Figure 8 – Immigration rates from 2004-2010. Dotted lines mark dates on which restrictions were lifted for 2004 and 2007 entrants, and destinations are ordered by their 2004 lift-dates.

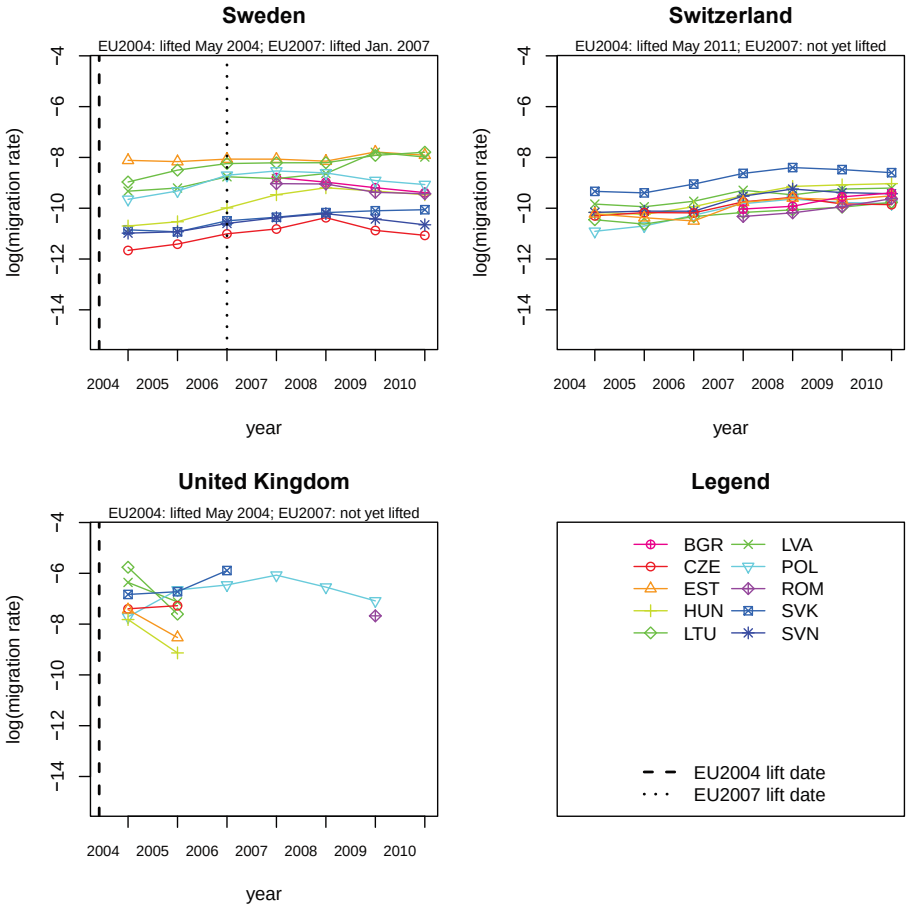

Figure 9 – Immigration rates from 2004-2010. Dotted lines mark dates on which restrictions were lifted for 2004 and 2007 entrants, and destinations are ordered by their 2004 lift-dates.

Appendix B: Model Estimates

Table 4 – Series 1: OLS estimates of migration rates with country-pair and year dummies.

	M1	M2	M3	M4
intercept	-8.80^{***}	-18.21^{***}	-16.98^{***}	-13.16^{**}
	(0.24)	(3.79)	(3.99)	(4.32)
Index_{ijt-1}	$0.05^{\dagger}$	0.07^{**}	0.09^{***}	0.08^{**}
	(0.02)	(0.02)	(0.03)	(0.03)
$\log(\text{GDP}_{it-1})$		0.29	0.41	0.32
		(0.24)	(0.25)	(0.25)
$\log(\text{GDP}_{jt-1})$		0.69^{*}	$0.59^{\dagger}$	$0.53^{\dagger}$
		(0.30)	(0.31)	(0.31)
$\log(\text{unempl.}_{it-1})$		0.49^{***}	0.60^{***}	0.65^{***}
		(0.08)	(0.09)	(0.10)
$\log(\text{unempl.}_{jt-1})$		-0.77^{***}	-0.71^{***}	-0.78^{***}
		(0.12)	(0.12)	(0.13)
welf._{it-1}			-0.03	$-0.03^{\dagger}$
			(0.02)	(0.02)
welf._{jt-1}			$-0.04^{\dagger}$	-0.07^{**}
			(0.02)	(0.02)
$\log(\text{stock}_{ijt-1})$				0.20^{**}
				(0.06)
N	984	984	974	935
R^2	0.95	0.95	0.95	0.96
adj. R^2	0.93	0.94	0.94	0.95
Resid. sd	0.46	0.43	0.43	0.42

Standard errors in parentheses

† significant at $p < .10$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$

Table 5 – Series 1: Negative binomial estimates of migration rates with country-pair and year dummies.

	M1	M2	M3	M4
intercept	7.12***	−0.82	0.06	2.21*
	(0.05)	(0.83)	(0.87)	(0.91)
Index_{ijt-1}	0.04***	0.06***	0.07***	0.05***
	(0.01)	(0.00)	(0.01)	(0.01)
$\log(\text{GDP}_{it-1})$		0.29***	0.40***	0.35***
		(0.05)	(0.05)	(0.05)
$\log(\text{GDP}_{jt-1})$		0.56***	0.48***	0.50***
		(0.07)	(0.07)	(0.07)
$\log(\text{unempl.}_{it-1})$		0.50***	0.60***	0.64***
		(0.02)	(0.02)	(0.02)
$\log(\text{unempl.}_{jt-1})$		−0.86***	−0.82***	−0.89***
		(0.03)	(0.03)	(0.03)
welf._{it-1}			−0.03***	−0.03***
			(0.00)	(0.00)
welf._{jt-1}			−0.03***	−0.05***
			(0.00)	(0.01)
$\log(\text{stock}_{ijt-1})$				0.15***
				(0.01)
theta	6.89***	8.30***	8.30***	9.19***
	(0.08)	(0.10)	(0.10)	(0.12)
N	984	984	974	935
AIC	201806.28	199041.63	196967.53	188751.81
BIC	205445.65	202759.27	200716.46	192488.71
$\log L$	−100159.14	−98760.82	−97715.77	−93603.91

Standard errors in parentheses

† significant at $p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$

Table 6 – Series 2: Negative binomial estimates of migration rates with country-pair and year dummies.

	M1	M2	M3	M4
intercept	7.91^{***}	-0.59	0.44	2.72^{**}
	(0.16)	(0.83)	(0.88)	(0.92)
Index_{ijt-1}	0.03^{***}	0.05^{***}	0.07^{***}	0.05^{***}
	(0.01)	(0.01)	(0.01)	(0.01)
WMCI_{ijt-1}	-0.13^{***}	-0.10^{***}	-0.10^{***}	-0.12^{***}
	(0.03)	(0.02)	(0.02)	(0.02)
$\log(\text{GDP}_{it-1})$		0.31^{***}	0.42^{***}	0.38^{***}
		(0.05)	(0.05)	(0.05)
$\log(\text{GDP}_{jt-1})$		0.58^{***}	0.49^{***}	0.50^{***}
		(0.07)	(0.07)	(0.07)
$\log(\text{unempl.}_{it-1})$		0.49^{***}	0.59^{***}	0.63^{***}
		(0.02)	(0.02)	(0.02)
$\log(\text{unempl.}_{jt-1})$		-0.85^{***}	-0.81^{***}	-0.89^{***}
		(0.03)	(0.03)	(0.03)
welf._{it-1}			-0.03^{***}	-0.03^{***}
			(0.00)	(0.00)
welf._{jt-1}			-0.03^{***}	-0.05^{***}
			(0.00)	(0.01)
$\log(\text{stock}_{ijt-1})$				0.15^{***}
				(0.01)
theta	6.90^{***}	8.31^{***}	8.32^{***}	9.22^{***}
	(0.08)	(0.10)	(0.10)	(0.12)
N	984	984	974	935
AIC	201783.61	199028.76	196952.57	188727.91
BIC	205442.54	202765.97	200721.02	192484.17
$\log L$	-100143.80	-98750.38	-97704.28	-93587.95

Standard errors in parentheses

† significant at $p < .10$; $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$

Appendix C: Labor Market Index

The following table provides the index of labor market access used in the analysis. The index is based on information contained in European Integration Consortium (2009), European Commission (2009), Hailbronner (2007), and Austrian Federal Chancellery (2006). Its construction is described more fully in Palmer (2010).

Table 7 – Index of employment rights.

Country	Category	Period	Score	Comments
Austria	S8	2004-2010	0.30	Retains restrictions on the restrictable 2004 entrants as of end 2009.
Austria	S2	2007-2010	0.30	Retains restrictions on 2007 entrants as of end 2009.
Belgium	S8	2004-2008	0.80	Maintains restrictions on the restrictable 2004 entrants until May 2009.
Belgium	S8	2009-2010	1.00	May 2009: lifts restrictions on the restrictable 2004 entrants.
Belgium	S2	2007-2010	0.80	Maintains restrictions on 2007 entrants as of end 2009.
Denmark	S8	2004-2008	0.95	Maintains restrictions on the restrictable 2004 entrants until May 2009.
Denmark	S8	2009-2010	1.00	May 2009: lifts restrictions on restrictable 2004 entrants.
Denmark	S2	2007-2008	0.95	Maintains restrictions on 2007 entrants until May 2009.
Denmark	S2	2009-2010	1.00	May 2009: lifts restrictions on restrictable 2007 entrants.
Finland	S8	2004-2005	0.95	Maintains restrictions on restrictable 2004 entrants until May 2006.
Finland	S8	2006-2010	1.00	May 2006: Lifts restrictions on the restrictable 2004 entrants.
Finland	S2	2007-2010	1.00	No restrictions placed on 2007 entrants.
France	S8	2004-2005	0.70	Maintains restrictions on restrictable 2004 entrants until March 2006.
France	S8	2006-2007	0.90	March 2006: Begins gradual lifting of restrictions on the restrictable 2004 entrants.
France	S8	2008-2010	1.00	July 2008: Lifts restrictions on the restrictable 2004 entrants.
France	S2	2007-2010	0.90	Dec. 2006: Begins gradual lifting of restrictions on 2007 entrants.

Continued on Next Page...

Table 7 – Continued

Country	Category	Period	Score	Comments
Germany	S8	2004-2010	0.70	Maintains restrictions on restrictable 2004 entrants as of end 2009.
Germany	S2	2007-2010	0.70	Maintains restrictions on 2007 entrants as of end 2009.
Greece	S8	2004-2005	0.80	Maintains restrictions on restrictable 2004 entrants until May 2006.
Greece	S8	2006-2010	1.00	May 2006: Lifts restrictions on the restrictable 2004 entrants.
Greece	S2	2007-2008	0.80	Maintains restrictions on 2007 entrants until Jan. 2009.
Greece	S2	2009-2010	1.00	Jan. 2009: Lifts restrictions on 2007 entrants.
Iceland	S8	2004-2005	0.95	Maintains restrictions on restrictable 2004 entrants until 2006.
Iceland	S8	2006-2010	1.00	2006: Lifts restrictions on the restrictable 2004 entrants.
Iceland	S2	2007-2010	0.95	Maintains restrictions on 2007 entrants as of end 2009.
Ireland	S8	2004-2010	1.00	Does not impose restrictions on 2004 entrants.
Ireland	S2	2007-2010	0.55	Maintains restrictions on 2007 entrants as of end 2009.
Italy	S8	2004-2005	0.55	Maintains restrictions on restrictable 2004 entrants until May 2006.
Italy	S8	2006-2010	1.00	May 2006: Lifts restrictions on the restrictable 2004 entrants.
Italy	S2	2007-2010	0.55	Maintains restrictions on 2007 entrants as of end 2009.
Luxembourg	S8	2004-2007	0.80	Maintains restrictions on restrictable 2004 entrants until Nov. 2007.
Luxembourg	S8	2008-2010	1.00	Nov. 2007: Lifts restrictions on the restrictable 2004 entrants.
Luxembourg	S2	2007-2010	0.80	Maintains restrictions on 2007 entrants as of end 2009.
Netherlands	S8	2004-2006	0.80	Maintains restrictions on restrictable 2004 entrants until May 2007.
Netherlands	S8	2007-2010	1.00	May 2007: Lifts restrictions on the restrictable 2004 entrants.
Netherlands	S2	2007-2010	0.80	Maintains restrictions on 2007 entrants as of end 2009.
Norway	S8	2004-2010	0.80	Maintains restrictions on restrictable 2004 entrants as of end 2009.

Continued on Next Page...

Table 7 – Continued

Country	Category	Period	Score	Comments
Norway	S2	2007-2010	0.80	Maintains restrictions on 2007 entrants as of end 2009.
Portugal	S8	2004-2005	0.80	Maintains restrictions on restrictable 2004 entrants until May 2006.
Portugal	S8	2006-2010	1.00	May 2006: Lifts restrictions on the restrictable 2004 entrants.
Portugal	S2	2007-2008	0.80	Maintains restrictions on 2007 entrants until Jan. 2009.
Portugal	S2	2009-2010	1.00	Jan. 2009: Lifts restrictions on 2007 entrants.
Spain	S8	2004-2005	0.80	Maintains restrictions on the restrictable 2004 entrants until May 2006.
Spain	S8	2006-2010	1.00	May 2006: Lifts restrictions on the restrictable 2004 entrants.
Spain	S2	2007-2008	0.80	Maintains restrictions on 2007 entrants until Jan. 2009.
Spain	S2	2009-2010	1.00	Jan. 2009: Lifts restrictions on 2007 entrants.
Sweden	S8	2004-2010	1.00	Does not impose restrictions on 2004 entrants.
Sweden	S2	2007-2010	1.00	Does not impose restrictions on 2007 entrants.
Switzerland	S8	2004-2010	0.55	Maintains restrictions on restrictable 2004 entrants as of end 2009.
Switzerland	S2	2007-2010	0.55	Maintains restrictions on 2007 entrants as of end 2009.
UK	S8	2004-2010	1.00	No restrictions placed on 2004 entrants.
UK	S2	2007-2010	1.00	Maintains restrictions on 2007 entrants as of end 2009.

Note: The index quantifies labor market access given in each destination state to residents who are citizens of the new EU members states. S8 refers to the 8 sending states that joined the EU in 2004 subject to transitional labor market restrictions (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia); S2 refers to the 2 that joined in 2007 (Bulgaria and Romania).

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