Comparing Immigration Law

A Quantitative Toolbox

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INTRODUCTION

From an outsider's perspective, comparative law seems to be at a crossroads. Particularly its methodology has been intensely debated in recent years. In this debate, while some remain skeptical (e.g. Kischel 2019, 135-40), many are calling for greater use of the quantitative comparative tools developed by the social sciences to advance comparative law (see e.g. Cope 2023 for comparative migration law specifically). The field of comparative constitutional studies has been pioneering in this respect. Two notable features of this field stand out. On the one hand, it has embraced an interdisciplinary approach. On the other hand, it has produced extensive global and longitudinal databases that are publicly available (e.g. Elkins and Ginsburg 2022). Therefore, to learn more about an object of study, both interdisciplinary exchange and the generation of large-scale data have proved to be immensely useful.

In this chapter, I argue that the time is ripe for the interdisciplinary and quantitative study of comparative immigration law based on large-scale data. Written in a way that should be understandable also for scholars and students from other disciplines with little knowledge of political science and quantitative methods, and based on the state of the art in comparative political science, the chapter presents a toolbox of quantitative solutions to the methodological challenges that this enterprise faces. I begin by describing the constituent domains and the architecture of immigration law, and then address the key decisions involved in devising adequate conceptual tools that clearly specify attributes and dimensions of interest for comparative analysis. After a short history of how the field of migration studies has evolved in terms of measurement, the next section explains the two basic approaches to social science measurement and then provides an overview of ten databases and datasets that can be used to quantify attributes and dimensions of immigration law. I then move on to tools for descriptive analysis and tools for causal analysis. While descriptive analysis maps

variations in immigration law across space and time, causal analysis relies on comparisons that aim either to test causal explanations of variations in immigration law or to estimate causal effects of variations in immigration law on various societal and individual-level outcomes. I present the key methodological tools for such analyses by unpacking some pertinent examples from the literature. I conclude by reflecting on the potentials for interdisciplinary cross-fertilizations between empirical legal scholars and quantitative political scientists in the field of comparative immigration law and its advancement through a common research agenda.

CONCEPTUAL TOOLS

The basis for any comparative exercise is to define the object under scrutiny. In the language of comparative law, this object constitutes the *tertium comparationis*. It can be defined as the *equivalent attribute* of various legal systems that is to be compared across these systems. Most often this attribute relates to the a certain function of specific laws and can be expressed as an abstract concept (Kischel 2019, 5). In the social sciences, leading methodologists have long recognized that valid and reliable measurement of any abstract concept requires rigorous concept specification (Sartori 1970; Adcock and Collier 2001; Goertz 2006, 2020). However, many quantitative studies in comparative politics do not devote enough attention to this fundamental task, and sometimes this is also the case in the comparative study of immigration law. In the following, I aim to provide guidance for concept specification by briefly describing the four main domains of immigration law, and by pointing to four key aspects that help us devise adequate conceptual tools capturing a specific attribute of these domains.

THE FOUR DOMAINS OF IMMIGRATION LAW

Immigration and integration. The distinction between immigration law and immigrant law has been canonical in the literature (Hammar 1985). In modern parlance, these two domains can be re-conceptualized as *immigration* and *integration*, respectively. The domain of *immigration* defines the rules that determine who can *enter* and *stay*, and who must *leave*. The domain of *integration* generally defines the *rights* and *obligations* that are applied to (specific) immigrants after establishing residence in a receiving country. While the notion of rights is widespread in the literature and sometimes also applied to describe the right to enter and stay in the domain of immigration, obligations are often related to *civic integration requirements* such as language and integration testing (Goodman 2014). In contrast to the predominant linear conception that sees immigration as the first and integration as the next step, in my view, these two domains are best understood as governing parallel and interactive processes as they can depend on each other in various ways, for instance by linking stay to certain obligations.

Citizenship. *Citizenship* can be seen as a third and separate domain. This is because when an immigrant acquires the nationality of a receiving country, the two domains of immigration and integration no longer apply. Citizenship transforms the legal subjects of non-naturalized immigrants into resident citizens and full members of the national political community of the receiving country. Citizenship law defines the conditions under which this may happen.

Control. The fourth and final domain of immigration law consists of mechanisms of *control*. Legal measures in this domain define how the regulations in the other domains are policed and how these measures materialize in various government activities as well as infrastructures within and beyond the territory of a specific nation-state.

Differentiation. It is important to note that the four domains of immigration law may be differentiated according to the categories of immigrants they apply to. Categories are usually specified on the basis of specific immigration channels – such as labor immigration or asylum – or even more specific entry tracks such as those targeting high-skilled labor. They may also discriminate based on the nationality or origin of immigrants, or by some combination of criteria based on various characteristics. Crucially, these differentiations can vary across both space and time at the same time, as different receiving countries possess different immigration systems with different legal architectures constituted by different entry tracks at different points in time. In other words, the architecture of immigration law may vary in a way that is non-uniform across space and time.

Given these domains of immigration law, as well as their interactions and potentially variegated architectures across space and time, what concepts can we use to adequately capture the equivalent attribute that we want to compare across national legal systems? I argue that there are four key and interrelated aspects to consider to answer this question.

DEVISING ADEQUATE CONCEPTS

Level of abstraction. The first and most important is choosing the adequate *level of abstraction* for the concept. For instance, subsuming all four domains of immigration law under a single one-dimensional concept of *the openness of national boundaries regarding immigration*, seems too abstract. It is more adequate to focus on a single domain or focus on sub-domains or even specific legal measures within sub-domains. For example, we could define the equivalent attribute immigration domain as the *openness of borders*, the integration domain as the *extent of rights and obligations*, the citizenship domain as the *inclusiveness of the access to citizenship*, and the control domain as the *degree of enforcement*. Depending on our research question, we could also zoom in on sub-domains such as the *openness of asylum laws*

in immigration, the *extent of political rights* in integration, or the *restrictiveness of residence conditions* for citizenship.

Conceptual labels. The second key aspect when devising adequate concepts is the choice of the conceptual label with which to tag the attribute we are investigating. I have already mentioned some options, among them openness, inclusiveness, and restrictiveness. *Openness* is often described as a quality of the domain of immigration. It refers to the porousness of national territorial borders for immigrants: the less restrictive the criteria for entry and stay, the greater the openness. The concept can be applied to either to single entry tracks, to different immigration channels, or to the average openness of multiple channels. Sometimes the notion of openness – as well as that of borders – is also applied to integration and citizenship, describing them as more or less open in terms of more rights, less obligations, and access to citizenship (Shachar 2020). Others reserve the term *openness* for territorial borders and instead use the term *inclusiveness* to characterize the degree to which integration and citizenship grant rights and promote as well as membership in national communities (e.g. Schmid 2020). Alternatively, as proposed above, one may simply talk about the *extent of rights*, which can in principle refer to both immigration and immigrant rights.

Another widespread concept is *selectiveness*. Conceived as a form of purposeful differential treatment, this term is often applied to the degree by which the domain of immigration seeks to grant entry and stay to certain "desired" immigrants regarding certain criteria such as skills while "undesired" ones are denied access to the territory. In this sense, countries can be open and closed to different immigrants at the same time (Shachar and Hirschl 2014, 236). Selectiveness can also apply to the potentially preferential treatment of certain immigrants regarding the domains of integration and citizenship (Shachar 2020). Therefore, the notion of selectiveness allows us to capture the manifold possible differentiations across the many criteria used to discriminate between

different immigrant categories across different domains of immigration law. A concept related to selectiveness is *relative openness*. Schultz and colleagues (2021) use this concept to capture the prioritization of asylum seekers over labor immigrants or vice-versa.

Finally, *restrictiveness* has become increasingly popular among scholars because it is a general term that allows us to better avoid both possible normative connotations and conflation of legal measures with their effects (e.g. Helbling et al. 2017). It should be clear from simple logic that restrictiveness is the conceptual opposite of both openness and inclusiveness. And while it is possible to characterize more controlled and more strictly enforced territorial borders and social boundaries as more closed, or as more exclusive, restrictiveness is also the most general and unambiguous concept with which we can describe the quality of control and enforcement. In this context, *more restrictive* simply means *more control*. Often the concept is also contrasted with the *liberalization* of immigration law. While restrictions limit immigration and immigrant rights, liberalizations expand them.

I do not further specify these concepts or provide more examples in this section. Instead, the following section discusses different measurement tools that not only cover different domains and components of immigration law but also operate with diverse understandings and operationalizations of such concepts.

Dimensionality. We must also grapple with the issue whether our concept is one-dimensional or multi-dimensional. This is especially important for immigration law because it is inherently multi-dimensional at higher levels of abstraction due to the differential treatment of different categories of immigrants. The standard I would like to suggest here is that dimensionality must not only make sense from a theoretical but also from a statistical perspective (for more on this see Schmid 2021a). In other words, the dimensionality of high-quality concepts are both theoretically

derived and statistically tested. If we reduce a concept to a single dimension, do we lose sight of something that is theoretically essential for the phenomenon? And can the existence of this single dimension be statistically confirmed? Alternatively, if we deal with a multi-dimensional legal space, does it make sense to craft a typology that defines what the combination of different scores on the constitutive dimensions means? And can this multi-dimensionality also be empirically validated?

Unit of analysis. These questions are intertwined with the choice of the unit of analysis. Most often, countries are the units that are compared. We may do a cross-sectional analysis with several countries at one point in time, or a time-series cross-sectional (TSCS) analysis (sometimes called panel or longitudinal analysis) based on annual data for each country, thus comparing *country-years*. This approach of treating the nation-state as the most relevant unit and depicting it as the "container" of national societies is still the dominant approach in political science. However, thanks to its focus on transnational phenomena, especially in the field of migration studies this approach has been increasingly questioned across the past decades. Indeed, the fixation on the nation-state and the unquestioned assumption of its viewpoint has been decried as "methodological nationalism" (Wimmer and Glick-Schiller 2002).

Alternative units. There are three alternatives to methodological nationalism for comparative immigration law. The first alternative is to go above or below the nation, zooming in on the immigration laws of supranational or sub-national territorial units. While for supranational entities quantitative data is scarce, more extensive data capturing sub-national variations in federal states do exist. For instance, Manatschal (2011) presents a dataset measuring integration laws across Swiss cantons, while Reich (2019) is an example for a panel dataset covering integration laws across US states 2005-2016.

The second alternative is to focus on certain bilateral relations of states. This is done by Lavenex and colleagues (2023), who have compiled the Migration Provisions in Preferential Trade Agreements (MITA) dataset. It covers 797 agreements signed between 1960 and 2020. Another resource is the Dyadic Dual Citizenship Acceptance Dataset (GcDDCAD) released by the Global Citizenship Observatory (GLOBALCIT). Capturing the legal constellations regulating access to dual citizenship from 1960 onwards, it covers 1.8 million directed dyad-year observations measuring the legal rules for holding dual citizenship after a person of one country acquires the citizenship of another country.

Finally, the third alternative is to approach the complex architecture of immigration law in a different way. One could isolate entry tracks as the basic unit of analysis to be compared both intra- and cross-nationally regarding a certain attribute. An example of a cross-national dataset of this kind is Ruhs (2013), who covers 104 labor immigration programs associated with specific entry tracks and permits across 46 countries in 2009. Alternatively, one could take individual legal changes as the most pertinent unit. However, both entry tracks and legal changes still need some territorial unit as a reference point as they are nested within at least one unit or multiple units that are themselves nested within each other. When modeling legal changes statistically, the fact that these changes are nested in political units (as well as years and legislative periods) has to be taken into account to correctly depict the data structure. And often, in practice, the most relevant political unit is (still) the nation-state. Therefore, it is not surprising that, the largest databases and datasets do not deviate from this standard unit of analysis. This is why I focus on them in the next section.

MEASUREMENT TOOLS

Once we have devised a concept with an adequate label, on an appropriate level of abstraction, valid dimensionality, and the proper unit of analysis, we can turn to measuring this concept. The first attempts to measure immigration-related laws in the social sciences relied on a "national model approach" based on simple and often binary typologies (Koopmans 2013, 696). One of the earliest and most influential dichotomous distinctions goes back to Brubaker (1992). He proposed that there are two "idioms of nationhood" that underpin national citizenship laws: an exclusive "ethnic" type based on descent-based birthright citizenship (*jus sanguinis*) and an inclusive "civic" type based on territorial birthright citizenship (*jus soli*). For Brubaker, a prime instance of the former is Germany whereas the latter manifests clearly in France. Arguing that these types of nationhood are deeply entrenched and persistent, Brubaker anticipated that citizenship regimes would not converge over time.

In the following decades, this "national model approach" and its usefulness for empirical analysis has been increasingly questioned. It has come to be considered too static, too simplistic, and/or too normative (Helbling and Vink 2013, 552). Instead, as the previous section has shown, it has become clear that contemporary immigration-related laws – also citizenship law on its own – constitute complex and dynamic regimes that rarely correspond to neat categorical distinctions. They reflect differences in degree much more than differences in kind (Vink 2017, 226). And, as I will show in more detail below, while they continue to be affected by past trajectories, much of the research since the turn of the millennium has shown that citizenship laws are not completely path-dependent but instead can change significantly over time (Howard 2009; Goodman 2014; Graeber 2020; Schmid 2021a).

To gain these novel insights, a large strand of the political science literature in comparative migration and citizenship studies has moved beyond single and small-N comparative case studies towards comprehensive data and composite quantitative indicators. This has led to significant progress in the field. The study of citizenship law again provides a prime example. Using fine-grained measures of numerous legal components of citizenship regulations, an innovative comparative study has demonstrated that European states' citizenship laws today in fact combine *jus soli* and *jus sanguinis* birthright citizenship principles in different ways and to different degrees (Vink and Bauböck 2013). Germany is a case in point; it has adopted a form of *jus soli* to complements its *jus sanguinis* rules. Thus, through the increasing sophistication in measuring citizenship law, we now know that across Europe *jus soli* and *jus sanguinis* provisions are part of two independent dimensions, thus defying what initially seemed to be an easy "ethnic-civic" distinction. Whether this holds beyond Europe remains an open question, but it surely will be tackled soon as global datasets in the field of citizenship are now available.

TWO APPROACHES

How can such potentially ground-breaking datasets and measures of immigration law be created? To answer this question, I proceed by briefly unpacking the basic approaches to and key challenges of index-building that uses legal data as its basis. Against this background, I provide an overview of the ten most comprehensive databases and datasets in the field.

There are two different philosophies for forming and measuring social science concepts. The first is based on *theoretical deduction* and uses ontological and semantic considerations to form concepts. Its most well-known proponent is Gary Goertz, who has fleshed out the most complete and in my view also most rigorous guide to conceptualization in the social sciences (see especially

Goertz 2020). He develops a three-level framework where concepts are defined at the basic level, dimensions are deduced for the second level, and indicators are used to measure these dimensions at the third level. This approach aims to capture the potentially complex ontological relationships between indicators and dimensions by translating them into appropriate mathematical aggregation rules.

The second philosophy relies on *empirical induction* and a latent variable approach (the classic reference is Bollen 1989), which is a way to empirically test the dimensionality of a concept. This approach focuses on selecting indicators that have very high statistical correlations, which is interpreted as evidence that the indicators reflect the same empirical phenomenon and thus belong to the same concept. In contrast to the deductive approach, no intermediate level between concepts and indicators is used and additive relationships between indicators are assumed and sometimes not properly justified. This also happens when latent variable models themselves – which assume additive relationships between indicators – are used to directly estimate the aggregate measure of the concept, as is often the case. These models assign weights to indicators based on their correlations with other indicators rather than their theoretical relevance.

Building on these two philosophies, the seminal framework by Munck and Verkuilen (2002) shows that every index builder has to deal with three fundamental challenges: conceptualization, measurement, and aggregation. As we have seen, conceptualization is about fleshing out an equivalent legal attribute by specifying the relevant dimensions of the concept, while measurement about selecting valid and reliable indicators to measure these dimensions as well as determining the appropriate measurement level. Finally, aggregation is about finding the proper mathematical formula to combine the indicators and to calculate the resulting measure of a concept. This framework thus combines elements from both philosophies but leans more towards the deductive

approach. This reflects the evolving practice in the social sciences, where a combination of these strategies is often used to address specific measurement problems and to validate the dimensionality of concepts. The *Varieties of Democracy* project (V-DEM) – the largest and most sophisticated political science dataset ever produced so far – is a leading example for this trend.

TEN DATA SOURCES

In the following, I present *ten publicly available quantitative data sources* in the field of comparative immigration law. I start by describing *four comprehensive databases* at greater length. They can be used to devise various measures of immigration law. Then I briefly summarize *six additional datasets* that are not mainly designed as broad databases but instead tied to specific projects and publications (though sometimes this distinction is fuzzy) and often come with a single central concept and measure of immigration law. My selection covers sources that offer data on a large number of cases either across space and time, or both. Most sources also go beyond the year 2010 and thus provide data of the most recent decade.

The most important features of these data sources are summarized in Table 1. Note that regarding measurement type, I distinguish between measures that quantify policy *levels* (e.g. absolute and relative levels of openness), those that focus on policy *changes*, and those that classify policies into separate legal *categories* that are not ordered by levels. For the coverage across domains, I specify whether it is *partial*, *expanded*, or *full*. For instance, partial coverage of immigration may mean a focus on labor immigrants only. It would become expanded when another category is added, and full when at least the three main categories of labor, family, and asylum are added. In the text, I focus on the most striking distinguishing characteristics of each data source. Due to space constraints, I can

neither offer an in-depth assessment nor a more comprehensive list (for this see e.g. Helbling 2013; Bjerre et al. 2015; Goodman 2015; Schmid 2021a; Solano and Huddleston 2021).

MIPEX. I start with the *Migrant Integration Policy Index* (MIPEX) because it has been a pioneering and widely used large-scale measurement tool in the field. In its latest incarnation, MIPEX covers 56 countries 2014-2019 (Solano and Huddleston 2020; the number of countries has increased over time and many OECD countries are covered from 2007 onwards). Conceptually, it distinguishes the following eight legal areas: labor market mobility, family reunification, political participation, permanent residence, access to nationality, anti-discrimination, education, and health (the number of legal areas has also increased over time). Therefore, the domains covered concern immigration (permanent residence), citizenship (access to nationality), and integration (all others). As mentioned above, family reunification can be related to both integration and immigration. In terms of immigrant categories, the various legal areas of MIPEX cover up to three types of migrants, depending on the relevance of each area: residents on temporary work permits (excluding seasonal workers), residents on family reunion permits, and permanent residents. Policies that directly and uniquely target refugees and asylum seekers are not covered.

The purpose of MIPEX is to assess countries against a benchmark of best practices derived from "the highest European and international standards aimed at achieving equal rights, responsibilities and opportunities for all residents" (Solano and Huddleston 2020, 6). Thus, the underlying concept to be measured is that of *equality*, though the project does not explicitly define it as such. This conceptual focus and its derivation from "best practices" has been criticized as being overly normative (Goodman 2010, 759). Others have also questioned the methodological rigor in indicator selection (Ruedin 2011). It is notable and laudable that MIPEX has also evolved in response to these criticisms. Crucially, the latest version of MIPEX reduces the number of indicators, either

by deleting items or by collapsing previously separate indicators into more fine-grained composite ordinal scales. Besides, disaggregated data has always been available, thus relaxing the potential problems of highly aggregated measures and giving researchers the opportunity to choose indicators and the level of aggregation on their own.

IMPIC. The next project is the *Immigration Policies in Comparison Database* (IMPIC; Helbling et al. 2017). An updated version of the dataset is planned and will cover 33 OECD countries from 1980-2018. IMPIC starts by crafting a comprehensive multi-dimensional conceptualization of immigration law. The first dimension distinguishes four broad "policy fields" (which I have called immigration channels): labor immigration, family reunification, asylum, and co-ethnics (Helbling et al. 2017, 83). Orthogonal to this first dimension, the second dimension distinguishes between two different "modus operandi," separating *regulations* from *control mechanisms*. Regulations create or constrain immigration and immigrant rights while control mechanisms reflect enforcement. Control mechanisms are not distinguished along policy fields but instead apply across them, and also include elements that refer to the treatment of irregular immigrants. Therefore, IMPIC mainly covers the domains of immigration and control. However, some of the regulations also focus on permit rights that are associated with certain entry tracks, thus reaching into the domain of integration.

To measure regulations, IMPIC starts by compiling entry tracks in a country in a certain year, and then groups these tracks into the broader policy fields. Various indicators are used to measure the relevant field-specific regulations, and the indicators across existing entry tracks are averaged using arithmetic means. The same can then be done to derive composite measures across policy fields. Control mechanisms, by contrast, are removed from the concept of entry tracks as they apply more generally and, as mentioned, to irregular migrants.

Table 1 Overview of comprehensive immigration law data sources

Name	MIPEX	IMPIC	DEMIG	GLOBALCIT	ICRI	MPI	CITRIX	Bearce/Hart	HIP	DWRAP
Year published	2020	2017	2015	2023	2012/2017	2020	2021	2018	2015 onwards	2022
N countries	52	33	45	191/201	10/29	21	23	38	31	92
Approach	Deductive	Deductive	Deductive	Deductive	Deductive	Deductive	Deductive	Deductive	Inductive	Deductive
Main concept	Equality	Restrictiveness	Liberal/restrictive	Inclusion	Inclusion	Multiculturalism	Inclusiveness	Liberal/restrictive	Openness	Liberal/restrictive
Measurement type	Levels	Levels	Changes	Categories	Changes	Changes	Levels	Changes	Levels	Levels
Domains covered										
Immigration	Partial	Full	Full		Partial			Full	Expanded	Partial
Integration	Expanded	Partial	Full		Full	Expanded		Full	Expanded	Partial
Citizenship	Full		Full	Full	Full	Partial	Full	Full	Expanded	Partial
Control		Full	Full						Expanded	
Countries covered										
Western Europe (WE)	X	X	X	X/X	X/X	X	X	X	X	
Eastern Europe (EE)	X	X	X	X/X	--/X	X		X	X	
Anglo-Saxon settler states	X	X	X	X/X	--/X	X	X	X	X	
Other democracies	X	X	X	X/X	--/X		X (Japan)	X	X	X
Autocracies	X		X	X/X	--/X				X	X
Years covered										
Before 1945			Partly						Partly	
Before 1980			X	--/X		X			X	1952-
1980s		X	X	--/X	1980/--	X	X		X	X
1990s		X	X	--/X	1990/--	X	X	1995-	X	X
2000s		X	X	--/X	2002/--2008/2008	X	X	X	X	X
2010s	X	-2010	-2014	--/X		X	X	-2016	-2010/3	-2017
2020s				2022/-2022		-2020				

The IMPIC project is highly sophisticated because it carefully solves each challenge of index-building and is explicitly guided by the framework of Munck and Verkuilen (2002). It focuses on the notion of *restrictiveness* and rigorously translates its conceptual components into valid and reliable indicators. The dataset's validity – including its dimensionality – has been confirmed in a separate analysis by Schmid and Helbling (2016). Yet, this validation exercise also revealed that it may not be valid from a statistical point of view to aggregate regulations and control mechanisms using an additive index, as IMPIC does in its own aggregation scheme. But also here disaggregated data is available.

DEMIG. The *DEMIG POLICY Database* is even more comprehensive and detailed than IMPIC but uses a different approach. Seeking to record all migration-related legal changes across 45 various countries around the globe mostly in the period from 1945 to 2014 (de Haas et al. 2015). It covers all domains – immigration, integration, citizenship (conceptualized as a part of integration), and control. It also uses an encompassing conceptualization that carefully distinguishes between many potential immigration (sub-)categories that may be targeted by different regulations. The unit of analysis are single legal changes, and these legal changes are assigned to the respective country and year of adoption. Each legal change is coded as *liberalizing* or *restrictive* depending on whether the rights of immigrants in the various domains are extended or restricted. Each change is also assessed in its magnitude depending on how universally the change applies to different categories of immigrants and nationalities of origin. DEMIG distinguishes between fine-tuning, minor, mid-level, and major legal changes. These changes can then be aggregated into any higher dimension of the concept for any country-year, either by simply subtracting restrictive from liberalizing changes or by additionally weighing them by their magnitude. Overall, the data from DEMIG appear valid and reliable, though it is likely that especially some fine-tuning changes could not be identified as the procedure does not use primary legislation data directly. The coding is made fully transparent and

well-documented. There is also a consecutive project that extends the DEMIG database to 31 European countries 1990-2020 (Czaika et al. 2023).

GLOBALCIT. The *Citizenship Law Dataset* by the Global Citizenship Observatory at the European University Institute (GLOBALCIT; Vink et al. 2023) is focused on the domain of citizenship and is the first dataset in comparative immigration law that truly reaches global coverage. It is organized around a comprehensive and systematic typology of modes of citizenship acquisition and loss. I shall focus on acquisition here, since loss is much less relevant for immigrants (although all immigrants are always also emigrants of their country of origin and may lose citizenship of that country). For each of the 28 "modes of acquisition", a standardized "target person" is outlined, which allows comparing rules applicable to similar groups across countries. The latest version of the dataset (GLOBALCIT Citizenship Law Dataset, v2.0) includes information on laws in force that regulate all modes of acquisition across 191 states in 2022. For selected dual citizenship regulations, it also covers information on laws in force in 201 states 1960-2022. Building on an interdisciplinary team of experts and scholars, the dataset explicitly uses the functional comparative legal method identifying functional equivalents across different legal systems to make citizenship laws comparable across the entire world (van der Baaren and Vink 2021, 4). It also does not offer pre-defined quantitative indices but instead offers nominal categorical data (instead of the usual ordinally scaled data with categories ordered along the levels of a certain concept) that can be used to tailor-make various measures for different legal attributes and dimensions.

Six additional datasets. I now turn to *six further measurement tools* based on specific datasets and publications. I present these datasets in in the order of the number of countries covered. I limit my discussion to the core elements; more information can be found in Table 1.

The first dataset is called *Citizenship Rights for Immigrants* (ICRI). It was originally compiled by Koompans and colleagues (2012) and covered 10 Western European countries in 1980, 1990, 2002, and 2010. A second study then expanded the sample for 2008 to 29 countries from Europe, Africa, the Middle East, East Asia, Oceania, and the Americas (Koopmans and Michalowski 2017). The dataset distinguishes two dimensions within the domain of integration: individual equality rights and cultural difference rights.

The second dataset builds on the work by Banting and Kymlicka (2013). The latest and most expansive version of their *Multiculturalism Policy Index* (MPI) comes from Westlake (2020). It covers 21 Western democracies 1960-2020 and measures the degree of multiculturalism for immigrant minorities, which lies in the domains of integration and citizenship law.

The third dataset by Schmid (2021a) extends and refines the MIPEX data and coding schemes for citizenship law. It zooms in on four essential legal components in the domain of citizenship: conditions regarding territorial birthright, residence, dual citizenship, and integration. The resulting *Citizenship Regime Inclusiveness Index* (CITRIX) covers 23 Western democracies 1980-2019.

The fourth dataset has been introduced by Bearce and Hart (2018). It captures legal changes that liberalize or restrict the openness of labor immigration as well as the domains of integration and citizenship across 38 democratic countries 1995-2016. In contrast to DEMIG, however, the magnitude of these changes is not measured.

Introduced by Peters (2015) and expanded by Shin (2017, 2019) as well as others (see Börang et al. 2022), the fifth dataset is called *Historical Immigration Policies* (HIP). It covers 31 labor-scarce democratic and autocratic countries from independence until the 2010 and for some cases until 2013.

For many cases the data temporally extend back into the 18th century. The focus is on laws that are relevant for the openness towards low-skill immigrants specifically, mostly focusing on the domain of immigration, but also reaching into the domains of integration and citizenship as well as control.

Finally, the sixth dataset comes from Blair and colleagues (2022) and is called *Developing World Refugee and Asylum Policy* (DWRAP). It focuses on aspects of immigration and integration as they pertain to asylum seekers and refugees. It offers data across 92 countries across the Global South 1952-2017. Like the HIP dataset, it fills an important gap in a measurement landscape whose horizon is often limited to the Global North and to the past few decades.

TOOLS FOR DESCRIPTIVE ANALYSIS

When valid and reliable measures of immigration law are at our disposal, we can use them as quantitative variables and proceed with empirical analysis. The first and most basic way to analyze these variables is to *systematically map their variation* across space and/or time. This is called *descriptive analysis*. It answers questions like: How does immigration law vary at one point in time across different countries? Or how does immigration law evolve in separate countries? These are questions about variation across space with a possible time component. One may also ask: Have borders become more selective? Has immigrant rights and the access to citizenship become more inclusive? And have immigration laws become more similar across countries? These are questions that focus on variation over time. Descriptive analysis can be either the first step in a more comprehensive research project that ultimately aims to identify causes and/or effects of immigration law, or it can be an end in itself to better understand immigration law and its patterns across space and time.

In this section, I unpack the two primary ways to describe cross-temporal aggregate patterns in immigration law beyond individual nation-states: *trend* and *convergence* analysis. For each way, I introduce several possible tools, illustrating each tool with examples from the existing literature. By doing so, the resulting overview also draws a picture of some important patterns in immigration law. The analysis of trends within countries is omitted; it can be achieved by simply displaying the variation of a variable over time in a table or graph for separate countries.

BASIC TOOLS

The most simple and most straightforward method to analyze aggregate trends and convergence in immigration law is the display the variation in *mean values* and *standard deviations* of a specific variable across units of time. Mean values are calculated using the arithmetic mean of the measure to be analyzed across several countries for each year that is covered. This average over time shows the trend in the relevant immigration law. By contrast, the standard deviation is a measure gauging how strongly the countries included vary around the arithmetic mean, thus capturing convergence. It is higher when there is greater variation, and lower when variation is smaller. Thus, if the standard deviation decreases there is convergence and countries have become more similar, and when it increases there is divergence and countries have become less similar.

One can either display these two statistics *numerically* for different years and/or illustrate the trend *graphically*. An example for the first option of numerical display is the seminal analysis of the *Indicators of Citizenship Rights for Immigrants* (ICRI) by Koopmans and colleagues (2012). Using their original data on 10 Western European countries for four years in the span of 1980-2008, they simply display the mean values and the standard deviations for each of the eight legal areas of integration and citizenship law as well as for the two main dimensions of their dataset, which, to reiterate,

collapse these areas into a first dimension measuring individual equality rights and a second dimension measuring cultural difference rights. The results indicate that the rights in most legal areas and in both dimensions have become extended until 2002 and then stagnated afterwards – as evidenced by higher mean values that stopped increasing from 2002 to 2008. Furthermore, at the same time, the standard deviations have neither increased or decreased substantially. Therefore, we can conclude that immigrant rights have not converged. Koopmans and colleagues (2012) thus bolster the classical but often questioned notion that integration and citizenship law are strongly path-dependent.

The trend and convergence analyses by Schmid (2021a) in essence do the same but they employ graphical displays rather than numerical information to chart mean values and standard deviations. One of the reasons for this is because full-fledged panel data is available for every country and year. This lends itself for graphical analysis. Schmid (2021a) uses the *Citizenship Regime Inclusiveness Index* (CITRIX) to show that across 23 OECD countries, citizenship law indeed converges from 1980-2019 as standard deviations decrease substantially over time. This goes against the classical expectations of path-dependency and thus also against the finding of Koopmans and colleagues (2012), who have used fewer cases and a different focus on integration more broadly, with citizenship as only one legal area among many. Regarding the trend in mean values, however, Schmid (2021a) comes to a strikingly similar conclusion. Citizenship law has become more inclusive until 2003, but afterwards, and after a dip in the wake of an often-cited civic integration turn that also manifests in the adoption of integration conditions in citizenship law, the aggregate level of inclusiveness has stagnated until 2019. Yet, the graphs also show that this aggregate stagnating trend is produced by an accelerating tightening of integration conditions for naturalization and a simultaneous liberalization when it comes to territorial birthright, residence, and the toleration of dual citizenship.

This illustrates how important it can be to disaggregate measures so that potentially contrasting trends become visible.

ADDITIONAL TOOLS

The study by Solano and colleagues (2023) adds three tools. One is an additional element for gauging statistical significance, and the other one constitutes an alternative to arithmetic means. I begin with this alternative. To analyze average trends in various domains of immigration law using the latest version of the *Migrant Integration Policy Index* (MIPEX) across 36 OECD and EU countries from 2010 to 2019, they opt for the median rather than the mean. The median constitutes a different type of average of some observed variable. It is defined as the observed value in one specific observation (in this case a country in some given year) above and below which the number of observations amounts to exactly 50% of all observations. This makes the median robust to extreme values (*outliers*), which is the main reason why Solano and colleagues use it. Arithmetic means, by contrast, can be strongly affected by extreme values. This is because the arithmetic mean factors in every observation directly and equally in its calculation of the average rather than simply locating the exact observation that is in the middle of the distribution of values regardless of what the other values are, as is done by the median. Solano and colleagues display both graphical and numerical information on median values in MIPEX aggregate scores and across seven different legal areas. The results show that overall most integration laws have become more liberal, but in non-EU countries as well as in the areas of family reunion and permanent residence they have become more restrictive. At the same time, the results suggest that the magnitude of these legal shifts is so small that they constitute subtle changes rather than the transformative change that is often assumed to have happened during the past decade.

Solano and colleagues (2023) then go beyond the basic template for trend and convergence analysis by adding further assessments of statistical significance that are usually not used in the field. Regarding trends, they do this by using two methods. The first is a simple test statistic derived from the direct comparison of MIPEX scores from 2010 and 2019 (in this case a Wilcoxon-test appropriate for the ordinal measurement level of the variable). The second is a coefficient from a descriptive regression analysis that summarizes the yearly linear change in median values, that is, the average linear trend for each year that can be gleaned from the pattern of change over all years. (I shall explain how regression analysis and statistical significance testing works in plain and simple terms in the next section.) The results show that that statistically significant differences in the aggregate MIPEX score and each legal area can be detected in at least one of those two methods, thus corroborating the results yielded by other methods.

Regarding convergence, there are two additional elements in the analysis by Solano and colleagues (2023). The first is an estimation of statistical significance for the trends in standard deviations. To do so, they employ descriptive regression analysis once more to estimate the yearly linear change in standard deviations. The results again show statistically significant yearly differences. The second is called *beta convergence* (while the analysis of standard deviations is called *sigma convergence*). Constituting a different form of convergence that may remain hidden when only sigma convergence is analyzed (Plümper and Schneider 2009), it uses regression analysis to estimate to what extent policy laggards catch up to policy leaders. Solano and colleagues find evidence for significant beta convergence in integration laws.

This overview of some mapping exercises showcases several instruments available in the methodological toolbox of descriptive statistics. Neither this toolbox nor the picture we gain from the results of the few selected studies is complete. Nonetheless, the main pattern of variation in

immigration law uncovered by the studies selected here points to tendencies towards long-term convergent liberalizations the domains of integration and citizenship. This contradicts the classical view that these domains exhibit persistent path-dependency. The evidence also suggests that the tendency towards liberalization has become weaker over time or even stagnated on aggregate, as changes tend to be smaller in magnitude from 2000 and especially from 2010 onwards. By contrast, the tendency towards convergence has increased. In addition, some of the results point to a restrictive and convergent tendency in some areas in the domain of immigration after 2010, especially in non-EU OECD countries.

TOOLS FOR CAUSAL ANALYSIS

We can turn to causal analysis once we go beyond cross-temporal trends and convergence and also identify cross-national variations in immigration law, ideally also over time. In this section, I introduce the two basic types of causal analysis that can be applied to investigate these variations in immigration law: the *analysis of causes*, and the *analysis of effects*. When we focus on causes, we need methods to estimate the impact of various explanatory factors on immigration law. When we focus on effects, we need methods to estimate the impact of immigration law on an outcome. When presenting the standard methods used to do so, we can distinguish between *X-centric approaches* focusing on isolating the explanatory power of a single independent variable and *Y-centric approaches* focusing on explaining as much variation as possible in a dependent variable, often by using multiple independent variables. While explanations of immigration law can be either X-centric or Y-centric, the estimation of effects is always X-centric – it focuses on immigration law as the independent variable or single explanatory factor of interest. Important differences between observational and quasi-experimental studies are also discussed. These differences define to what extent we can identify

truly causal relations between independent and dependent variables. To unpack these various issues, I provide further examples from the literature.

THE LOGIC OF REGRESSION ANALYSIS MADE SIMPLE

I begin with a simple and plain explanation of regression analysis – the workhorse of quantitative comparative analysis is the social sciences. My aim is to present the logic of this method for those who are not familiar with it so that they can understand what follows. While regression analysis comes in many forms to accommodate different types of variables and to meet a wide variety of purposes across various settings, the underlying goal is always to quantify the effect of an *independent variable*, or the to quantify the separate effects of multiple independent variables, on some other *dependent variable*. This quantification is ultimately based on the correlation between independent and dependent variables. Independent variables in a regression model constitute the explanatory factors, often abbreviated as X. Dependent variables in a regression model constitute the phenomenon to be explained, often abbreviated as Y. Hence, in short, regression analysis uses X-variables to explain Y-variables. A frequently encountered relationship is that when there is more of X, then there is more of Y. To quantify this relationship, regression analysis estimates *regression coefficients*. They estimate the extent to which the variation in some independent variable X can explain variation in the dependent variable Y, and they do so in two ways.

On the one hand, the coefficient itself estimates the *effect size*, and on the other hand, the regression analysis attaches a *p-value* to every coefficient. The effect size reveals the substantial explanatory power of some variable X. If the size can be interpreted as large, the explanatory power is high; if it is small, it is low. So, for instance, if a modest increase in X leads to a large increase in Y, the effect size is large. Meanwhile, the p-value indicates the degree of *statistical significance*. This is

not to be confused with *substantive significance*, which refers to the effect size. Instead, the p-value tells us how certain we can be that the coefficient we have estimated differs from a *null effect* (meaning there is no effect). If the p-value is very low, we can be relatively certain (but never absolutely sure) that the coefficient we have estimated differs from a null effect not only in our sample due to random chance but also more systematically in the broader underlying population that we are interested in. Hence, statistical significance indicates to what extent we can generalize beyond a specific sample.

The (arbitrary) convention is that we see a statistically significant coefficient when this certainty exceeds 95% as quantified by the p-value. Accordingly, we regard coefficients with a p-value below 0.05 as significant, and those that are above 0.05 as insignificant. There is no space here to go into the manifold discussions about the use and misuse of p-values – conceptualized as this dichotomous decision – as the main quantity that indicates the presence of some effect. But it is useful to know that the p-value and its dichotomous use is not as firmly established as it once was. The attention in both the methodological literature as well as the standards required by some journals is shifting to effect sizes and other measures of uncertainty or at least a different or less central use of p-values.

If we enter multiple independent variables into a regression analysis, the method can estimate separate regression coefficients for each variable at once. In this way, regression analysis can isolate the explanatory power and statistical significance of each of those variables, and thus tell us to what degree each independent variable has an effect on a dependent variable while adjusting for the effects of other variables at the same time. When we investigate the causes of immigration law, we can therefore, on the one hand, focus on a specific independent variable X and try to isolate it by accounting for other relevant X variables that may affect this X-Y relationship we focus on, called *control variables*. This first strategy is *X-centric* because it is interested solely in quantifying and isolating

the effect of a specific X while controlling for additional variables. On the other hand, we can focus on multiple independent variables X to explain as much variation as possible in immigration law as the dependent variable Y. This second strategy is *Y-centric* because it is interested in explaining variation in Y by using multiple X variables and, if that is the goal of our analysis, by separating and comparing their explanatory power. The two strategies can also be combined. The prime instance is when we test whether a specific X variable explains a large proportion of the variation in Y.

ANALYSIS OF CAUSES

X-centric analysis. The study by Lutz (2019) is an example of an *X-centric* quantitative regression analysis using a classical comparative political science approach. Focusing on 17 Western European countries from 1990 to 2014, it aims to estimate the effect of government participation of right-wing populist parties (the key independent variable X) on legal reforms in the domains of immigration and integration (two separate dependent variables Y). The unit of analysis are government cabinets, to which relevant legal reforms in immigration and integration are attributed using the DEMIG POLICY database. While the independent variable is dichotomous, indicating whether right-wing populist parties are part of the cabinet, the dependent variable reflects the sum of liberalizing versus restrictive legal changes in immigration and integration, respectively, thus indicating to what extent liberalizations outnumber restrictions, or vice-versa. Various control variables ranging from economic to political and institutional factors are added and their value is averaged across each cabinet to accommodate the annually varying variables with the unit of analysis chosen here (for an alternative approach that uses cross-classified multilevel models to better account for the data structure with countries, years, and legislative periods see Garritzmann and Seng 2020). Additional methodological measures are taken to accommodate the spatial and temporal

clustering of the data within specific countries over time (such adjustments are necessary when we handle panel data with yearly observations per country).

The results show that while for integration right-wing populist parties' participation in government coalitions matter, for immigration they do not. This is evidenced by a statistically significant and substantively sizable negative regression coefficient for variable X on the variable Y measuring net legal changes in integration. In other words, this negative coefficient indicates that if right-wing populist parties are part of a government, integration becomes more restrictive. By contrast, the regression coefficient for variable X on the variable Y measuring net legal changes in immigration is statistically insignificant and small in size, thus showing a null effect. This indicates that a government with radical right populists does not affect changes in the domain of immigration compared to governments without radical right populists. According to Lutz (2019) this shows that right-wing populist parties cannot overcome the strong structural constraints in the domain of immigration even when they are in government. The domain of integration lacks those constraints, enabling right-wing populists in government to realize their restrictive preferences in this domain of immigration law. This study therefore shows what we can learn about immigration lawmaking by combining novel databases with political variables and by employing regression analysis.

Y-centric analysis. Another notable example zooming in on various explanatory factors that account for variation in the domain of integration is that of Koopmans and colleagues (2012). It is *Y-centric* because it is mainly interested in explaining variation in integration lawand in comparing the the explanatory power of multiple independent variables simultaneously while not accounting for control variables. Covering 10 Western European countries at three points in time (1990, 2002, 2008), and using the ICRI database to measure variations in the domain of integration as the dependent variable, it considers the three types of independent variables. The first is the level of

immigrant rights in 1980. It can be used to see to what extent immigrant rights are constrained by their past. The second type relate to a specific theoretical lens that has gained prominence in the study of immigrant rights, namely the idea that due to international and democratic-constitutional factors there has been liberal convergence in immigrant rights. The study considers EU membership and the strength of judicial review to test this theory. Finally, an alternative prominent theoretical lens argues that variations in immigrant rights are the outcome of distinct national political processes. Here the study considers the following independent variables: the share of immigrant-origin voters, the vote share of right-wing populist parties, left-party government incumbency, and economic growth.

The regression analyses in the study by Koopmans and colleagues (2012) show that three factors are statistically significant predictors of variations in integration law, regardless of whether we consider the different dimensions of integration that ICRI measures: individual equality rights, cultural difference rights, or all immigrant rights in a composite index. The first statistically significant and large coefficient is estimated for the level of immigrant rights in 1980. Hence, integration law is strongly path-dependent. The other two factors relate to the national political process perspective. While higher shares of immigrant-origin voters explain the expansion of rights, higher vote shares of right-wing populist parties are associated with lower levels of rights. All other factors show statistically insignificant regression coefficients. Koopmans and colleagues conclude that path-dependence and certain variations in national political processes best explain what we observe. The alternative idea of liberal convergence in the domain of integration is refuted. This study therefore constitutes another prime example of what we can learn about immigration lawmaking by leveraging the quantitative tools at our disposal.

Across the past decades, the social sciences have undergone a "causal revolution" (Pearl and Mackenzie 2020). This has led to the development of new research designs and methods that allow for *causal identification* or *causal inference*. When an effect of X on Y is causally identified, we can infer that X *causes* Y, it does not just correlate with it. Some even argue that any use of the causal language of "effects" is misplaced when we are not equipped with effective causal identification strategies.

The gold standard for causal identification is an experimental research design. Its purest form is a randomized controlled trial (RCT), which has a long tradition especially in medicine. Most of us are familiar with the basic idea. Researchers randomly assign people into a treatment group that receives a pill with an active ingredient and a control group that receives a placebo, and both do so unknowingly. Random assignment ensures that the only systematic variation between the two groups is the exposure to the active ingredient. If statistical analysis then shows that the treatment groups' symptoms have been decreased to a statistically significant degree when compared to the control group, one can infer that the medication works – it has a causal effect.

The causal revolution in the social sciences has gone hand-in-hand with the study of the effects of legislative action. One reason for this is that many laws can be conceptualized as a pill that lawmakers administer to society to solve a certain problem or mitigate a perceived pathology in society. In other words, lawmakers in some ways think like doctors. Social science can then be used to test the effectiveness of legal changes and investigate other possible effects. To do so, a wide variety of techniques implementing or mimicking the basic experimental template have evolved across the social sciences. It is not my aim to provide an overview of these techniques here. Instead, in the following, I discuss one prominent example from the literature on immigration law. I then use

this example to situate causal methodologies and their potential problems in the broader literature of the effects of immigration law.

For my discussion, I select the study by Hainmueller and colleagues (2015). Published in the *Proceedings of the National Academy of Sciences* (PNAS) – a renowned natural science journal – it seeks to causally identify the effect of naturalization on long-term political integration outcomes such as political efficacy (the sense of having political influence) and political knowledge. It focuses on the special case of Switzerland, where until some decades ago voters in many municipalities had decided at the polls whether to grant Swiss citizenship to applicants and have fulfilled all legal requirements (Swiss citizenship on the federal level is derived from having been granted citizenship in a specific municipality).

Their causal identification strategy works by comparing the integration outcomes of individuals that have narrowly been rejected or narrowly been approved for naturalization. Around the approval threshold of fifty percent, and especially in the context of small Swiss municipalities, the result of the referendum is determined by slight variations in turnout and voter composition and/or preferences related to factors that are not systematically related to the result itself. This quasi-random assignment to the group of those who receive the "pill of naturalization" and those who do not does not deviate meaningfully from directly controlled random assignment to treatment and control group. By cleverly cutting out this snippet of reality that works like an experiment, the researchers can therefore plausibly infer a causal effect. This is why this research design is also called a natural experiment or quasi-experiment.

One can fully appreciate this design by looking at the alternative that researchers would have implemented before the causal revolution. They would have simply run a representative survey among all people with an immigration background, asked them whether they possess the passport

or not (including those who never applied), and then asked further questions to measure political integration outcomes and several control variables. These variables would then be entered into a regression model, estimating the effect of naturalization on integration outcomes along with control variables. The fundamental problem with this strategy is that it does not account for the self-selection into naturalization, and therefore the assignment to the treatment is not random. This is problematic because those who apply for naturalization are likely to differ systematically regarding political integration than those who do not. This non-experimental strategy may uncover systematic differences between naturalized and non-naturalized, but it does not allow for robust causal identification of a naturalization effect because it does not compare like with like. Against this background, it becomes more understandable why some argue that the causal language of "effects" is not warranted whenever we cannot use a proper causal identification strategy.

However, causal research designs also have downsides. The first and most-referenced disadvantage is that, while causal identification strategies maximize the internal validity of a study, the external validity or generalizability is not clear. For instance, Switzerland is notorious for its restrictive citizenship law – a fact well-documented by measures like MIPEX or CITRIX. Even more, standard national-level measures of citizenship law seriously underestimate Switzerland's exclusiveness, because municipalities can add local-level requirements and have a lot of discretion in naturalization decisions. This restrictiveness could increase the positive effect of naturalization on integration outcomes. In addition, Switzerland grants foreigners below-average degrees of political rights (as measured by MIPEX), while citizens possess extremely above-average direct democratic rights (as many will know). Experiencing this boost in democratic rights makes the finding of statistically significant effects on variables such as political efficacy – which is what the study finds – very likely if not trivial.

The more classical *observational* (non-experimental) approach to study the effects of variations in immigration law more broadly is to compare individuals nested within various countries, or to compare countries as such rather than individuals. For instance, observational regression analyses show that more inclusive citizenship laws lead to a higher propensity of individuals to naturalize (Dronkers and Vink 2012; using MIPEX). Other studies show that immigrants exposed to more restrictive immigration laws only experience no to very limited increases in various integration outcomes, with most of these effects being contingent on the region of origin (Helbling et al. 2020; using IMPIC). Still other observational analyses show that more restrictive immigration laws reduce migration flows to some extent (Helbling and Leblang 2019; using IMPIC). By addressing these key questions, this strand of research has also significantly advanced our knowledge about the effects of immigration law.

Thus, even though causal identification strategies are very appealing due to their scientific elegance and rigor, it would be bad news if we were to abandon the study of important questions about the effects of immigration law that cannot investigated using causal research designs. This applies even more to the study of the causes of immigration law, because it often impossible to devise a causal identification strategy for explaining legal variations on the national level based on observational data.

CONCLUSION

This chapter has built on the term *tertium comparationis* – the cornerstone of any exercise in comparative law. It refers to the equivalent attribute that is to be compared across legal systems. In my view, this basic aspect also constitutes a key point of entry for lawyers engaging with the quantitative study of immigration law as practiced in comparative political science. Legal scholars

know much better than political scientists which regulations can be considered functionally equivalent across different settings. Once we have identified the relevant legal rules, political scientists should also talk to lawyers to jointly refine concepts and measurements that allow us to pinpoint the relevant distinctions with greater accuracy, and which can travel across different legal systems globally without undermining their validity.

The first truly global database in the realm of comparative immigration law – the GLOBALCIT Citizenship Law Dataset – is testimony to the potential of interdisciplinary collaboration. It has emerged thanks to political theorists, political scientists, and legal scholars intimately working together. Other projects should follow their lead to create more data with global coverage. Especially our knowledge of immigration law in the Global South is still very limited, mostly due to this lack of readily available quantitative data and the self-perpetuating political economy of knowledge production focusing heavily on OECD countries. Last but not least, we lack historical data for important dimensions of immigration law, also across the Global North. Only when we have such global longitudinal measures at our disposal will we be able to draw of full picture of the nature and evolution as well as the causes and effects of immigration law on our planet.

Due to their central role in the research process, the interdisciplinary community studying comparative immigration law should also keep key databases up to date and expand their coverage across space and time. Ideally, scholars from various disciplines would work together to build a centralized infrastructure that ensures the continuous maintenance and refinement of databases and leads their expansion across time and space through pooled funding. Other fields in political science have already achieved this level of coordination and sophistication. The prime example and role model is the database on democracy measurement developed by the *Varieties of Democracy* project (V-DEM).

Comparative lawyers can also help political scientists identify qualitative distinctions that go beyond the usual focus of quantitative measures on differences in degree, which I have also highlighted in this chapter. The creation of new typologies is a key area that has recently become more busy again in political science research on immigration law (e.g. Boucher and Gest 2018; Schmid 2020). Having a rich tradition in classifying legal systems, comparative lawyers could contribute to this enterprise by identifying thresholds that mark qualitative variation along quantitatively measured dimensions. Furthermore, such qualitative assessments could be connected to normative legal analysis to bridge the divide between empirical political science and political theory – something that, paradoxically, has been done rarely in a field that is saturated with normative proposals (for an exception see Blatter et al. 2017).

However, while qualitative distinctions, normative assessments, and typologies can be useful, we must avoid falling back into the old traps of dichotomous or otherwise categorical classifications just as much as we must avoid falling into the new traps of inductive and data-driven identification of clusters of countries with similar immigration laws, which is unhelpful if it is not grounded in strong theory. Instead of combining multiple dimensions into immigration law typologies, it seems more productive for future research – besides the analysis of the causes and effects of single dimensions itself – to explore the relationships between different dimensions across different domains of immigration law. Potential trade-offs between distinct domains are particularly interesting and contested. For instance, there is conflicting evidence as to how openness in the immigration domain and inclusiveness in integration and citizenship domains correlate across space and time (Ruhs 2013; Bearce and Hart 2018; Schmid 2021b). Legal scholars could contribute to this question not only directly but also by bringing to bear the relevant qualitative evidence from the countries and legal systems they know best. Indeed, interdisciplinary collaboration may also be most productive when it triangulates multiple methods.

At the same time, while certainly not all students of law need training in statistical methods, scholars of empirical legal studies can and should also employ quantitative tools on their own. Going beyond the confines of political science and its key variables, they may also think of new independent variables that could be causes of variations in immigration law, or new dependent variables that may be relevant as effects of variations in immigration law. Legal scholarship seems especially well-equipped to theorize and study the effectiveness of specific immigration laws as it pertains to various social or individual-level outcomes.

I conclude that the insight that "comparative law seems to be too important to be left to comparative lawyers" (Siems 2014, 312) also applies to comparative political science generally and to the study of comparative immigration law inspired by quantitative political science approaches more specifically: it is too important to be left only to political scientists. This is why in the years and decades ahead, one of the main challenges for comparative political scientists and comparative lawyers will be to overcome their disciplinary boundaries in order to realize that they have ignored each other too long when they in fact have so much to say to each other (Kischel 2019, 23-4, 26). Equipped with jointly created and ever-more encompassing sources of comparative data, as well as by leveraging creative combinations of multiple methods, it is this interdisciplinary spirit – combined with a productive and sensible collaboration and division of labor – that has the potential to lead to critical advances in the field of comparative immigration law.

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