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INTERNATIONAL MIGRATION REVIEW

Comparing Immigration Policies: An Overview from the IMPALA Database[1]

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This paper introduces a method and preliminary findings from a database that systematically measures the character and stringency of immigration policies. Based on the selection of that data for nine countries between 1999 and 2008, we challenge the idea that any one country is systematically the most or least restrictive toward

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admissions. The data also reveal trends toward more complex and, often, more restrictive regulation since the 1990s, as well as differential treatment of groups, such as lower requirements for highly skilled than low-skilled labor migrants. These patterns illustrate the IMPALA data and methods but are also of intrinsic importance to understanding immigration regulation.

An understanding of the character and stringency of immigration policies over time and space is crucial to debates about the causes, effects, and governance of international migration. Despite many important measurement efforts, there are no comprehensive, cross-nationally comparable data on immigration policies and no established method for classifying, measuring, and comparing immigration laws and policies over countries and time. This is a major problem for both basic and applied research: It is extremely difficult to make precise and meaningful empirical claims about the orientation, roots, or implications of immigration regulations in a comparative or historical perspective.

This paper presents a method and preliminary data to address this problem by measuring immigration regulations with a particular focus on admissions policies and citizenship. Both the method and data come from the "International Migration Law and Policy Analysis" (IMPALA) database project, a collaborative, interdisciplinary initiative to classify and measure immigration policy by mapping "tracks of entry" associated with economic migration, family reunification, asylum and humanitarian

[1]The large project undergirding this article demands a longer-than-customary acknowledgment. We thank the anonymous reviewers and IMR Editor, Ellen Percy Kraly, for their insights on the article, and also and particularly the research colleagues and coders of the IMPALA project, especially: Suzanne Challen, Anna Antipova, Carolyn Armstrong, Timnah Baker, Diana Anca Bratean, Bénédicte Souy-Cour, Daniel Ghezelbash, Antonia Margherita , Maxime Molenaar, Judith Rosina van Ingen, Wouter Schakel, Tijn Erkamp, Kara Ross Camarena, Krysta Moulton, Raquel Moreno Marin, Daniel Sills, Ilona Bannister, Adriana Detrell Mandado, Catherine Robinson, Micaela Ceballos, Hannah Martin and Lisa Wang. Funding has been provided by: the University of Amsterdam's Amsterdam Institute for Social Science Research; the University of Sydney's School of Social and Political Science and Faculty of Law; the Harvard Weatherhead Institute of International Affairs; the Ian Potter Foundation; the Australian Department of Immigration and Citizenship; the Australian Research Council; the British Academy; the European Union Framework 7 Program PEGGED; the London School of Economics and Political Science including STICERD; Barrow Cadbury Trust; the Madrid Centro Internacional de Estudios Económicos y Sociales; the University of Luxembourg and National Research Fundof Luxembourg.

migration, and student migration, as well as acquisition of citizenship. Each country's laws and regulations with respect to such tracks are coded annually using a common standardized list of questions about the character of such regulations, with coding decisions based on transparently citing written laws and regulations. The resulting data provide comparable, valid, and transparent measures of immigration regulation that capture the nuanced detail of immigration law but also provide a basis to estimate the restrictiveness of such regulation at the level of the country, year, and particular aspect of migration and migration law.

The paper explains the methodology of this IMPALA approach to measuring admissions policies, and gives an empirical overview of such policies based on data from the first phase of the project. These data involve the coding of nine sample countries between the years 1999 and 2008: Australia, France, Germany, Luxembourg, the Netherlands, Spain, Switzerland, the United Kingdom, and the U.S. The empirical discussion, here, focuses on immigration regulations in those countries and years with respect to economic migration, family migration, humanitarian/asylum migration, student migration, and citizenship acquisition. We gauge the regulatory complexity, or density, in the number of distinct tracks of entry in these categories of immigration law. Such regulatory density varies substantially across countries, migration categories, and time and is important to understanding the character of immigration laws that steer or deter migration. We also look more closely at key regulatory tracks of economic, family, and humanitarian/asylum migration. Focusing on a subset of such tracks, we provide examples of the fine-grained coding of laws possible with the IMPALA method, but also present a simple aggregation of such coding as transparent and plausible measures of restrictiveness in selected countries.

The empirical overview is not just meant to clarify the character and promise of the measures of migration regulation provided by the IMPALA database, but to reveal important patterns across countries, time, and admissions track. We do so, here, by working inductively, rather than in light of any particular expectations about such patterns. And we do so with respect to our modest sample of countries, using the simplest of methods for aggregating the IMPALA data. The resulting overview reveals substantial variation in the character and apparent restrictiveness of immigration regulations. First, we see large differences across countries in the complexity and restrictiveness of immigration regulations. But those differences and trends vary widely from one category of admissions to

another, complicating any simple discussion of countries being generally most or least restrictive in their immigration laws. Second, we see an increasing number of distinct tracks of entry in migration regulations that entail heightened regulatory complexity between 1999 and 2008, but a mixed pattern of increases and decreases in restrictiveness across different categories and countries over the same period. Third and most importantly, we observe highly variable and uneven treatment of particular groups of migrants within a broad migration category in any given country and year, such as easier entry in higher-skilled than lower-skilled tracks of entry, and similarly easier treatment for children than for partners in family reunification.

Our overview of the IMPALA methodology and these first-phase results proceeds in three sections. The first clarifies the need for better and more comparable data on immigration laws and policy. The second section overviews the design and method of the IMPALA database to address that need. The third and most substantial section presents the descriptive results based on the first phase of data, focusing inductively and first on the regulatory density or complexity across countries, time, and category of migration law and then focusing on more regulatory detail for particular tracks in the categories of *economic migration* (in particular, high-skilled and low- and semi-skilled migration tracks), *family migration* (in particular, partner and child reunification), and *humanitarian migration* (in particular, asylum regulation). A final section concludes this contribution.

EXISTING SCHOLARSHIP AND THE RESEARCH PROBLEM

There are important scholarly and practical controversies about the nature and impact of immigration policy, particularly about the origins of admissions policies and their implications for levels of immigration and subsequent migrant integration. Political scientists and political economists have formulated competing theoretical approaches to explain actual or preferred immigration policies. Some scholars focus upon the real or expected economic impacts of past immigration, such as fears about labor-market competition (Borjas 1999; Scheve and Slaughter 2001; Mayda 2006). Others emphasize the role of ethnic tolerance or cosmopolitanism (Espenshade and Calhoun 1993; Citrin et al. 1997; McLaren 2001; Hainmueller and Hiscox 2010). Still others focus on cultural and ethnic differences or perceived threats to traditional culture and values, and a decline of "social capital" and trust, that may generate demands for more

restrictive immigration policies (Burns and Gimpel 2000; Fetzer 2000; Chandler and Tsai 2001; Huntington 2004; Dustmann and Preston 2007; Putnam 2007). And some researchers posit that historical experience with diversity and colonialism influence conceptions of difference and make immigration more politically acceptable (Freeman 1979; Olzak 1992; Cornelius et al. 2004). In such light, immigration policy may reflect historical experiences with diversity, and change with shifts in ideology and the domestic-political or organizational strength of extremist groups advocating intolerance (Kitschelt 1995; Joppke 1999; Givens and Luedtke 2004). Still others focus on immigrants' use of public welfare (e.g. unemployment insurance) and taxation, yielding fears from voters bearing fiscal burdens of immigration (Boeri, Hanson, and McCormick 2002; Hanson, Scheve, and Slaughter 2007; Facchini and Mayda 2009).

In addition to attempts to explain the origins of immigration policies, there is also a rapidly growing literature about the effects of these same policies. Demographers, economists, political scientists, and sociologists have all developed theories about such effects (Boucher and Gest 2014). A pressing issue is the extent to which policies can affect the size and composition of migrant flows. It is already well established that migrant flows are determined by factors affecting the supply of different types of immigrants seeking to enter recipient countries, including network effects among migrants, and economic and political conditions in sending countries (Beine, Docquier, and Rapoport 2007; Grogger and Hanson 2011). But policies themselves are also likely key factors. And by affecting the size and composition of migration flows, admissions regulations can have profound consequences in recipient countries.

Of course, immigration policies also directly affect the living and working conditions and legal rights of immigrants, as well as relations between immigrant and native populations and divisions within society more generally. Recent scholarship has explored how particular immigration rules and social-policy provisions influence rights, labor-market incorporation, and social position of immigrants (Morissens and Sainsbury 2005; Sainsbury 2006; Heath and Cheung 2007; Ruhs and Martin 2008; Ruhs 2011). For instance, Heath's analysis of the "selectivity" of admissions policies and ethnic penalties among second-generation immigrants finds that those whose origins lie in guestworker-type programs within less selective countries, such as Austria, Belgium, and Germany, were more likely to be unemployed and to have less upward social mobility (Heath 2007).

Given how immigration itself can affect the economic position of natives and migrants with respect to economic insecurities and working practices (Burgoon and Raess 2011; Burgoon 2014), the effects of immigration policies extend to welfare states and other public goods. More broadly, immigration, and admissions policies in particular, may influence cultural and ethnic diversity, social capital, political participation, and partisan alignments (Bauer, Lofstrom, and Zimmerman 2000; Putnam 2007). Immigration policies not emphasizing cultural integration may reduce trust and political participation (Putnam 2007). Legal researchers have highlighted the impact that immigration policies have on the human rights of migrants and on social cohesion (Rubenstein 2002; Bosniak 2006; Crock 2007; Dauvergne 2007).

One of the striking features of this entire literature is that its desire to make claims that hold across countries and over time outstrips its ability to do so. Despite some original and pioneering contributions, this emerging area of research is still hampered by the paucity of valid, reliable, and cross-nationally comparative data on immigration laws and policies.

For the most part, researchers comparing immigration policies have relied upon qualitative evidence from small *N* studies that draw on a few countries (Hammar 1985; Brochmann and Hammar 1999; Watts 2002; Meyers 2004). However, an emerging strand of research has begun to develop quantitative measures of immigration policies to address important controversies about their historical development and persisting cross-national differences. Timmer and Williamson (1996, 1998), for instance, focus on broad measures of stringency in legislation in the late 19th and early 20th century; the Migration Integration Policy Index focuses on policies regulating integration (Niessen et al. 2007); Kogan (2007) examines "relative selectivity" surmised from immigration flows and their native counterparts;Ortega and Peri (2009), Mayda (2010), and de Haas, Natter, and Vezzoli (2014) gauge broad legislative reforms over time within countries; Bélot and Ederveen (2012) track cultural barriers to immigration; and (Ruhs 2011) measures policies regulating the social rights of migrant workers. Other efforts have examined particular features of policy, including asylum and refugee policies, particularly in Europe (Thielemann 2003, 2004, 2006; Hatton 2004, 2009; Neumayer 2004; Lowell 2005; Cerna 2008; Czaika 2009), and citizenship policies (Waldrauch and Hofinger 1997; Howard 2005, 2006, 2009; Koopmans et al. 2005; Helbling 2008; Janoski 2010; Koopmans, Michalowski, and Waibel 2012; EUDO 2011). These contributions generate valuable information on the countries

that have implemented more or less restrictive admissions, integration, and citizenship regulations at particular swaths of time.

However, existing studies have important measurement limitations that hamper more systematic and comprehensive comparisons over time and space (Bjerre et al. 2014; Gest et al. 2014). First, most measurement efforts are very compartmentalized in their focus – using disparate methodologies to examine laws for particular types of immigration, such as asylum or (an aspect of) economic migration, or border protection. This clearly hinders comparison across admissions policies generally. Second, most studies are very limited in their coverage with respect to space and/or time, focusing on small cross-sections of countries or on circumscribed and/or widely spaced time periods. Third, more systematic measures that have been developed to allow systematic study for a number of countries and large periods of time (Ortega and Peri 2009; Mayda 2010; de Haas, Natter, and Vezzoli 2014) focus on overtime reforms vis a vis a given country's past policy, providing little leverage for systematically gauge policy stringency across countries at a given point in time.

The remaining problems are more fundamental. Fourth, many measures use coding methods that may suffer from unreliability or bias. The questions or aspects of regulations being coded in many measures tend to be highly aggregated, combining and smoothing-over many disparate features of regulation in ways that ignore crucial information (Coppedge et al. 2011). For instance, some may mix de jure law with de facto implementation, and others may conflate policy outputs with policy outcomes, while a few rely on categorizations that are themselves highly ambiguous, such as that of "highly skilled" immigrants (McGovern 2013). Fifth and finally, the coding of many possible combinations of aggregation and weighting across the component questions that generate stringency indices is usually developed non-transparently, such as via expert survey, even though slightly different choices could yield much different outcomes and findings. All these problems are threats to internal and external measurement validity and reliability. In short, the lack of comprehensive, cross-nationally comparable data on immigration policies or systematic methods for gauging restrictions severely constrains scholarship and debate about immigration policies.

IMPALA DATABASE PROJECT

The IMPALA database project seeks to develop and analyze precisely such comprehensive, comparable data on immigration policy and thereby

promises to provide a foundation to address fundamental controversies about the nature, origins, and effects of immigration policies and laws. IMPALA has developed a transparent and accessible method for compiling systematic, detailed information about immigration policy and laws that is comparable across countries, immigration issues, and time.[2]

The basic unit of the IMPALA database is the *entry track*. A given entry track corresponds to a specific way of entering the country. Different entry tracks are distinguished on the basis of the purpose of migration as well as on various characteristics of the applicant. In particular, tracks get identified for any situation where possible applicants receive distinct treatment in the law, based on any given characteristic of that applicant's profile evoked in the wording of the law or regulation. Such identification of a track emerges from the coding of the pre-designed set of questions we use to describe treatment in existing already-identified track(s) of entry (Challen 2014). For instance, a child who migrates to France in order to reunify with a parent who is a third-country national (as opposed to a European citizen) entails a separate entry track. A more specific example of a track of entry is the H-1B visa offered in the U.S. under the Immigration and Nationality Act of 1965 which allows employers to temporarily sponsor and employ foreign workers in specialty occupations. The concept of entry track is close to the concept of a visa but can be less inclusive of visas, with multiple tracks per visa (Ibid).

The dataset focuses on formal and explicit immigration laws and regulations – de jure rules, not de facto implementation. The coded laws and regulations include the most important categories of immigration entry, which we divide into distinct legal tracks clustered in five categories: (1) economic migration; (2) family reunification; (3) asylum and refugee immigration; (4) students; and (5) acquisition (and loss) of citizenship.[3] Within these categories, the number of tracks varies substantially

[2]Due to the large-scale and interdisciplinary expertise needed to develop such information, the methodology and dataset is developed by ongoing collaboration between teams of economists, lawyers, sociologists, and political scientists at five universities (co-PIs in parentheses): Harvard University (Michael Hiscox and Justin Gest); University of Luxembourg (Michel Beine and Hillel Rapoport); University of Sydney (Mary Crock); the University of Amsterdam (Brian Burgoon); and the London School of Economics and Political Science (Patrick McGovern and Eiko Thielemann).

[3]The IMPALA consortium is also developing data both on bilateral agreements between countries with respect to migration rules and on irregular migration and its control. The present overview will not report on these data.

over time and across countries. Table 1 overviews these categories and tracks. Based on the countries and years already coded, the number of tracks per category ranges between 1 (student category in Spain) and 64 tracks (Australian economic category), and in a given year, the number of tracks per country ranges between 40 and 143 tracks in total.

For any given track, coders examine national legislation, tracing statutes, and regulations over time to identify rules for each year. Primary text legislation is checked against each country's annotated texts and electronic resources for legal scholars and professionals. Additional documentary sources include government department and agency publications, international conventions, reports from international organizations, and regional and bilateral agreements. Important in the latter are major bilateral agreements that confer preferential treatment upon migrants coming from a particular origin-country.

Using all such sources, coders identify the statutes and regulations that affect the number and types of immigrants that can enter a country, the conditions under which immigrants live and work, and their legal rights. In most cases, the questions and associated coding simply indicate the presence or absence of specific characteristics or restrictions (e.g. whether asylum seekers are detained while applications are pending). In other cases, the coding gathers non-binary quantitative data on variables such as number of admissions allowed each year for specific applicants, the duration of stay allowed, waiting periods, fees, and minimum and maximum fines and prison sentences for illegal activities involving

TABLE 1
RELEVANT IMPALA CATEGORIES

	Economic Migration	Family Migration	Humanitarian Migration	Student Migration	Citizenship
Migration group targeted	Workers, investors, entrepreneurs	Partners, children, parents, and extended family members	Asylum seekers, refugees, subsidiary protection, temp.-prot., dom.-violence, human traffic, medical cases	University, school, exchange, vocational and language students	All: acquisition and modes of loss of naturalization
Tracks per country (in 2008)	15–64	16–46	6–43	4–10	13–28
Questions per track	9 country level 81 track based	77	116 country level 186–220 track based	51	3–43

undocumented immigrants. A key feature of the IMPALA coding system is that questions vary by track and type of immigration, allowing later users of the data to construct track-specific measures best suited to their research questions. And fundamental to the IMPALA methodology is that every decision about every coded question with respect to every track, within any given country-year, refers to the sentences or sections of original legal sources. As the last column of Table 1 summarizes, the questions gauging distinct features of a given law can number in the hundreds for a given track and year.

This method is designed to make the database – more than expert surveys and other attempts to gauge policy trends – transparent, replicable, and customizable by future researchers. The resulting data involve systematic cross-nationally and temporally comparable information on hundreds of features of law relevant to any given track within any given category of immigration. These features of the IMPALA methodology should help ensure that the coding of detailed provisions provides reliable and valid measures of immigration law, policy, and regulation. The promise of reliability resides principally in the coding of identifiable tracks of entry, and pre-defined and clearly worded questions, focused on, and with explicit citation of, de jure regulation. The promise of validity resides principally in the coding of the detailed questions tapping into the many aspects of regulation of interest to an interdisciplinary user, allowing users to consult or aggregate such detail to accurately gauge the stringency of or the varying treatment of migrant groups in the regulations.

The IMPALA project will develop illustrative examples of aggregating the detailed data into measures of restrictiveness or stringency in admissions policies. One straightforward method involves scaling answers to questions relating to restrictiveness as taking-on higher values for greater stringency. For instance, the binary yes/no questions are scaled as 1 for higher stringency and 0 for less.[4] The simplest measure of stringency, to be discussed below, is the sum of the values in a given track–country–year, ignoring questions whose implications for stringency are less obvious or are non-binary, and weighting all included aspects of law and questions equally. Such

[4]Some questions are coded "required" (1 for higher stringency), "considered" (0.5 for higher stringency), and "no" (0 for less stringency). Finally, some questions involve permits coded on a 4-point scale: permanent permit (–1 least stringent), probationary permanent permit (–0.5 less stringency), temporary permit with the prospect of being eligible to apply for transition to a related permanent permit (0.5 stringency), and temporary permit without eligibility to transition to a related permanent permit (1 stringency).

an approach is only the simplest and certainly not the most accurate method of aggregation and weighting. Indeed, the IMPALA project is developing various algorithms for such aggregation and weighting. Seeing even the simplest aggregation, however, clarifies how the IMPALA data can be leveraged to systematically measure restrictiveness and bias in policies.

The planned national coverage of the IMPALA database encompasses all economies in the Organization of Economic Cooperation and Development (OECD), except those with negative net immigration (i.e., net emigration) over the past two decades. This leaves 26 countries: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland, the United Kingdom, and the U.S. These countries receive the most international migrants and include the five receiving the most immigrants over the past 50 years: the U.S., Canada, Australia, the United Kingdom, France, and Germany. Furthermore, given the emphasis of the IMPALA project on the way countries sort migrants, these countries are also of interest because of the importance of the skilled immigration. Based on data from Docquier and Marfouk (2006) on bilateral migration stocks by education level,[5] we can say that the IMPALA countries represent about half of the total immigration around the world (about 110 millions registered migrants in 2000 in the dataset). And our selection of countries captures about 70 percent of the global immigration of skilled workers.[6] This is important since the project aims at capturing not only restrictive policies in terms of global immigration, but also policies targeting certain categories of immigrants.

In addition, the IMPALA project will code European Union supranational regulations parallel to the national laws of member states. Such cross-national and EU coverage provides substantial leverage to examine the core theoretical questions discussed above, as the countries exhibit

[5] *See* Docquier and Marfouk (2006), update of release 2.1. of April 2013. This dataset provides the bilateral stocks for three education levels for all countries of origin (203 countries) and most destinations (194 countries). The initial version included only 30 destinations. We use the last available year, 2000.

[6] Furthermore, their definition of migrants (foreign-born residents) may underestimate the economic importance of immigration. For instance, Luxembourg has the highest proportion of foreigners, with roughly 60 percent of workers coming from abroad. This estimate does not include cross-border workers from neighboring countries who represent 25 percent of the total labor force.

widely varied economic, social, and institutional settings. While the consortium intends to code all years between 1960 and the present, we prioritize coding between 1980 and 2010, since documentation for earlier years tends to be incomplete.

At this time of writing, we have completed the initial pilot study phase of the IMPALA project. This phase involved the development and synchronization of tracks, questions, and coding and the development of methods of international, inter-coder storage, communication, and dissemination of coded laws and regulations. The first phase of coding has focused on economic, family, student, and humanitarian migration in Australia, France, Germany, Luxembourg, the Netherlands, Spain, Switzerland, the United Kingdom and the U.S., and the years 1999 and 2008. In the coming year, we plan to complete and in phases make available the methodology, questionnaires, and coding for these pilot countries, years, and tracks.[7] With continued funding, we plan to continue expanding the database. But our release of the coding methodology and track-based questions allow other users to code countries and years of their choosing, on their own.

PATTERNS OF POLICY COMPLEXITY AND RESTRICTIVENESS

Based on the first phase of data, we can measure diverse immigration regulations across countries with different legal systems in a period that was believed to be particularly turbulent. Much of the variation is too detailed and specific to policies, countries, and years to be usefully highlighted here. We can, however, focus on broad cross-national, cross-category, and temporal patterns in the first phase of data with respect to the number of distinct legal tracks that capture regulatory complexity and with respect to more nuanced coding of features of such tracks that allow simple measures of restrictiveness. We begin with the broadest of patterns and then consider more detail with respect to three categories of migration: economic migration, family migration,

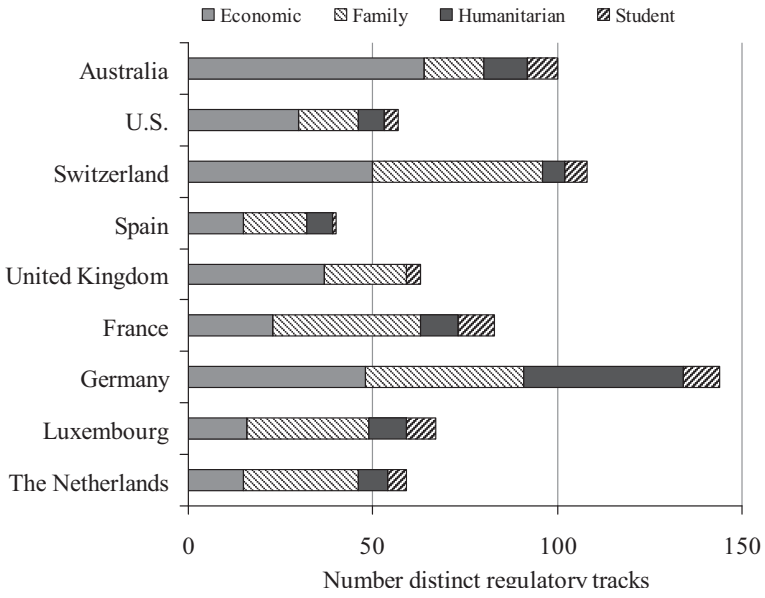
[7]All the data, questions, and coding for this article will be available by publication at www.impaladatabase.org. With publication, we will also release the full questionnaire and methodological overview (for all tracks), inviting scholars to code other countries and years not already completed by the IMPALA team. We expect to make all the additional pilot data available after an embargo period.

and asylum/humanitarian migration. The story to emerge from the comparisons is threefold: big differences between countries that vary across categories of migration; trends toward more regulatory complexity; and biased treatment for particular groups within categories of migration.

Regulatory density and complexity

In Figure I, we summarize the substantial variation across countries in the number of distinct legal tracks that regulate migration within each country.[8] Such density of tracks is intrinsically relevant as a measure of regulatory complexity. The increase in the number of tracks over time indicates a move toward a more differentiated and particularistic approach to

Figure I. Tracks by Country and Entry Category, 2008



[8]These are the track counts as of coding dated to September 2014. For the EU countries, the reported tracks involve entry tracks for migrants coming from another European country and from outside the EU. The latter migrants are called third-country nationals; these are separate tracks since they imply distinct legal treatment. For the UK, the figure includes only track counts for the economic, family, and student categories, as the other categories are not yet completed.

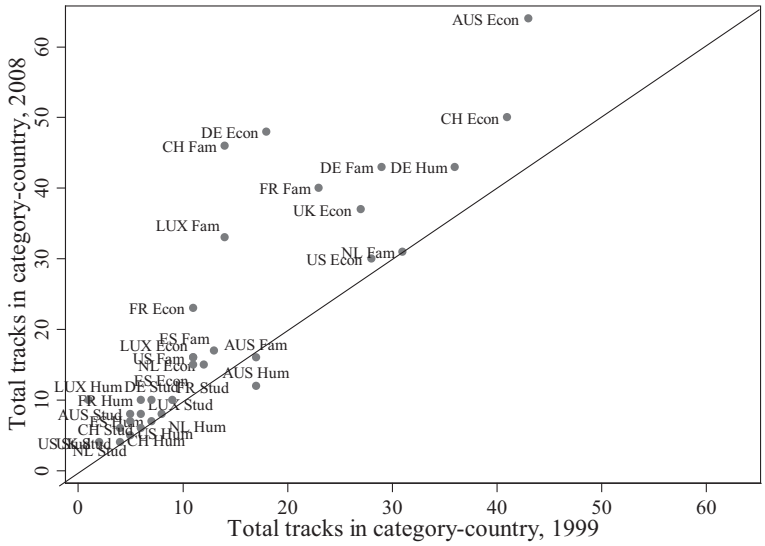
admissions that is based on selected characteristics such as skill shortages at the national level, employment within a multinational firm at the organizational level, and occupation or type of family tie at the personal level. They may also be the outcome of an adjustment to external legal constraints such as EU regulation.[9]

As is clear from the figure, variation in the number of tracks within a country is as great across categories as it is between countries. In the economic category, for instance, all countries make distinctions in visa and work-permit groupings that distinguish potential workers or investors, and many countries make distinctions between general labor migrants and more highly skilled workers. Many also offer special entry to very narrowly defined skill groups, like professional athletes, entertainers, and artists. But the complexity of such distinctions among the pilot countries is by far the greatest in Australia, and the least fragmented or complex in Spain and the Netherlands. In the category of family reunification, on the other hand, Australia has the fewest tracks, with Germany featuring the most distinct categories of entry. In this category, the most important distinctions are between various kinds of partners, children, parents, and extended family who may be admitted. The humanitarian and student categories of entry, as the figure captures, have the fewest distinct tracks and least variation across the sample countries. Although not easy to discern from the figure, the total number of distinct tracks tabulated across all five categories suggests that Germany has the most complex set of migration regulations (143 tracks in 2008) and Spain the least (43 tracks).

To capture trends in such density, Figure II shows how the number of tracks has gone up in most countries and categories between 1999 and 2008. The horizontal axis of the figure measures the number of distinct tracks in each country–category of migration in 1999, with the scale ranging from 0 to 64 tracks of entry. The vertical axis measures the same, on the same scale, for 2008. The diagonal line captures, hence, parity of regulatory complexity in the 2 years of comparison. In most country–categories, the number of tracks has increased in this 10-year period. The most substantial increase has taken place with respect to family migration tracks

[9]For instance, Luxembourg introduced reforms into economic migration in 2008 to comply with European directives. Before 2008, economic migration involved only three work permits, A, B, and C. With the 2008 reform, these were divided into more precise categories such as salaried workers, researchers, and sportspersons. This allows us to target more precisely certain categories of workers.

Figure II. Distinct Tracks per Country-Category, 1999 and 2008



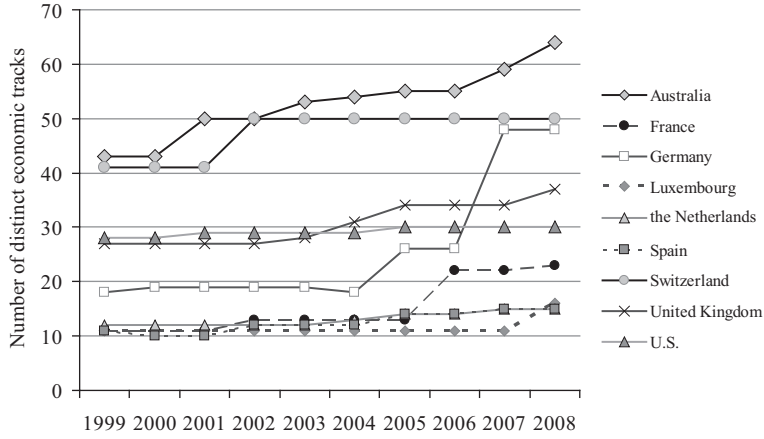
in Luxembourg.[10] The number of tracks remained the same in a few country–categories, captured by those on the diagonal line. Modest decreases in the number of tracks are evident in Australia's family and humanitarian categories.

Economic category: high-skilled versus low-skilled migration

Looking more closely at the economic tracks reveals more about regulatory complexity and provides a portrait of immigration restriction across different kinds of economic migration. As can be surmised from the figures above, the economic category harbors many distinctive legal tracks in the sample countries (e.g. 64 in Australia alone). Figure III below shows the yearly variation in such regulatory complexity across countries. The increase in the number of distinct tracks occurs episodically by country, with longer periods of constancy punctuated by changes via legislative reforms. Most of the change appears to take place in the mid-to-late 2000s. Such quantification obscures important qualitative developments. To take but one

[10]For instance, the increase in tracks involving family reunification for Luxembourg clearly entails heightened complexity, as each family reunification track depends on the sponsor/migrants as well as his/her status.

Figure III. Economic Tracks by Country, 1999–2008



example, the visa classes introduced in the Netherlands during the period are for highly qualified workers, intra-corporate transferees, and academic scholars. The new tracks also reflect what appears to be an emerging trend among policymakers, namely separating high-skilled labor immigration from unwanted labor migration. Seeing such detail, however, requires more information about specific tracks and their regulation.

Such detail can be glimpsed by considering the regulatory characteristics of high-skilled tracks in the sample countries. As stated above, such characteristics are captured by the coded answers to many dozens of questions about the legal regulations applying to this and other economic tracks (nine country-level questions or characteristics and 81 track based). Table 2 below lists 10 of these questions for the high-skilled migration tracks in 2008. In some countries, this grouping involves a single entry track, but a few countries feature two or more distinct tracks that pertain to skilled professionals – for instance Germany's treatment of "IT professionals (third-country nationals or TCN)," and general "highly qualified personnel (TCN)" as separate tracks.[11] Where there is more than one track in the "high-skilled" sub-category, Table 2 reports the average coded

[11]For EU members, this section focuses on tracks involving TCN, disregarding for now economic tracks relevant to applicants from other EU countries. This facilitates comparison with countries like the U.S. or Australia that are not integrated into regional institutions in the same way. In turn, the level of reported stringency for European countries here should be seen as an upper-bound estimate of stringency.

TABLE 2
REGULATIONS FOR HIGHLY SKILLED ECONOMIC TRACK(S) (SAMPLE QUESTIONS), 2008

Sample questions	Australia	France	Germany	Luxembourg	The Nether lands	Spain	Switzerland	United Kingdom	U.S.
Is proficiency in the official language(s) of the receiving country considered? (yes=1)	1	0	0	0	0	0	1	0.75	0
Is proof of the entrants financial resources considered? (yes=1)	0	1	1	1	0.5	0	1	0.5	0.75
Is having medical insurance considered? (yes=1)	0	0.67	1	1	1	0	1	0	0
Can the permit be extended/renewed by the same sponsor/employer only? (yes=1)	1	0.33	1	0	0	0	0	1	0
Can the entrant engage in employment while the application is being processed? (no=1)	1	1	0.5	1	1	1	1	1	1
Must the position be full time? (yes=1)	0.33	0	0	0	0	0	0	0	0.5
Is proof of having appropriate accommodation in the receiving country considered? (yes=1)	0	0.67	0.5	1	0	0	1	0.25	0
Can family members accompany the primary applicant as secondary applicant? (no=1)	0	0.33	0	0	0	0.5	0	0	0
Is the sponsor required to pay an application fee? (yes=1)	0.33	0.67	0	0	1	1	0	0.5	0.25
Is there a minimum threshold requirement for future expected earnings? (yes=1)	0.33	0.33	1	1	0.6	1	1	0	0.25

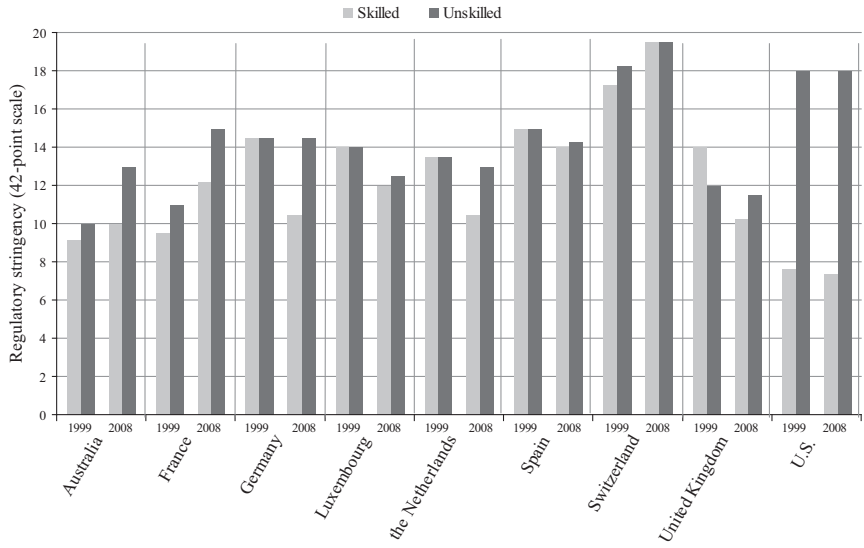
Note: For European countries, tracks involving only third-country nationals. The reported score is an average across the various tracks.

answer across the two or three component tracks to give a flavor of the treatment of highly skilled workers in the country's law. Hence, some entries fall between 0 and 1, such as Australia's .33 for whether a position must be full time (question 6), reflecting the average score of its three highly skilled tracks (business "Long Stay" visa track; skilled independent visa track; and skilled sponsored visa track). The table summarizes 2008 coding on a mere 10 of the dozens of questions, focusing on simple binary measures of restrictiveness (i.e., yes or no, coded as a 0 or 1, where a "1" is given to the answer constituting more restrictiveness). Such a list does not highlight the database's extensive qualitative coding with respect to levels of quotas, fees, income, and educational requirements.

The information in these and the many other questions in the database can be combined to generate measures of restrictiveness in a given track in a given category, year, and country. For instance, one can surmise that high-skilled immigration is more stringently regulated in countries where language proficiency is required or considered (question 1 in Table 2, where "yes" is 1), where family members may *not* accompany the entering applicant (question 8, where "no" is coded as 1 and "yes" as 0), and where an applicant must have minimum future expected earnings (question 10, where "yes" is 1). By this standard, the questions per track constitute distinct measures of stringency. Which (combination) of these questions are most restricting is a priori unclear, and the appropriate method of aggregation and weighting is uncertain. As discussed above, the IMPALA project allows users to implement their own aggregation algorithms suitable to their specific analytical interests. But a very crude but useful method is to simply add those questions clearly relevant to stringency in the requirements they pose while ignoring questions relevant to the selectivity of a particular migrant (as opposed to the requirements that such a migrant faces should he or she try to access the track in question). For the purposes of systematic comparison, one must focus on (the subset of) such questions common to the countries, years, and tracks being compared, even this crude strategy yields dozens of questions for each track in a given category, country, and year.

Figure IV summarizes such comparison between the "stringency" of coded tracks relevant to highly skilled as opposed to (semi- or) low-skilled labor. The figure adds the stringency score for these two kinds of tracks based on 42 binary questions that relate to stringency and common to the

Figure IV. **Regulatory "Stringency" of High-skilled and Low-skilled Tracks by country 1999–2008**



two kinds of tracks across the sample countries and years 1999 and 2008. The resulting comparison suggests three important patterns of stringency.

The first is more stringent treatment of migrants entering the low-skilled migration track (the darker-colored bars) compared to those entering the skilled track (the lighter-colored bars), with that differential becoming greater with time (comparing the two bars for 1999 and for 2008 for each country). In some cases, the skew in treatment is very large, such as in the U.S. where the stringency score for low-skilled migration is twice that of skilled admissions. The exceptions are the equal treatment of skilled and low-skilled in Germany, the Netherlands, and Luxembourg in 1999 – but this gives way to relatively less stringent treatment of skilled migrants by 2008 in all three countries. This leaves only Switzerland as the only exception in 2008, where both low-skilled and skilled migrant tracks receive similarly stringent treatment. This broad pattern comports with commonly discussed and high-profile changes in the discussion and regulation of migrants where many European Union countries have sought to profile themselves as knowledge economies attracting particularly highly skilled workers – a goal that shows up in actual regulations, via a loosening of regulatory treatment of such workers more than via a

tightening of rules for low-skilled workers (see also Smith and Favell 2006). France appears as an exception in this respect. The changes quantified, here, indeed, reflect the introduction of Dutch "Knowledge-worker" policies ("kennismigranten regeling" in 2003 and 2004) (EMN 2010; CBS 2012). The loosening in Luxembourg and the Netherlands, and perhaps also the decision not to increase restrictiveness elsewhere, may also foreshadow European-level changes such as the EU Blue Card policy in May 2009 (Euraxess 2010).

Second, we see substantial cross-national variation in the stringency of these economic tracks, but the cross-national variation with respect to highly skilled migrants is quite different from low-skilled migrants. The U.S. is the least stringent in its regulation of highly skilled migrants, while Switzerland is the most stringent. However, the U.S. is also the *most* restrictive in its 2008 treatment of low-skilled migrants (Australia is the least stringent in 1999). By 2008, we can see that the differential treatment is the greatest in the U.S. and the least in Switzerland and Spain. In any event, the stringency scores do not correlate significantly across the two kinds of tracks in each country (correlation coefficient 0.04).

Third, we can discern highly contrasting temporal trends in the treatment of highly skilled and low-skilled workers. The trend for high-skilled worker tracks is one of the declining stringency for six of the nine countries between 1999 and 2008 (the exceptions being Australia, France, and Switzerland). But the trend for semi- and low-skilled migrants is more mixed: For three of the nine countries, we see a clearly increasing stringency score (Australia, France, and Switzerland); for two countries, there was no change (Germany and the U.S.); and for four, we see a modest slackening for low-skilled tracks (Luxembourg, the Netherlands, Spain, and the United Kingdom). Such patterns are not the full picture, of course, not least because restrictiveness also reflects the qualitative information in the coding, where we do know that fees and income requirements have increased also in Australia and the U.S., in addition to the European Continent (results not shown). But Figure IV suggests that the differences in the treatment across skill categories may be more important than those differences across countries and time.

Family category: partner versus child reunification

Family reunification is also a diverse category of entry in immigration regulations, with between 16 and 43 distinct tracks in the sample countries.

Figure V shows the trends in that track-based measure of regulatory complexity. With the exception of Australia and the Netherlands, all of the other countries introduced additional tracks. In Switzerland, the 2002 changes increased track complexity from 14 to 46 distinct tracks. The U.S., again, has the fewest family-related tracks of entry. Unlike the economic category, the increases across the sample countries were not clustered in the later period under scrutiny but instead were dispersed throughout the 10-year period. We have, in any event, another portrait of modestly increased regulatory density and, in the broadest of senses, increased complexity.

We are also in a position to offer a brief snapshot of the partner and child reunification tracks, to gauge consistency or difference across particular tracks within this family category of entry. These partner and child tracks have as many as 77 binary questions, but only a subset of 49 assesses restrictiveness in both tracks (as opposed to questions about age and custody relevant only to children or about nature of romantic relationships relevant only to partner reunification). Table 3 gives a taste of these questions for partner reunification. Again, the focus is on simple, binary questions as opposed to the many qualitative questions. Some are similar to those in other categories, including the economic ones above, such as whether there is an application fee (question 1, where yes=1 and no=0) and whether language proficiency of the applicant is considered or required question2, required=1, considered=.5, neither=0. Others are unique to the reunification tracks, such as whether a maximum age can

Figure V. Family Tracks by Country, 1999–2008

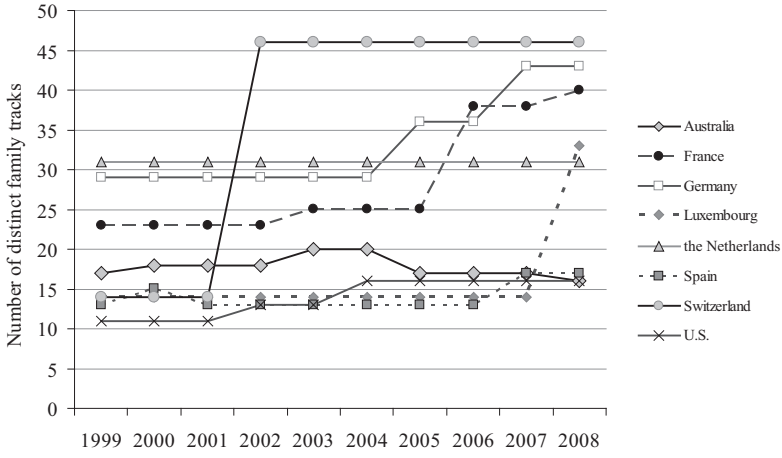


TABLE 3
REGULATIONS FOR PARTNER REUNIFICATION TRACK (SELECTED QUESTIONS), 2008

	Australia	France	Germany	Luxembourg	The Netherlands	Spain	Switzerland	United Kingdom	U.S.
Is the entrant required to pay an application fee?	1	1	0	0	1	1	0	1	1
Is proficiency in the official language(s) of the receiving country considered as defined by the selecting country?	0	0	1	0	1	0	0	0.5	0
Is there a waiting period for sponsor before being eligible to apply for admission or sponsor the entrant?	1	0	0	0	0	0	0	1	0
Is the resident required to demonstrate a 'genuine option for long-term residence' in order to be eligible to apply for admission or sponsor the entrant?	0	0	0	0	0	0	0	1	0
Is there a minimum income level for the resident/sponsor?	0	0	1	0	1	1	1	1	1
Is the resident/sponsor required to provide a monetary bond?	0.5	0	0	0	0.5	0	0	0	0
Must resident/sponsor show evidence of adequate housing to accommodate the entrant(s)?	0.5	0	0	0	0	0	0	1	0
Is having medical insurance considered?	0	0	1	1	1	0	1	0	0
Is there a minimum age for the resident/sponsor?	1	1	1	0	1	0	0	1	1
Does the law provide for the possibility to carry out an interview with the entrant in order to verify the genuineness of the relationship?	1	1	0	0	0	1	0	1	1

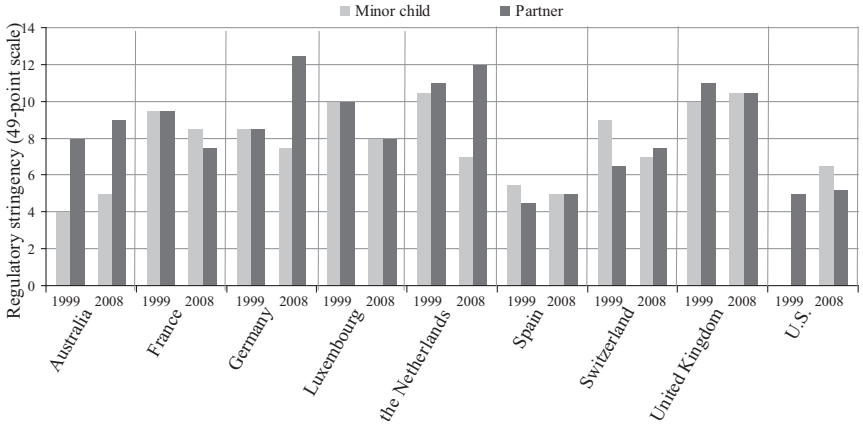
Note: Tracks involving only citizen-sponsers

be waived in any circumstances (yes=0; no=1) and whether the resident sponsor must post a monetary bond (yes=1; no=0).

The full story of adding together such questions is told by Figure VI, which summarizes the full 49-point stringency scores for child and partner reunification, respectively, for the nine sample countries between 1999 and 2008. Note that for European countries, the stringency score is computed only on tracks for which the sponsor is a citizen. As with the economic comparisons above, this figure suggests three important patterns. The first is that in most countries we observe differential treatment of children and of partners of residents. In four of the sample countries (Australia, Germany, the Netherlands, and Switzerland), children of residents tend to be subject to less stringent legal regulations than are the partners of residents. This skew is largest in Australia in 2008, where the 49-point stringency score is almost three times higher for partners of residents than for children of residents. But the pattern is the opposite for France and the U.S., where partners of residents receive slightly less restrictive treatment than do children of residents. And for Luxembourg, Spain, and the UK, there is no net differential in treatment.

Indeed, similar to economic tracks, the cross-national and temporal patterns vary substantially in stringency across children and partner reunification. Germany is the most stringent in regulation of partner reunification, while Spain is the least stringent; the UK is the most stringent in the treatment of child reunification, while Australia and Spain are the

Figure VI. **Regulatory Stringency for Partner and Child Reunification, by Country, 1999 and 2008**



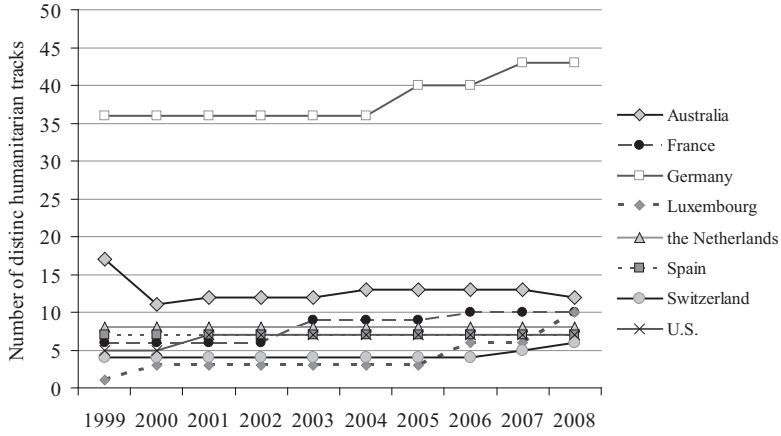
least stringent. The correlation coefficient is positive but insignificant (.14) for a country's stringency on child versus partner reunification. Finally, the trend over time shows increases in stringency for six of the nine countries' treatment of partner reunification, but the converse for child reunification: Six of the nine countries passed legal regulations that lowered stringency for child migrants. The patterns are again partly artifacts of the particular tracks and years of focus. For instance, the relatively high Dutch restrictiveness in regulating partner reunification reflects developments in the 1990s, earlier than the period on which we focus, with policy changes introducing the minimum age requirement of the resident in 1994 and a registration requirement on marriages performed in foreign countries in 1997 (Everaert 2012). But the period does capture an important truth about family migration: the pattern of greater restrictiveness in relation to partner reunification and less restrictiveness in relation to children, despite the vagaries of any particular cross-national contrast.

Humanitarian category: asylum migration

The final category we would like briefly to consider involves the regulatory tracks of humanitarian migration regulation, which addresses not only the most obvious and contentious treatment of asylum and refugee migration but also a range of other vulnerable groups traditionally given shelter to address (criminal) victimhood or suffering. This category harbors between six and 43 distinct tracks in the sample countries. Figure VII below shows the evolution since 1999 in such regulatory complexity, where we see again a pattern of increasing regulatory density in most countries. An important exception is Australia, where we see a ratcheting-down of the distinct tracks between 1999 and 2008, through regulatory changes particularly in 2000. We also see that Germany has by far the highest regulatory density throughout the period.

The patterns across countries and time in such regulatory complexity parallel the more nuanced restrictiveness story about one track of humanitarian regulation: asylum. As with the economic and family categories, we focus on the questions most relevant to regulatory stringency or restrictiveness. Table 4 gives a snapshot of a subset of these questions. Many are quite different than those relevant to the economic and family categories discussed above. Here, for instance, are questions about whether refugee protection can be denied for those who have committed serious non-political crimes (question 1, yes=1; no=0), whether child asylum seekers can

Figure VII. Humanitarian Tracks by Country, 1999–2008



be detained (question 5, yes=1 no=0), and whether asylum seekers are entitled to free legal assistance (question 7, yes=0 no=1). We focus, here, on those 34 binary questions (again excluding the qualitative questions) that directly involve national legal standards, leaving for simplicity the detail with respect to ratification or membership of various international conventions in the treatment of asylum seekers.

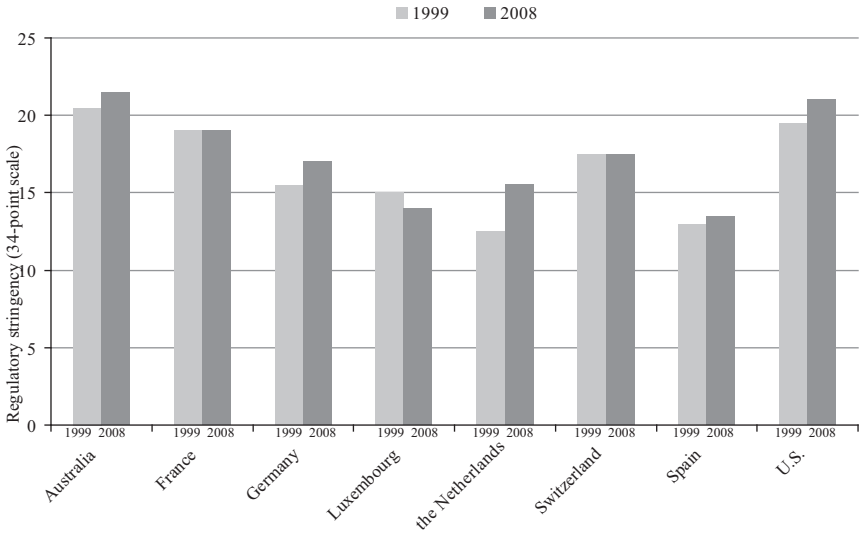
Figure VIII provides the snapshot of this 34-question measure of stringency across eight sample countries. Given how the European Union has sought to harmonize Member States' national regulations and laws particularly on issues of asylum, it is worth pointing out the national differences in 2008 are no smaller than they were in 1999 (the coefficient of variation for the stringency scores in 1999 and 2008 are 0.15 and 0.18, respectively). This persistence likely reflects a number of reasons worthy of brief mention. First, EU harmonization measures are relatively recent, and by 2008, not all EU measures had been transposed into Member States' domestic laws. Second, EU policies constitute minimum standards, which mean that Member States can choose to maintain or adopt higher national provisions. Third, some EU Member States, like the UK, have opted out of common European asylum measures and are therefore not constrained by such standards.

When comparing European and non-European destination countries for asylum, there are important differences, including in relation to detention policies. No European Union country operates mandatory detention

TABLE 4
REGULATIONS FOR ASYLUM TRACK (SELECTED QUESTIONS), 2008

Questions	Australia	France	Germany	Luxembourg	The Netherlands	Spain	Switzerland	United Kingdom	U.S.
Is refugee protection denied to applicants who have committed serious non-political crimes outside country? (yes=1)	1	1	0	1	1	1	1	1	1
Are applicants required to provide proof of identity? (yes=1)	1	1	1	1	1	1	1	0	1
Can applicants be subject to mandatory DNA testing to establish identity? (yes=1)	0	0	0	0	0	0	0	0	1
Is detention mandatory for asylum seekers arriving without a permit? (yes=1)	1	0	0	0	0	0	1	0	1
Can child asylum seekers be detained? (yes=1)	1	0	0	0	1	0	0	0	1
Are asylum seekers advised – in a language they can understand – about their rights/obligations? (no=1)	1	0.5	0	0.5	0	0	1	0	0
Are asylum seekers generally entitled to free legal assistance during the appeal? (no=1)	1	0	1	0.5	0	0	1	0	1
Is removal automatic upon final rejection of an asylum claim (after appeals)? (yes=1)	1	1	0.5	1	0	0	0	0	0
Can the removal decision be suspended in case of necessity of medical care? (no=1)	0.5	0	0.5	0.5	0	0	1	0	0.5
Can asylum seekers be removed to a “safe third country”? (yes=1)	0.5	0	1	0.5	1	1	1	1	1

Figure VIII. Regulatory "Stringency" of Asylum Track, 1999–2008



policy for asylum seekers, while this is standard practice in the U.S., Switzerland, and Australia. In Australia, mandatory detention has long been regarded as a cornerstone of Australia's attempts to deter asylum seekers arriving by boat (Crock 1993). Australian policymakers have argued that detention is crucial for those arriving in Australia without prior permission in order to apply for refugee protection status, to discourage jumping the immigration queue in this way. As European countries have never had any significant resettlement programs akin to those of the U.S. and Australia, the arrival of asylum seekers in Europe has generally been regarded as more legitimate by European policymakers and deterrence measures in Europe have stopped short of introducing mandatory detention policies.

Equally important for our judgment of asylum regulations, however, is the trend in asylum regulations toward more restrictive regulation in most of the sample countries, with the exceptions of Luxembourg (and no change for France and Switzerland). This pattern is consistent with trends identified in earlier data focused on narrower measures of stringency, such as Thielemann's asylum deterrence index for the earlier period 1985–2000 showing similar temporal and cross-national patterns (*see* Thielemann 2006:460, figure 17.2).

Unsurprisingly, Australia emerges as the least receptive country for asylum entry over the 1999–2008 period. This gap between Australian

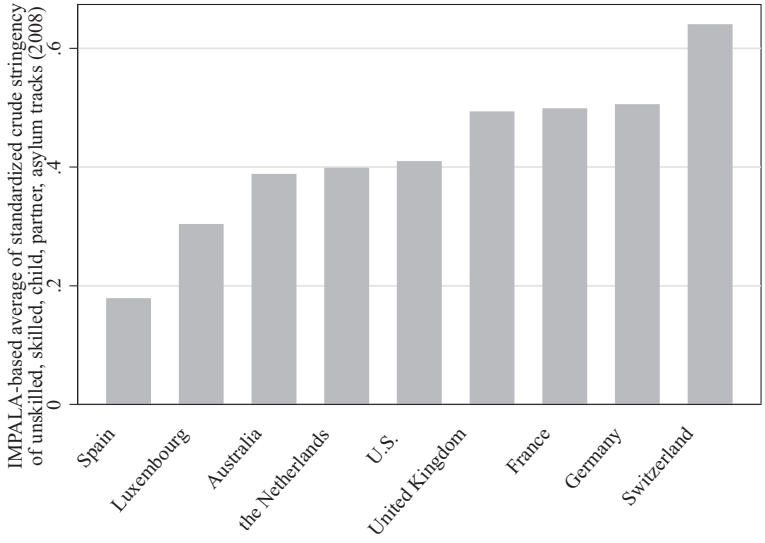
and European policies is likely to persist or widen, as EU Member States now operate under common EU minimum standards introduced between 2003 and 2008. While these new EU policies allow Member States to offer higher standards through national policy measures, they provide a bottom line in terms of protection below which no Member States can unilaterally drop. EU harmonization should increasingly constrain EU Member States in many humanitarian policies, including detention policies for asylum seekers where the EU return directive has introduced new safeguards and where the contrast between European and Australian policies is particularly striking.

Categories aggregated and compared

From the above snapshots of economic, family, and humanitarian tracks, we can see that the nine countries in our pilot sample vary substantially in the complexity and also in our crude measures of stringency. We see, however, that the variation between countries is not stable across these categories of admissions policy, such that countries like Switzerland stand out as extraordinarily restrictive with respect to economic migration but remain among the least restrictive with respect to child and partner reunification. Such offsetting characteristics complicate the development of, and question the utility of, a single measure of a country's restrictiveness encompassing disparate categories of immigration laws.

Nonetheless, even the above crude measures of stringency of the selected subset of tracks provide leverage to gauge total restrictiveness scores. The simplest aggregation, without weighting, is captured in Figure IX, where we take the simple average of the standardized scores for each track. It provides a crude but also systematic and transparent measure of general stringency in immigration law and policy generally, where Switzerland is on average the most restrictive and Spain the least by this measure. We hasten to add that this summary would likely change should one consider differential weighting of particular questions, particular tracks, or particular categories being aggregated here. The above patterns of stringency, based on a modest subset of tracks and the crudest of aggregation methods, can still be defended as systematic, transparent, and reliable. But their validity is more questionable: While the reported measures aggregate and evenly weigh those questions clearly relevant to intuitive

Figure IX. **IMPALA Mean of Standardized Crude Stringency of Low-Skilled and Highly Skilled Labor, Child and Partner Reunification, and Asylum Tracks**



restrictiveness, they may be less valid than alternatives that more heavily weigh some questions, tracks, and categories more than others.

Notwithstanding this uncertain validity, the crude stringency measures above do relate positively to prominent, existing attempts to quantify (particular aspects of) immigration policy. A full comparison must consider more aggregation methods and tracks of entry, relative to more benchmarks, than we can consider here. But each of the labor, family, or asylum category measures, or aggregate composite, does correlate with known measures that, whatever their shortcomings, are at least isomorphic to policy stringency.[12] For instance, our measure of low- and highly skilled labor stringency (summarized in Figure IV) correlates positively with the Ruhs (2011) measure of restrictiveness of the same broad categories of regulation (R-square of .45 in the bi-variate relationship shown in online Supplemental Appendix Figure S1). Our crude measure of child and partner reunification stringency (summarized in Figure VI) correlates modestly positively with the MIPEX measure of discriminatory treatment of migrants in family reunification (*R*-square of .28). And our IMPALA-

[12]For details, see the four panels in online Supplemental Appendix Figure A1, at http: www.impaladatabase.org

based crude stringency in asylum regulation (summarized in Figure VIII) correlates also positively, though more weakly, with measures of asylum by Hatton (2009) (*R*-square of .12). Finally, our simple standardized mean of economic, family, and asylum stringency (summarized in Figure IX) correlates quite strongly positively with the aggregate MIPEX-based measure of discriminatory treatment of migrants in integration law (*R*-square of .49). Since the IMPALA-based measures have a different focus and/or empirical basis than existing benchmarks, these patterns suggest that IMPALA-measured features of access may comport with other features of migrant policy and integration law and practice.[13]

CONCLUSION

In an early overview of the growing literature on immigration policy, Massey identified an emerging paradox of globalization: "... while the global economy unleashes powerful forces that produce larger and more diverse flows of migrants from developing to developed countries, it simultaneously creates conditions within developed countries that promote the implementation of restrictive immigration policies" (Massey 1999, 312). However, the lack of comparative data on national immigration policies has meant that scholars have been unable to confirm or refute Massey's claim with any certainty. Regardless of whether there is a gap between the intentions and outcomes in immigration policy (Cornelius et al. 2004), theories of immigration policy can only be improved by having a more accurate map of the terrain that they are trying to explain.

In this paper, we have sought to highlight the character and value of the track-based method to provide comparable, valid, reliable, and transparent measures of the character, complexity, and restrictiveness of immigration laws and regulations. Drawing on the first, pilot phase of the data from the IMPALA project and using very simple aspects of measurement and aggregation, the paper has also shed systematic light on

[13]Also intriguing is that the IMPALA-based stringency measures correlate in expected ways with immigration stocks and flows (changes in stocks) (Docquier and Marfouk 2006; Brücker, Capuano, and Marfouk 2013). For instance, measures of 2000 highly skilled stocks (and also of changes in such stocks between 2000 and 2005) correlate significantly negatively with crude stringency of highly skilled regulations for 1999, summarized in Figure IV (coeff. = −.27, SE = .105, *R*-sq. = .52). See online Supplemental Appendix Figure S2.

important empirical patterns in immigration policy of keen interest to scholars and policymakers. That light has revealed substantial and politically important variation across countries, time, and tracks of admission with respect to various measures of regulatory complexity or density and various measures of policy restrictiveness in economic, family, and humanitarian migration.

The cross-country variation includes major differences across nine major OECD countries that are important as leaders and examples in the development of international migration policy. While our preliminary analyses suggest general differences in the crude stringency of immigration laws between countries, it is clear that such differences themselves vary a lot across categories and particular tracks of entry. The same can be said of the overtime variation. We do observe a broad trend toward greater regulatory complexity since 1999, a pattern applying to most countries and migration categories (if not all country-tracks). And we also see, in the majority of country-tracks, modest increases in regulatory restrictiveness based on the simple aggregation methods applied here. But again, the overtime patterns vary a lot across categories within a given country.

Among the most striking patterns to emerge from the above analysis are the big differences across broad categories of immigration law and across politically significant tracks within such categories. These imply very different treatment across particular socioeconomic and demographic groups – notably between the regulation of high-skilled and low-skilled economic migrants and between child and partner reunification in family migration. Such differential treatment may comport with one's intuition or expectation, but the patterns above go beyond context-specific anecdote to provide what is likely the first systematic evidence of such differential legal treatment.

This paper's portrait of admissions policies based on the first phase of the IMPALA database is, to be sure, preliminary. It is possible that this portrait will be revised by more sophisticated aggregation and weighting of the coded questions discussed above and by consideration of all tracks and questions (all binary and non-binary quantitative, as well as qualitative questions). We know, in any event, that further consideration of the IMPALA methodology and data will clarify immigration regulations over time and space and provide a basis for sharper judgments of policy restrictiveness of those regulations. And the database, even the first-phase data presented here, can improve research into the causes or consequences of

policy patterns, not least into how policies affect actual migration flows. And the new IMPALA methodology and data can inform policymakers as a basis for benchmarking and comparison.

In short, the IMPALA method and data, together with accompanying measures of stringency and bias in immigration policy, should permit improved descriptive and causal inferences about immigration policies. This will clarify how recipient countries differ in their policies and whether such differences have widened or narrowed over time. Moreover, with better immigration policy data, scholars in a wide variety of fields – including economics, sociology, political science, and law – will be able to address core questions about the determinants and consequences of immigration policies. By providing what will be an open-access data tool, the project also promises lasting and growing value for scholars, policymakers, and the broader public.

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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of this article at the publisher's web site:

Figure S1. IMPALA-based crude stringency compared to selected immigration-policy measures.

Figure S2. Migration and IMPALA-based crude stringency.