GLOBAL DYNAMICS OF SOCIAL POLICY

Networks and Geographies of Global Social Policy Diffusion

Culture, Economy, and Colonial Legacies

Edited by
Michael Windzio
Ivo Mossig
Fabian Besche-Truthe
Helen Seitzer

Global Dynamics of Social Policy CRC 1342

OPEN ACCESS

palgrave macmillan

Global Dynamics of Social Policy

This open access series welcomes studies on the waves, ruptures and transformative periods of welfare state expansion and retrenchment globally, that is, across nation states and the world as well as across history since the inception of the modern Western welfare state in the nineteenth century. It takes a comprehensive and globalized perspective on social policy, and the approach will help to locate and explain episodes of retrenchment, austerity, and tendencies toward de-welfarization in particular countries, policy areas and/or social risk-groups by reference to prior, simultaneous or anticipated episodes of expansion or contraction in other countries, areas, and risks. One of the aims of this series is to address the different constellations that emerge between political and economic actors including international and intergovernmental organizations, political actors and bodies, and business enterprises. A better understanding of these dynamics improves the reader's grasp of social policy making, social policy outputs, and ultimately the outcomes of social policy.

More information about this series at
https://link.springer.com/bookseries/16294

Michael Windzio · Ivo Mossig ·
Fabian Besche-Truthe · Helen Seitzer
Editors

Networks and Geographies of Global Social Policy Diffusion

Culture, Economy, and Colonial Legacies

palgrave
macmillan

Editors
Michael Windzio
SOCIUM
University of Bremen
Bremen, Germany

Ivo Mossig
Institute of Geography
University of Bremen
Bremen, Germany

Fabian Besche-Truthe
SOCIUM
University of Bremen
Bremen, Germany

Helen Seitzer
SOCIUM
University of Bremen
Bremen, Germany

ISSN 2661-8672 ISSN 2661-8680 (electronic)
Global Dynamics of Social Policy
ISBN 978-3-030-83402-9 ISBN 978-3-030-83403-6 (eBook)
https://doi.org/10.1007/978-3-030-83403-6

This Palgrave Macmillan imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Acknowledgments

This book is based on the research conducted in the Collaborative Research Center (CRC) 1342 "Global Dynamics of Social Policy" at the University of Bremen. The Bremen CRC 1342 is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)—project number 374666841—SFB 1342. As the editors we are grateful to the DFG and the CRC for having enabled us to conduct this research and to produce this volume. First, ideas of the analyses have been developed during a workshop on network diffusion held by the editors in September 2020 in Bremen. Draft versions of the chapters have been discussed during an online workshop in November 2020. We are grateful to Gabrielle Bieser, Amelia Price, Vicki May, Ashley Fritsch, Nils Düpont, and Dirk Stieglitz who helped us with language checking and manuscript editing. Michael Lischka helped us with the network graphs, Tobias Tkaczick with the maps, and Kerstin Martens with some support on formal issues. Thanks go also to a reviewer, who gave helpful advice, and special thanks to Heinz Rothgang who was more important for the realization of this project than he might think.

About This Book

This volume presents a wide-ranging analysis of the emergence and worldwide diffusion of social policies. Social policy diffusion is analyzed in varying fields—affecting all aspects of life—namely, old age and survivor pensions, labor and labor markets, health and long-term care, education and training, and family and gender policy. Based on policy field-specific theoretical approaches, the authors of this volume investigate how the global diffusion of social policy occurs through different network dimensions. In this perspective, networks of global trade, colonial history, similarity in culture, and spatial proximity are regarded as "pipe structures," or structural backbones, of the diffusion process. It is the first volume that explicitly follows this macro-quantitative perspective on network diffusion of different social policies on a global scale and over a long historical period, beginning in 1880. Each study applies the same method of network-diffusion event history analysis and predicts the diffusion process for the same set of networks in order to make these processes comparable. Moreover, diffusion of each policy is highlighted by its spatial–temporal patterns in global maps. This volume therefore provides a comprehensive overview of the development of modern social policies.

Contents

Contributors

Fabian Besche-Truthe University of Bremen, Germany

Tobias Böger University of Bremen, Germany

Nate Breznau University of Bremen, Germany

Gabriela de Carvalho University of Bremen, Germany

Johanna Fischer University of Bremen, Germany

Jenny Hahs University of Bremen, Germany

Sebastian Haunss University of Bremen, Germany

Felix Lanver University of Bremen, Germany

Ivo Mossig University of Bremen, Germany

Herbert Obinger University of Bremen, Germany

Alexander Polte University of Bremen, Germany

Heinz Rothgang University of Bremen, Germany

Achim Schmid University of Bremen, Germany

Carina Schmitt University of Bremen, Germany

Helen Seitzer University of Bremen, Germany

Keonhi Son University of Bremen, Germany

Meika Sternkopf University of Bremen, Germany

Simone Tonelli University of Bremen, Germany

Michael Windzio University of Bremen, Germany

List of Figures

List of Tables

1

Networks of Global Social Policy Diffusion: The Effects of Culture, Economy, Colonial Legacies, and Geographic Proximity

Ivo Mossig, Michael Windzio, Fabian Besche-Truthe, and Helen Seitzer

Introduction[1]

The global diffusion of social policy is an emerging field in political science and comparative macro-sociology. Detailed, qualitative studies can precisely highlight the mechanisms of diffusion at work, e.g., learning, emulation, competition, or coercion (Gilardi 2016; Obinger et al. 2013). Even though this approach can reveal these mechanisms, it is limited to the respective cases under investigation. At a higher level of abstraction, researchers can apply statistical models for diffusion research on a comprehensive set of countries and over a long historical

[1]This chapter is a product of the research conducted in the Collaborative Research Center "Global Dynamics of Social Policy" at the University of Bremen. The center is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)—project number 374666841—SFB 1342.

I. Mossig (✉)
Institute of Geography, University of Bremen, Bremen, Germany
e-mail: ivo.mossig@uni-bremen.de; mossig@uni-bremen.de

M. Windzio et al. (eds.), *Networks and Geographies of Global Social Policy Diffusion*, Global Dynamics of Social Policy,
https://doi.org/10.1007/978-3-030-83403-6_1

period. On the one hand, such studies usually abstract from the country-specific "micro" mechanisms; on the other hand, they provide a "macro" perspective on the diffusion process in the overall population of countries around the globe. The empirical studies collected in this volume follow the second approach.

Our research was conducted in the Collaborative Research Center 1342 (CRC 1342) at the University of Bremen, which is funded by the German Research Foundation (DFG). The members of the CRC 1342 collected an unprecedented amount of historical data on welfare policies around the globe to allow for macro-quantitative analyzes of global diffusion in different subfields of social policy covering almost all countries in the world. This book is a collaborative effort of the quantitative projects in the CRC 1342 that analyze the diffusion of welfare policies.

We regard diffusion as a process driven by multiplex ties between countries in global social networks. In social network research, *multiplexity* means that subjects have network ties in various dimensions. In our view, *global trade*, *colonial history*, *similarity in culture*, and *spatial proximity* link countries to each other. In an epidemic, nowadays an unfortunately well-known type of diffusion, the share of infected subjects in the population depends on single events of disease-adoption at the micro-level; these events, in turn, result from some kind of *interaction* between subjects. Hence, networks are the "pipe structure," or the structural backbone, of the diffusion process. We will analyze diffusion in several subfields of social policy, investigating the question of which network dimensions drive the process. For instance, the introduction of certain labor regulations might depend more on economic ties, in particular, global trade, whereas cultural similarity between countries could

M. Windzio · F. Besche-Truthe · H. Seitzer
SOCIUM, University of Bremen, Bremen, Germany
e-mail: mwindzio@uni-bremen.de

F. Besche-Truthe
e-mail: fbesche@uni-bremen.de

H. Seitzer
e-mail: seitzer@uni-bremen.de

be more important for family or education policy. This volume aims at testing the different network structures against one another in their relevance for the diffusion process in different subfields of social policy. These policy fields are *old age and survivor pensions*, *labor and labor markets*, *health and long-term care*, *education and training*, and *family and gender policy*.

The present chapter introduces a network diffusion model for the analysis of social policy diffusion. We will give a detailed overview of the networks used in the following contributions. By applying an identical methodology to different fields of social policy, studies in this volume contribute to comparative research on the diffusion of social policy.

Four different networks will be analyzed as explanatory variables in this volume. The first is the network of *geographical distance or proximity*, which is represented by the distances between the capitals of the countries included in the sample. This network is based on the assumption that diffusion processes are subject to "slowing" effects of distance (Staudacher 2005; Berry 1972). However, geographical distances do not represent actual network contacts but merely promote the formation, frequency, and intensity of contacts. For this reason, we will secondly analyze the effect of the *global trade* network. We assume that beneficial economic exchange in global markets is a crucial condition for domestic economic growth (Krugman et al. 2018), but global economic transactions might be less costly if labor or educational standards are similar. Thirdly, we will analyze the network representing "*cultural spheres*" (Windzio and Martens 2021), which we assume to be of particular importance in the subfields of family and education policy. The fourth network represents ties of *colonial legacies* between states and captures long-term, asymmetric interdependencies. In this framework, the spatial distance network, or more precisely the spatial proximity network, serves as a reference point for determining whether the contacts in the three other network types exceed the breaking effect of distances and are therefore more relevant to the diffusion of social policy (Simmons and Elkins 2004).

The aim of this chapter is to present in detail the methodology of the network diffusion model used in the following chapters and the networks of geographical distances, global trade, cultural spheres, and colonial

legacies. We will give a brief overview of the current state of research and argue that the respective networks might be relevant in explaining diffusion processes in social policy. Subsequently, we will describe the construction of the networks, network parameters, and visualizations. Accounting for the change of network contacts over time, we apply longitudinal exponential random graph models (ERGMs) (Harris 2014) to analyze relevant variables influencing the probability of network ties.

The Network Diffusion Model in Event History Analysis

Processes of social diffusion often follow a logistic growth curve. Logistic growth processes are common in epidemiology, where they describe the spread of infectious diseases (Shen 2020). If the mechanism of diffusion is *contagion* via contact among subjects, the probability of meeting an "infected" subject is very low at the beginning of an epidemic, but the likelihood increases as the share of those who have already contracted the disease rises.

Yet subjects show considerable variance in social behavior as well as in their likelihood to contract the disease. Depending on the disease, some subjects turn out to be immune, have very few network ties, or are even isolated. Moreover, if other subjects recover from the disease and are immune afterward, the increase in the probability of becoming infected at a particular moment decreases if most subjects to whom potentially infected persons have contacted are now immune (left-hand side of Fig. 1.1). This applies not only to the spread of diseases (Shen 2020); we can also describe the diffusion of innovation in this way and, accordingly, the diffusion of different social policies as well. Even though the logistic growth curve is a crucial characteristic of diffusion processes (Rogers 2003), the underlying structure is a network. Networks were not systematically included in diffusion analysis until the mid-1990s, when Thomas Valente developed the network diffusion model (Valente 1995). At the micro-level, events of contraction drive the diffusion process, which means that subjects change their state from uninfected to infected, for example, or to have adopted an innovation—in our case, a policy. Each

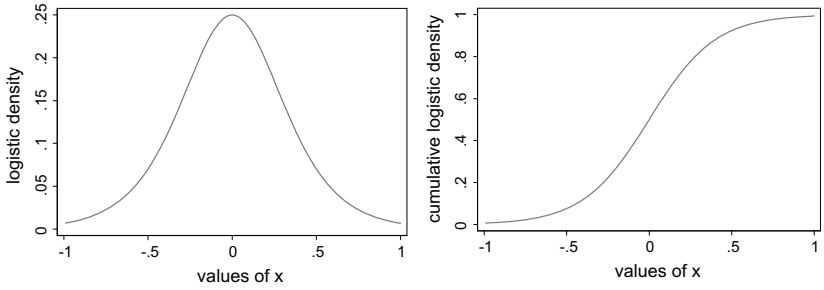


Fig. 1.1 Logistic density and cumulative logistic density function

single micro-level event contributes to the time-dependent aggregation of these events to the macro-level, where we then describe the diffusion process as a characteristic of the overall population, for example, by the cumulative logistic growth function (right-hand side of Fig. 1.1).

At the starting point of an epidemic, all subjects are at risk of adopting the disease. Due to the waiting time until the moment of contraction, the underlying micro-level data are called *episodes*, with the starting point being the first occurrence of an infection in the population and the endpoint being either the contraction of the disease, the end of the epidemic, or simply the end of the window of observation. Consequently, we will apply event history models to analyze micro-level events of policy adoption in order to reconstruct the diffusion process at the population level. In these models, the dependent variable is the hazard rate (in our case the rate of adoption of the respective social policy). It is defined as the probability P, that the event at time T, occurs within a particular interval between t and $t + \Delta t$, given that the event has not yet occurred at t, that is, T is greater than or equal to t.

$$r(t) = P(t \leq T < t + \Delta t | T \geq t) = \frac{P(t \leq T < t + \Delta t)}{P(T \geq t)}$$

In a discrete-time situation, we can estimate event history regression models by using binary outcome models (Singer and Willett 2003) such as logit, probit, or complementary log–log models. In this volume, we

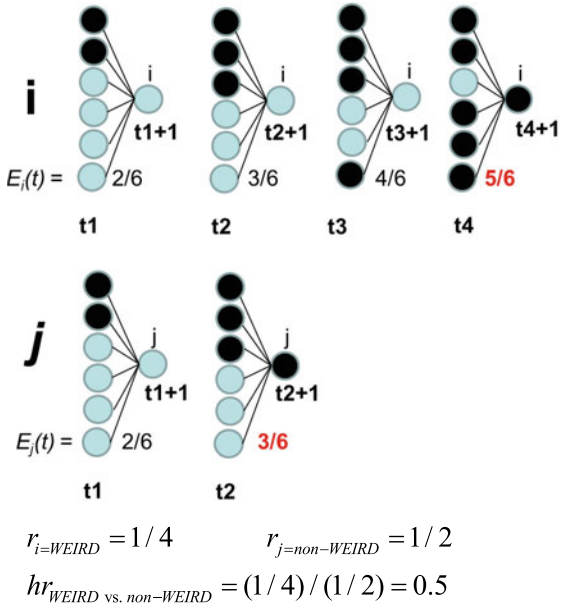
will use logit models, where the hazard rate $r(t)$ is predicted by j time-dummies α that indicate e.g., 25-year time intervals, to estimate the effects of our four networks of trade, colonial history, cultural spheres, and spatial proximity, and some control variables **β'x**.

$$r(t) = \frac{1}{1 + \exp(-(\alpha_1 t_1 + \ldots + \alpha_j t_j + \beta_1 trade + \beta_2 colony + \beta_3 culture + \beta_4 proximty + \beta' \mathbf{x}))}$$

Contagion at time t depends on exposure to subjects already infected at $t-1$. Valente (1995, 43) defines exposure as the share of infected subjects j in the (time-varying) egocentered network of subject i. The term x_{ij} defines a tie in the egocentered network of subject j, and a_j are those alters already infected at t. The formula below shows that exposure is a function of t, which means that it depends on time.

$$E_i(t) = \frac{(\sum_{j \neq i} x_{ij} \bullet a_j)_t}{(\sum_{j \neq i} x_{ij})_t}$$

Figure 1.2 gives an example of how exposure is calculated and represented in time-dependent episode data. The table on the right-hand side of Fig. 1.2 represents the underlying data structure, which is comprised of two subjects i and j. It shows the dependent variable "d" that denotes whether the innovation was adopted at a particular time point "t," the network exposure ("expo."), and one binary control variable. For this exemplary representation, we chose a dummy variable, which indicates that subject i belongs to the WEIRD "cultural sphere" *of western, educated, industrialized, resourceful and democratic* countries as one control variable (Henrich 2020; Seitzer et al. 2021) (see below). We will describe this category in more detail later on. To the left of Fig. 1.2, we see the graphical representation of network exposure in the respective episodes. Observation i is exposed to 2/6 of its alters who already adopted a social policy at $t1$, to 3/6 at $t2$, 4/6 at $t3$, and 5/6 at $t4$. Since subject i adopts the social policy at $t4 + 1$, when 5/6 in its network are adopters, i's threshold is 5/6. In contrast, subject j adopted the social policy at $t2 + 1$ at a threshold of 3/6.



id	t	d	expo.	WEIRD
i	1	0	-	1
i	2	0	2/6	1
i	3	0	3/6	1
i	4	0	4/6	1
i	5	1	5/6	1
j	1	0	-	0
j	2	0	2/6	0
j	3	1	3/6	0

$$r_{i=WEIRD} = 1/4 \qquad r_{j=non-WEIRD} = 1/2$$
$$hr_{WEIRD \text{ vs. } non-WEIRD} = (1/4)/(1/2) = 0.5$$

Fig. 1.2 Network exposure and the hazard rate

In the column "expo." in the table to the right of Fig. 1.2, there is a particular value of exposure for each year in which the two countries i and j were *at risk* of adopting (which means that they had not yet adopted, or $T \geq t$). The event of adoption occurs as a result of a given exposure in the moment *before* adoption, so the respective exposure is lagged by one year. At the bottom of Fig. 1.2, hazard ratios are shown for the binary explanatory variable WEIRD. Country i is WEIRD and has 1 event out of 4 time periods at risk and thus a hazard rate of 0.25. Period $t1$ has been dropped because of the lagged exposure, i.e., there is no data on subjects that adopted at $t \leq 1$. Country j (non-WEIRD) has 1 event out of 2 time periods at risk and thus a hazard rate of 0.5, so the hazard ratio is (1/4)/(1/2) = 0.5. Computing hazard ratios and standard errors for continuous variables, such as exposure, is much more

difficult and requires the application of maximum likelihood estimation, particularly if the model includes further covariates.

The Methodology Used in This Volume

Throughout this volume, we use *discrete-time logistic hazard models*. The dependent variable is the absorbing destination state of having adopted a social policy (= 1). Similar to Fig. 1.2, once a country has adopted the social policy in question, it drops out of the risk set. Since j adopts at $t2 + 1$, there are no data entries for the subsequent time points. Conversely, more entries are given for i because the adoption comes later in $t4 + 1$. Countries that adopted a policy prior to 1880 dropped out of the risk set, and if they did not adopt until 2010, they are *right-censored*. In hazard models, the consequence of left-censoring is usually that the beginning of the episode is unknown, so we cannot properly compute time-at-risk. Those countries are not considered in the risk set, i.e., in the underlying sample on which hazard ratios are estimated. However, they contribute to the estimation of the network exposure of countries that have not yet adopted. Right-censoring, on the other hand, means that those countries remain in the risk set throughout the entire time frame.

To test whether the diffusion of social policy occurs along particular network contacts, four different networks build the underlying structure through which we assume diffusion to occur. As mentioned before, these are geographic proximity, trade relations, cultural similarity, and colonial legacies. Exposure to countries that already adopted a social policy is calculated separately for every network. Hence, while the exposure of a country i can be very high in the global trade network, it can be zero in the colonial legacies network simply because the country has not had any colonial relationship. Furthermore, the exposure in the respective network is weighted by tie strength, e.g., exposure to a country that had already adopted the social policy is higher in a geographically close country than in one that is further away. Lastly, exposure is estimated either undirected (for the networks of geographic distance, global trade, and cultural spheres) or directed (for the network of colonial legacies). For the latter, this means that if the colonial power adopted a

social policy, exposure for its (past) colonial entities increases. However, this does not hold the other way around. For undirected networks, exposure would take the same value regardless of direction. Generally, (unweighted) exposure is included in the logistic hazard models as a numeric variable ranging from 0, where no alter has adopted the social policy, to 1, where all alters have adopted the social policy. On a similar note, the geographical proximity network is time constant, meaning the tie strength does not change over the duration of analysis, while cultural spheres, trade, and colonial legacies are time-variant to account for the declining influence of colonial powers after decolonization, changing economic partnerships, and evolving cultural characteristics.

We take the four networks as the underlying structures for the diffusion process. As we will see later in the chapter, all networks constitute different avenues or "pipes" through which communication and information about social policies can travel. Taken together, these networks emphasize different specificities of countries' interdependencies. By including different networks, we assume to catch as many instances of network diffusion as possible through the different mechanisms.

However, social policy diffusion can also depend on domestic factors such as a country's level of economic development or financial capability. The same is true for civil freedom in the political regime (Lindert 2004). Thus, we introduce *Gross Domestic Product (GDP) per capita* (Inklaar et al. 2018) and a *democratization index* as baseline control variables. The former was linearly interpolated for the whole time frame by taking the minimum value for every income group based on all observations before 1800 and filling in any missing values according to the minimum of the respective income group of the corresponding country by assuming a logistic growth function. Provided there were no data available, these were the values to start the interpolation into future years. This yields a continuous measure of economic development from 1880 to 2010 for almost all countries in our dataset. For the level of *democratization*, we use the basic Varieties of Democracy Regime Score (Lührmann et al. 2018), which in the raw data ranges from 0 to 9 and was linearly interpolated for any missing data points. This method introduces some noise to the data, as it fills missing data points with non-natural numbers (decimals). However, filling missing data either with

the number observed before or thereafter would make the measurement error even greater. We suspect the benefits of the interpolation to be greater than its disadvantages and certainly greater than having to discard observations.

Additionally, the diffusion process in question might show time dependency resulting from unobserved heterogeneity. Hence, we control for time dependency by using a piecewise constant step function, based on a baseline of, e.g., 25 years steps, starting in 1880 until 2010. Nevertheless, as different as the social policy fields are in this volume, authors might very well find a way of defining time effects that better fit their theories and hypotheses. One last variable that needs introduction is *trade existed*. This variable stems from and directly refers to the global trade network. Because of the historicity of the data, we are often unable to accurately describe national units that were not established in the respective historical period. This problem is especially apparent in the network of global trade based upon the Correlates of War (COW) International Trade Dataset (Barbieri and Keshk 2016). Since their collection efforts were for the purpose of measuring trade between states, any states considered to be non-existent at a particular moment according to the COW definition are not included in times of non-existence. Because our data covers the network across all 164 countries from 1880 until 2010, empty dyads in the trade network do not necessarily mean that no trade happened. It might just mean that the country did not exist as an independent trading partner and therefore trade with this country was impossible. States that did exist but did not officially trade are coded with a value of zero. To control for the possible distortion of the two different meanings of zero ties, we include a dummy variable in all estimations which signifies whether a country, according to the trade data, existed (= 1) or did not exist (= 0).

Lastly, we face a problem with *statistically non-independent observations*. During the time frame under investigation, there are historical time periods in which several countries did not exist because they were part of a larger unit. An ideal-type example of this are countries of the former Yugoslavia. For example, if Slovenia and Croatia both adopted a social policy when they were part of the former Yugoslavia, then Yugoslavia was the overarching unit that actually adopted the policy, thus resulting in

the introduction of a policy when the country units Slovenia and Croatia were non-independent observations. This is due to the way we arrange the dataset for the diffusion analysis: the set of nodes in the network is constant over time, which implies that Slovenia and Croatia existed before, during, and after Yugoslavia existed. Our approach to address this problem is to regard Slovenia and Croatia as "spatial patches," remaining well aware of the fact that many countries actually changed their borders throughout history. From this perspective, Slovenia and Croatia were spatial patches at risk of adopting a social policy before, during, and after Yugoslavia existed. Yugoslavia will not be regarded as a subject in our sample, but Slovenia and Croatia and all other countries formerly belonging to Yugoslavia are indeed distinct units. These subjects are not, however, statistically independent from one another! This does not pose a problem for the calculation of exposure through the networks but it does cause a violation of the assumption of independence of error terms in the maximum likelihood estimation. In the logistic diffusion model, we address this statistical non-independence by using cluster-robust standard errors (Zeileis et al. 2020). Our procedure has the following advantage: it accounts for the statistical non-independence of observations when they are part of an overarching cluster (spatial patch) by using the corrected standard errors, but it does not impose any standard error correction in the hazard model for country-years *not* belonging to the respective cluster or to any other cluster.

The analyses in all chapters of this book follow the same rationale: First, the exposure to already "infected" countries is calculated for each network, as discussed above. This statistic, i.e., the weighted share of ego's network contacts who had already adopted the policy in question at $t-1$, is then handed over to a time-discrete hazard model. In this model, the adoption rate is regressed on exposure, controlling for GDP per capita, the democracy index, and additional policy field-specific factors. The resulting robust standard errors correct any statistical non-independence, potentially affecting standard errors. In most chapters, we present the coefficients as hazard ratios, representing influence of the predictors on the risk of policy adoption. The results therefore allow us to determine which of our networks represent a "pipe structure" for the contagion of social policies, for example, through exposure to countries that already

adopted the respective policy. We can determine whether factors such as cultural similarity or trade, for example, have a stronger effect on the adoption of a policy, as they represent the better "diffusion channel." To give an example: if we enhance a diffusion model based on the cultural spheres network with the trade network and the effect of the former thereby loses significance afterward, then the trade network is not just a mediator of the effect of trade on diffusion but also the more appropriate explanatory variable.

Networks of Social Policy Diffusion

In the following, we discuss the networks we use to explain diffusion processes in different fields of social policy. As mentioned before, countries are tied to each other in networks of geographical proximity, global trade, cultural spheres, and colonial legacies. These network dimensions are the basis of our comparative analysis of diffusion based on the network diffusion event history model discussed in the previous section.

At first sight, our four networks seem to correspond with the mechanisms discussed in the diffusion literature (Obinger et al. 2013; Starke and Tosun 2019; Gilardi 2016). Networks of colonial legacies could correspond with *coercion*, global trade networks with *competition*, cultural spheres networks with *learning* and geographical proximity with *imitation*. On second thought, however, such an assignment between network dimensions and diffusion mechanisms does not capture the complex reality of policy diffusion. For instance, global trade networks can also indicate cooperation and division of labor, so that the mechanism at the dyadic or country level would be surely different. Moreover, whether a policy adoption in a particular country results from learning or imitation is hard to decide from a global, macro-quantitative perspective. It is thus important to put the power of the network diffusion approach into perspective. Network diffusion analysis based on multiplex networks can reveal the relative importance of the respective "pipe structure" for the diffusion process under investigation. But neither does it provide information on agency and decision-making nor does it guarantee that the networks considered in the analysis actually are the most important

structures. Possibly, other network dimensions, international organizations, or even personal networks between experts and policymakers are more important, e.g., for learning. Our approach is thus a first starting point in the global analysis of network diffusion of social policies.

Network of Geographic Distances

There is little doubt that geographical distance influences diffusion processes. The closer the objects of investigation are located to each other, the more likely they come into contact and the more likely the content of the diffusion process—e.g., disease, innovation, or a social policy—will be contracted or adopted. A simple and illustrative example is the spread of a virus transmitted via personal contacts (Cliff 1979), or, alternatively, the negative effect of geographical distance in migration (Windzio 2018) as predicted by the gravity model (Dodd 1950). The "neighborhood effect" is a simplified version of spatial distance, whereby a location in the immediate neighborhood increased the risk of adoption.

The strength of neighborhood effects can be derived from the diffusion rate, which in turn depends on the properties of the diffusing information. The adoption rate usually declines with increasing complexity of knowledge or increasing capital intensity (Staudacher 2005). Rumors about prominent personalities spread rather quickly, while complex scientific findings, for example, show a much slower diffusion. In addition to the speed of diffusion, the spatial area in which diffusion takes place is a crucial factor. If geographical distances were the only explanatory factor, the speed of diffusion would allow conclusions about the topology of the area and the distribution of subjects within this area. The diffusion rate is usually not constant across time and space, rather there are preferred routes—for example, through particularly intensive contacts—which increase the propagation velocity along certain diffusion channels and thus have a significant influence on the propagation area (Grabher 2006).

In previous research on policy diffusion (Obinger et al. 2013), geographical distances were used as weighting matrices in spatial regression models to capture dependencies in the form of "spatial lags" (e.g.,

Franzese and Hays 2007; Schmitt and Obinger 2013). A simple form of a spatial weighting matrix is the neighborhood matrix. If two countries have a shared border, the respective cell of the neighborhood matrix has a value of 1, and otherwise 0 (Windzio et al. 2019). The neighborhood matrix thus implies the assumption that only countries with a common border can influence each other (Obinger et al. 2013). Not least because of the criticism of this very narrow assumption, the distances between capital cities were used instead of, or rather in addition to, the neighborhood matrix to define "spatial lags" in the weighting matrices (Schmitt 2019; Simmons and Elkins 2004).

As a justification of the relevance of geographical proximity, it is often argued that the intensity of communication between countries can increase due to their proximity. This argument implies the assumption that the exchange of information between neighboring or geographically close countries is substantially higher. Even unintended forms of information exchange occur more easily and thus more frequently. In addition, policy examples from neighboring or nearby countries are often regarded as a blueprint for a country's own national policies, so that a high degree of mutual influence is assumed due to geographical proximity (Schmitt and Obinger 2013). However, a clear assignment of geographical proximity to one of the mechanisms from the diffusion literature—(i) learning, (ii) competition, (iii) imitation, or (iv) coercion (Obinger et al. 2013; Starke and Tosun 2019)—is difficult. Magetti and Gilardi (2016) conclude that "Geography is often an important component of diffusion, but it cannot be linked straightforwardly to any of the […] mechanisms. Therefore, it is a catch-all indicator that usually discriminates between them. It is best used in combination with other indicators" (Magetti and Gilardi 2016, 93).

Similarly, Simmons and Elkins (2004) note that geographical distance does not provide a satisfactory explanation for policy diffusion per se. In line with their view, Beck et al. (2006) point out in a contribution with the significant title "Space is more than Geography" that, on the one hand, taking geographical distances into account in spatial econometrics is a methodological enrichment, but that other measures for determining interconnectedness between states would produce more fruitful results. Similarly, Boschma (2005) argues that proximity not

only encompasses physical–geographical proximity, but that cognitive, organizational, social, and institutional forms of proximity exist as well. Accordingly, neighboring countries are more likely to display similar social structures and traditions. These similarities serve as one explanation for the high correlation between culture and spatial proximity. This argument fits well with our idea that cultural proximity can also be an important dimension. Ties in the network of "cultural spheres" (see below), which is correlated with spatial proximity, can be a much more meaningful condition of diffusion. Whereas spatial proximity between capitals is measured almost accurately, however, the network of cultural spheres is a combination of various complex characteristics and therefore more prone to measurement error. According to this brief overview, we argue that the network of geographical distances serves as a reference point to measure the relevance of the contact networks of global trade, cultural spheres, and colonial connections.

The calculation of distances between capitals is described in detail in Eiser et al. (2020). The corresponding dataset is available in the Global Welfare State Information System WeSIS (www.wesis.org). To ensure that an increasing geographical distance indicates a decrease in the intensity of contact, we calculated the inverse of distance. The value for the contact between two countries i and j due to geographical proximity is therefore:

$$x_{ij} = 1/\text{ capital distance}$$

Even though there are occasional shifts of the capital in some countries, for pragmatic reasons the distances are based on the capital cities in 2020. Therefore, the geographical distances are a time-invariant network.

Global Trade Networks

In international comparative social policy research, trade networks are a central indicator for mapping economic globalization processes. Both in the first wave of globalization from 1890 to World War I (WWI), and especially during the second wave of globalization from World War II (WWII) to the mid-1980s, the density of trade networks increased

rapidly, and trade was the central engine of economic globalization (Mossig and Lischka 2022). In social policy research, the share of trade ([imports + exports]/GDP) was traditionally interpreted as an indicator of economic openness (Busemeyer 2009). Cameron (1978) was one of the first to show an empirical association between the expansion of the public sector and the integration into world trade for 18 Western industrialized countries. According to his argument, open economies with a high share of trade in GDP are particularly dependent on external events, such as price developments on the world market. In order to counteract these external dependencies, these open economies try to extend their influence within the domestic economic sectors. Smaller economies in particular have comparatively high trade shares as a percentage of GDP due to the smaller domestic market and a high degree of specialization in their own industrial structure. Accordingly, the economic openness of smaller economies, such as the Scandinavian countries or the Netherlands, partially explains the disproportionate expansion of the welfare state. In the literature, such side effects of economic globalization are discussed in the context of the compensation thesis (Rieger and Leibfried 2003; Starke and Tosun 2019).

Since the 1980s the importance of trade networks on world market integration declined. States have now become increasingly involved in global competition for foreign direct investment (FDI). This competition takes place with regard to the range of low-cost location conditions offered, for example, in terms of social security contributions or taxes (Mossig and Lischka 2022; Düpont et al. 2022). In order to survive this competition, policymakers considered a dismantling of the welfare state by lowering social standards and social contributions as necessary (Swank 2010), which was referred to as a "race to the bottom" (Kvist 2004) in the literature.

Openness or inclusion as measured by trade shares in a country's GDP or foreign direct investments (FDI stocks or flows) is a highly aggregated indicator. It disregards the varying importance of different trading partners, i.e., it does not differentiate between trading partners that are important and unimportant to ego. In addition, indirect connections via third trading partners are neglected. However, the structure of the network and the position of the individual states in this network

largely determine the scope of action and also influence the vulnerability and sensitivity of interstate relations (Glückler and Doreian 2016; Maoz 2011). The significance of economic globalization and the relevance of intensifying trade linkages for the diffusion of social policy is based on the assumption that important trading partners influence a country's policies more strongly than subordinate trading partners do. As a result of the globalization process, countries are becoming more closely aligned with one another, although this does not necessarily mean that social policy has to converge (Jahn 2016).

The trade networks were defined as follows: The trade data are collected from the Correlates of War Project (Barbieri and Keshk 2016). According to the following regulations, the edge weights were determined for each year. The volume of trade between each of the two countries comprises the total trade in goods in one year and is therefore undirected. The original trade flows were converted into US$ using the average exchange rate from 2011 to avoid an inflation-related densification of the networks. Due to the extremely different trade volumes, we logarithmically transformed the trade values. The edge weight of trade interdependence between two countries i, j is therefore:

$$x_{ij} = \begin{cases} \log(trade) & \text{if trade} > 0 \\ 0 & \text{if trade} = 0 \end{cases}$$

If a dyad shared any trade volume in any respective year, the log of this volume was used, otherwise the edge was set to 0 as the dyad did not share any trade in the respective year. Further decisions regarding the construction of trading networks concern former countries that have split up over time, e.g., Austria-Hungary, Czechoslovakia, or Serbia-Montenegro. In such countries, the trade volume of the shared years was divided according to the GDP proportion of these countries after these countries separated from each other. In the case of the Union of Soviet Socialist Republics (USSR) this refers to the period from 1922 to 1991, in the case of the Baltic States 1941–1991, and in the case of the former Yugoslavia the period from 1918 to 1992. "Small" states that once existed but are not represented in the selected country sample for this anthology were deleted (e.g., Yemen People's Republic, Republic of Vietnam, Korea

from 1880 to 1905, Kosovo, Zanzibar). Furthermore, because there are some missing values, we include a dummy variable in the later analysis which depicts whether a country "existed" based on the COW definition, as explained in detail above. The network representation in Fig. 1.3 is a quadrilateral Simmelian backbone (Nocaj et al. 2015) (Fig. 1.3).

The network visualization only shows to a limited extent how intensively individual countries are involved in global trade. But weighted degree centrality can be used as a measure of network integration. In 2010, China was the country with the highest trade integration (degree centrality of 1.92). The value 1.92 indicates that China was involved in 1.92% of bilateral trade worldwide, followed by the USA (1.80),

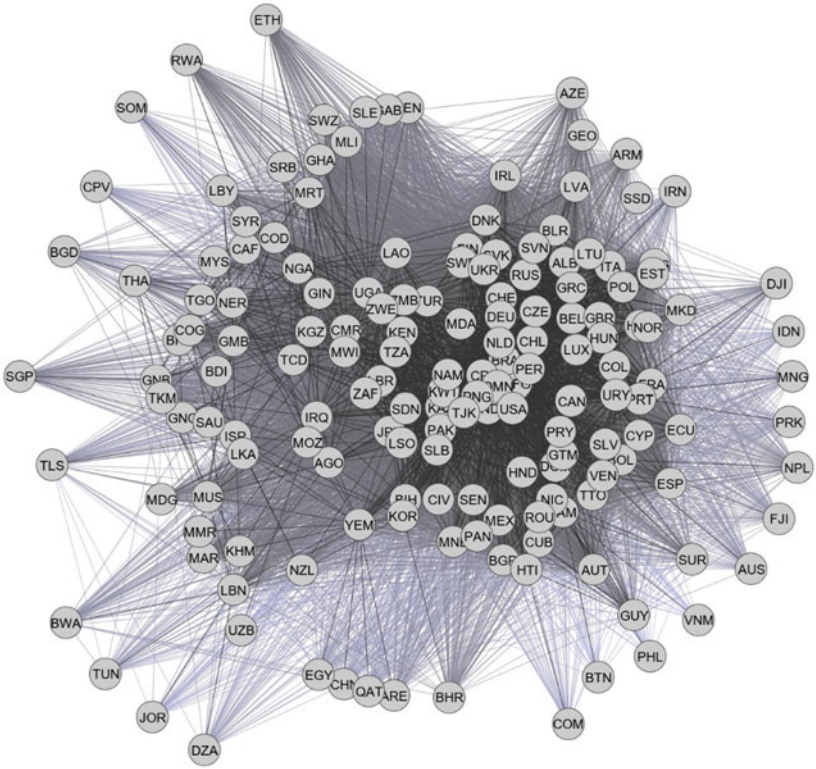


Fig. 1.3 The network of global trade in 2010

Table 1.1 Countries in quartiles of degree centrality

1st Quartile (Degree: 1.92–1.27)	**17 Countries**: CHN, USA, DEU, FRA, ITA, NLD, JPN, IND, GBR, KOR, BEL, ESP, BRA, TUR, RUS, CAN, THA
2nd Quartile (Degree: 1.21–0.87)	**24 Countries**: MYS, CHE, SWE, IDN, ZAF, SGP, AUS, AUT, ARE, POL, SAU, UKR, DNK, FIN, ARG, CZE, EGY, PRT, NOR, GRC, IRL, MEX, PAK, ROU
3rd Quartile (Degree: 0.86–0.52)	**38 Countries**: HUN, VNM, MAR, ISR, NZL, IRN, CHL, NGA, BGR, DZA, COL, SVK, SVN, PHL, BLR, LBN, BGD, QAT, TUN, KAZ, PER, KWT, HRV, VEN, LTU, SYR, OMN, KEN, CIV, ECU, LKA, JOR, GHA, URY, LBY, LVA, LUX, CRI
4th Quartile (Degree: 0.51–0.05)	**81 Countries**: IRQ, AZE, EST, CYP, GTM, DOM, YEM, TZA, CMR, SEN, AGO, TTO, SDN, PAN, GEO, PRY, CUB, MUS, MKD, HND, UGA, UZB, MOZ, SLV, ZMB, BEN, ETH, TKM, COG, MDA, ARM, ALB, AFG, GAB, KHM, BIH, ZWE, JAM, GIN, BOL, COD, TGO, MRT, PRK, NIC, LBR, MMR, MDG, TJK, NAM, BFA, MWI, MLI, GNQ, HTI, KGZ, PNG, DJI, MNE, SWZ, NER, MNG, GUY, SLE, NPL, RWA, GMB, TCD, LAO, SUR, BWA, FJI, SOM, BDI, CAF, GNB, SLB, COM, LSO, BTN

No 2010 trade data reported for CPV, SRB, SSD, and TLS

Germany (1.69), and France (1.57). The following Table 1.1 divides the country sample into quartiles. 17 countries (10.4% out of 164 countries) with the highest centrality rating account for 25% of the cumulative degree centrality. In contrast, the last quartile is occupied by 81 countries with the lowest centrality values in global trade. Bhutan, for example, which ranks last, only accounts for 0.05% of global trade. Lesotho (0.08), the Comoros (0.09), and the Solomon Islands (0.10) also had a very low-degree centrality in 2010.

The Network of "Cultural Spheres"

During the last decades, culture became an increasingly important concept in economics and the social sciences (Rose 2019; Emirbayer and Goodwin 1994). Despite its importance, however, culture is quite a controversial concept. Culture exists at different levels (Basáñez 2016);

it can be very local, or it can encompass wider regions of the world—the term can be used to refer to the character of business organizations or of neighborhoods, cities, and nation-states (Anderson-Levitt 2007). Huntington's "clash of civilizations" emphasized the role of cultural conflicts after the end of the Cold War but attracted sharp criticism for his approach because it also challenged optimistic views on cultural diversity. He derived his typology of world cultures from the most important world religions but did not appropriately account for the cultural diversity within these religions and regions. Finally, he focused on "fault lines" between cultures, where he supposed conflicts to be most likely to occur (Huntington 1993). Given this criticism, scientific investigations should think more carefully about how to classify cultures rather than simply abstaining from analyzing this important driving force of global politics and political and social change of nation-states. We thus use the concept of "cultural spheres," which distinguishes cultures in the world but allows fuzzy boundaries, a considerable degree of overlap, and change in cluster membership over time (Windzio and Martens 2021). Our typology of cultural spheres results from a combination of time-varying indicators. By regarding cultures as spheres with fuzzy boundaries, changing membership, and considerable overlap, we avoid an essentialist concept of culture. We coded our cultural indicators as binary variables and created a valued two-mode network in which countries are linked to one another by sharing one or several cultural characteristics, e.g., the highest quartile of the index of political liberties or the same language group. We used the following cultural characteristics to build the two-mode network of cultural spheres: a country's dominant religion, gender relations, civil liberties, rule of law, government ideology (nationalist, socialist or communist, restorative or conservative, separatist or autonomist, religious), dominant language group, hegemonic language (English, Spanish, Arabic), Huntington's civilizations (African, Buddhist, Hindu, Islamic, Latin American, Lone States, Orthodox, Sinic, Western), and both long and short-term colonial influence (Besche-Truthe et al. 2020). The more of these characteristics two countries share, the higher their cultural proximity. In our network diffusion models, we thus include exposure as a weighted term, which means that exposure increases with the growing share of adopters in

the network but also with the increasing tie-strength to these adopters. The cultural spheres network is time varying. For example, proportions of dominant religious or ethnic groups as well as dominant language changed over time.

To gain a better overview of the network and the resulting cultural spheres, we clustered the network with a Louvain clustering algorithm. According to the time-variant nature of the network, the result suggests a five-cluster solution in 1880 but a three-cluster solution in 2010. This supports the idea that there has been an increasing isomorphism in institutional structures around the globe (Meyer et al. 1997). Figure 1.4

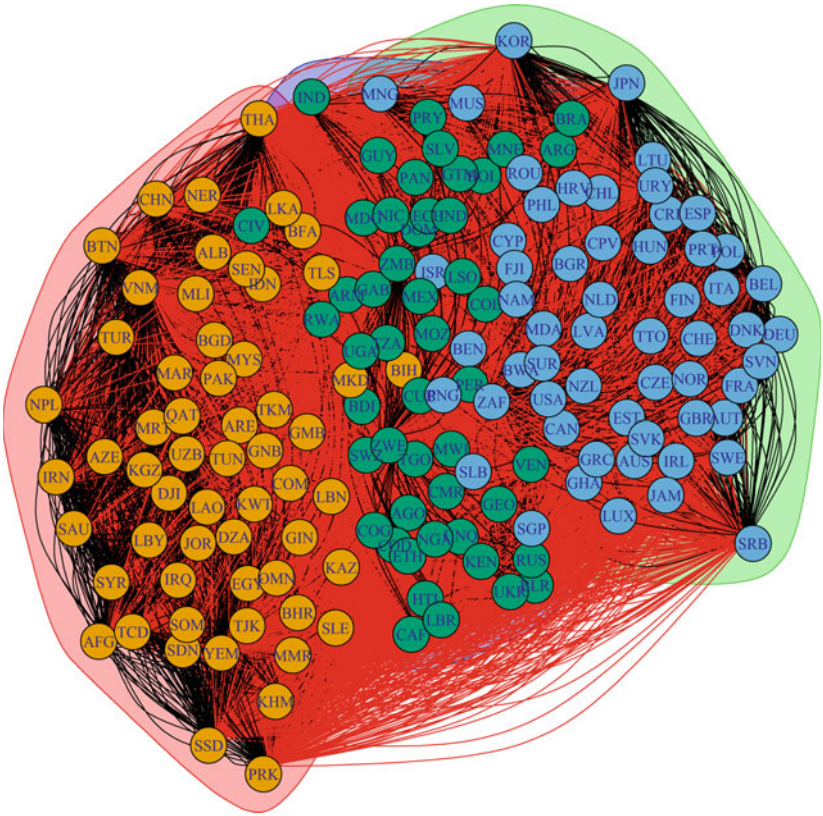


Fig. 1.4 Network of cultural spheres in 2010

shows the result of a Louvain clustering procedure which results in a three-cluster solution for the year 2010. Blue vertices represent a cluster of mostly WEIRD (see above) and economically developed countries, the second cluster (green) mainly consists of non-dominantly Muslim African, Asian, and South American countries, and the third cluster (orange) is dominated by Muslim countries. A closer inspection of these clusters shows that there is some overlap between cultural spheres and world regions, but this correspondence is far from being perfect (Fig. 1.4).

Network of Colonial Legacies

Researching the history of social policy adoption means to acknowledge specific historical interdependencies. A thorough and encompassing diffusion study must consider early social policy diffusion "under the conditions of colonialism" and "under conditions of continuing post-colonial ties" (Kuhlmann et al. 2020, 81). Influences of these dependencies can be as diverse as the mechanisms of diffusion. On the one hand, we can assume a coercive mechanism in that the empire just implemented policies in colonies without deliberation. The process of social policies diffusing from the empire to dependent entities is described as "imperial diffusion" (Kuhlmann et al. 2020). After the colonial dominion ended, however, a different diffusion mechanism might have been at work. For example, we know from diffusion research that perceived similarity can foster orientation toward some specific "role model" countries; Australia might look to Britain and Guinea to France for appropriate policy solutions (Dobbin et al. 2007, 453). Furthermore, possible policy solutions can be easier to implement because of path dependencies, such as institutional structures implemented during colonial rule that were modeled according to the role model. However, adverse effects can also be existent, as the institutionalization of policies in colonies differed in light of different characteristics and the strength of indigenous traditions (Craig 1981, 192).

Moreover, after colonization ends, the forged linkages between nation-states can facilitate diffusion in several ways. Specialized actors enter into

transnational contact, especially in cases where nation-states are actively searching for role models for their institutions or for the transformation of their welfare systems. Once, a colonial link has been forged, the influence does not recede immediately after independence. Indeed, past studies show a strong correlation between colonial past on the one hand and enhanced contact and influence between the two countries on the other, such as through migration (Windzio 2018) or development aid (Shields and Menashy 2017), for example.

To include both colonial dependencies and postcolonial influences, we established a network of colonial legacies which is time-variant, directed, and weighted. This means that much like social network surveys, colonized countries "nominate" their colonizers. In the years of colonial dominion, the weight of the tie is 1. After colonization ended, an exponential decay parameter is estimated, representing the eroding influence of the former colonial link. The exponential function has been chosen because the values tend to get quite small, i.e., the influence via a link of colonial legacy is diminishing. For example, the values of ties are 0.97 one year after colonization, 0.77 ten years after colonization, and 0.08 one hundred years after colonization. The decay parameter was calculated with the following function:

$$\exp(-(No.\ years\ since\ colony\ ends/40))$$

In our view, the influence of a colonial power does not simply disappear immediately after the colony becomes officially independent. According to our assumption, the influence of the colonial power declines much more gradually over time after official independence is achieved. There are different variants to compute exposure due to the colonial legacy based on this function. We apply the function to the standardized exposure as computed by the netdiffuseR package (Vega Yon and Valente 2021), which restricts the range of exposure between zero and one. Accordingly, the theoretical assumption is that colonial legacy is very strong and the strength of the colonial power's influence remains almost constant after independence. In contrast, if we do not standardize the exposure, the influence of former colonial powers still exist, but compared to the standardized computation of exposure, the power

declines after colonization. To date, there is no commonly accepted standard by which the influence of former colonial ties on the subsequent history of a country can be modeled. There are even more alternative approaches that are conceivable, e.g., that the network of colonial ties is simply cross-sectional, but this would be a strange assumption for the historical periods before colonization. Another approach would be to test the influence in a time-constant way after colonization ended, whereas the tie in the colonization network is zero before colonization. The "right" way to capture the effect of colonial legacies might also depend on the particular social policy under investigation. Finally, since we are interested in comparing the effects of different networks on the diffusion of social policy, we should keep in mind the strong correlation of exposure across different networks. Hence, researchers should also interpret their results against the background of considerable multicollinearity.

The raw data is based on the Colonial Dates Dataset (COLDAT) by Bastian Becker (2019) in combination with the Centre d'Etudes Prospectives et d'Informations Internationales (CEPII) (Head and Mayer 2014) and our own data collection using Wikipedia. In line with CEPII, our definition of colonial links is that a colonial relationship should involve long-term, civilian administration that includes significant settlement. We assume, for instance, that the territory of what is now known as Armenia was "colonized" by the Persian Empire before 1828 and by the Ottoman Empire before 1920, as well as simultaneously by Russia between 1813 and 1918. After that time, we assume Armenia to be a "colony" of Russia until the dissolution of the USSR in 1990. Although these relations do not depict "classic" (exploitative) colonial relations, we find merit in a more encompassing approach. The long rule of an empire leaves marks on the society and the political system at large. We still see some former USSR states that actively search for contact to Russia and openly base their (authoritarian) policies on Russian examples, e.g., Belarus. Furthermore, by using the aforementioned decay parameter we do assume a decreasing influence of former rule by empires. Nevertheless, the colonial network poses a methodological problem when, for instance, a social policy was adopted for the entirety of the USSR. Due to the simultaneous adoption of policy, the exposure of former USSR states is calculated as 0 at the time of policy adoption. That, however, would

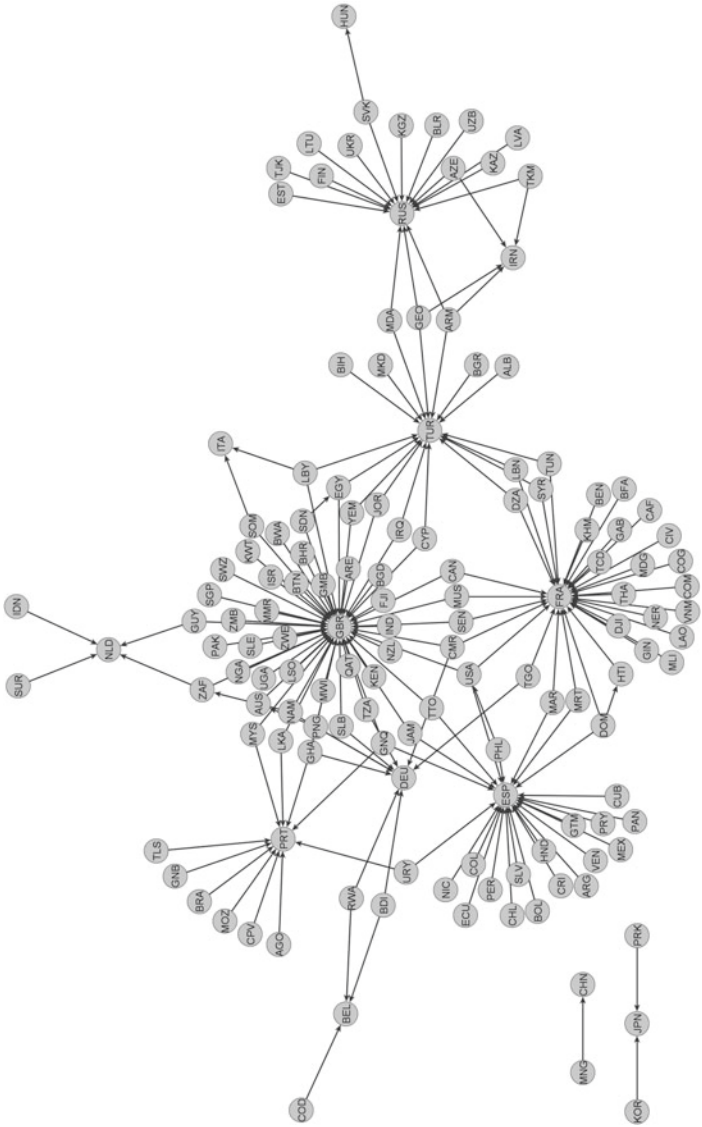


Fig. 1.5 The network of colonial legacies

assume an incorrect threshold and therefore distort the regression estimation. Hence, in contrast to Fig. 1.2, exposure was calculated *without* a one-year lag in the colonial network, i.e., exposure at t is calculated as the ratio of alters that adopted precisely at t and not $t-1$ (Fig. 1.5).

Correlations of Our Networks

Social networks are the structural backbone of the diffusion process. We are interested in whether the multiplex network in the dimensions of geographic proximity, colonial heritage, global trade, and cultural proximity do actually relate to different influence channels, or whether they tend to be rather redundant. If the correlation between ties in a network or, more precisely, the value of different edges in the dyads are strongly correlated, these networks tend to be redundant. As Table 1.2 indicates, this is definitely not the case. Here we see a correlation matrix of the weighted edges and find only minor correlations overall. We find the highest correlation between networks of cultural spheres and (log) trade ($r = 0.242$). As a result, these four networks are far from being redundant.

However, the correlation of these networks is not the same as the correlation of *exposure* to alters that have already adopted the information. At the beginning of a pandemic, for example, when exposure is generally low, it does not matter whether these networks are correlated or not. Exposure will be low anyway. Minor differences in network structure can correspond to strong differences in exposure if, for example, the ego-network of country i has just one more tie to an adopter in the

Table 1.2 Correlations of (weighted) networks

	Geogr. proximity	Colonial ties (exp. decay)	Log (trade)	Cultural prox
Geogr. proximity	1.000	–	–	–
Colonial tie (exp. decay)	0.007	1.000	–	–
Log(trade)	0.036	−0.007	1.000	–
Cultural prox	0.071	−0.019	0.242	1.000

Table 1.3 Correlations of (weighted) *exposure* to alters that adopted compulsory education

	Cultural prox	Colonial ties (exp. decay)	Log (trade)	Geogr. proximity
Cultural prox	1.000	–	–	–
Colonial ties (exp. decay)	0.142	1.000	–	–
Log(trade)	0.728	0.038	1.000	–
Geogr. proximity	0.919	0.050	0.741	1.000

(weighted) trade network than in the cultural spheres network but the additional tie in the trade network has a particularly high weight in the computation of exposure. Similarly important are situations when most alters are already infected and exposure is generally high. Exposure can be 1 (maximum normalized exposure) in a network dimension where ego is tied to 12 alters, but it can also be 1 in another network dimension where ego is tied only to 2 alters. Table 1.3 shows the correlations of (weighted) exposure to alters that adopted compulsory education. Indeed, correlations are considerably higher. Exposure in the network of geographic proximity is strongly correlated with the network of cultural proximity (0.919) and also with exposure in the trade network (0.741). Moreover, trade and cultural proximity are highly correlated as well (0.728).

Structural Features and Interdependencies of Our Networks

How can we further characterize these networks? Networks of positive ties often show transitive hierarchies, as epitomized by the adage "friends of my friends are my friends." If node i names node j as a friend, and if j is befriended with node k, i tends to close the triad and establish a tie to k because i regards friends of j as his or her friends as well. However, not all networks show this pattern. A visual inspection of the colonial ties network in Fig. 1.5 suggests that the overall share of transitive triads of all triads is comparatively low, but the structure is dominated by so-called "in-stars." We use Exponential Random Graph Models ERGMs

(Harris 2014) in order to explain the basic determinants of the respective networks in a multivariate regression. We recoded the weighted edges into binary values by setting the lowest quintile of geographic distance to 1 (else = 0). We did the same with values of ≥ 3 of log(*trade*) and values > 3 of weighted cultural proximity. These thresholds identify rather strong ties in the respective network. The motivation of this model is to maximize the likelihood of actually observing the empirical network x out of the huge set of networks $\mathbf{X}$ that the respective set of nodes (in our case countries) could form. The outcome of interest is the probability P of observing the empirical network x out of the huge set $\mathbf{X}$. The odds of all possible networks are represented by $\kappa(\boldsymbol{\theta})$, and due to $\kappa(\boldsymbol{\theta})$, P is indeed a probability in the equation below, expressed in a way that resembles a multinomial logit model.

$$P(\mathbf{X} = x) = \frac{\exp\{\theta' \mathbf{z}(\mathbf{x})\}}{\kappa(\boldsymbol{\theta})}, \text{ where } \kappa(\boldsymbol{\theta}) = \sum_{n=1}^{2^{g(g-1)}} \exp\{\theta' \mathbf{z}(\mathbf{x})\}$$

The likelihood is maximized by inserting coefficients $\boldsymbol{\theta}$ for the network characteristics $\mathbf{z}(\mathbf{x})$, e.g., transitive closure, homophily, or any other kind of explanatory variable. Because of the statistical non-independence in networks, it is almost impossible to get reliable results by using maximum likelihood methods, the estimation is based on Markov Chain Monte Carlo (MCMC) simulations. Given the specified regression equation, the algorithm generates a huge set of networks by inserting $\boldsymbol{\theta}$ coefficients drawn from a random distribution and adapts these coefficients until the equation generates networks similar to the empirical network with respect to the underlying characteristics $\mathbf{z}(\mathbf{x})$. The resulting coefficients $\boldsymbol{\theta}$ of a converged model can be interpreted as changes in the log odds of a tie in the respective network due to a one-unit change in the explanatory variable $\mathbf{z}(\mathbf{x})$.

The first column in Table 1.4 shows determinants of ties in the *trade network*, the second column in the network of *cultural spheres*, and the third column in the network of *colonial histories*. We estimated a

Table 1.4 Determinants of ties in networks of countries 1880–2010 ($t = 8$), temporal exponential random graph models, $N = 164$

	Effects on network ties		
	Trade	Culture	Colony
Edges	−2.2137*	−1.6452*	−5.9938*
Structural factors			
Gwesp.fixed.0.693	1.0127*	1.0263*	–
Gwdsp.fixed.0.693	−0.1569*	−0.2130*	–
2-in-stars	–	–	0.1207*
Dyadic factors			
Edgecov(spatial prox.)	0.1488*	0.0956	0.5812*
Edgecov(cultural prox.)	0.9971*	–	–
Edgecov(colonial tie)	0.9816	−0.3214*	–
Edgecov(trade tie)	–	0.8275*	0.8158*
Political-economic factors			
Same regime	−0.9179*	0.129	−0.0440
Absdiff(GDP/1000 USD)	−0.0182*	−0.0055	−0.0078
Indegree(GDP/1000 USD)	–	–	0.0147
Outdegree(GDP/1000 USD)	–	–	−0.0385*
Degree(GDP/1000 USD)	0.0332*	–	–
Memory term (tie stability)	2.1166*	1.5484*	–

*Null hypothesis value outside the confidence interval, $p < = 0.001$
Source WeSIS database, own computation

temporal ERGM for the period from 1890 to 2010 in 20-year intervals and eight measurement occasions using bootstrapping methods (Leifeld et al. 2016). The term "edges" is the intercept of the regression model and represents the log odds of the network density, given that all covariates are constrained to zero. The positive significant effect of *gwesp* (geometrically edgewise shared partners) indicates that transitive closure much more likely occurs in the empirical network than in a corresponding random network. In contrast, *gwdsp* (geometrically dyadwise shared partners) shows a significantly negative effect and points to the lower probability of open triads (Harris 2014). Aside from these network structural effects, ties in the *trade network* depend on spatial proximity (0.1488*) and cultural spheres (0.9971*) but not significantly on colonial legacies. They occur less often if two countries have the same level of democratization (same regime) and the higher the absolute difference

in GDP per capita between ego and alter is. Unsurprisingly, global trade is an issue of economically well-performing countries since high levels of GDP increase the degree (0.0332^{*}). We also estimated the memory-term of "tie stability" (Leifeld et al. 2016), which indicates the stability of ties and non-ties, and thereby accounts for how strongly the state of the network at t depends on its previous state at $t-1$ (Table 1.4).

Column 2 in Table 1.4 shows the effects on the log odds of ties in the network of *cultural spheres*. Again, we find the pattern of high transitivity (*gwesp*) and a negative tendency toward open triads (*gwdsp*). Having a tie in the network of colonial legacies has a negative effect on cultural similarity (-0.3214^{*}), which means that countries colonized other countries that were culturally rather different. Contrariwise, a tie in the network of global trade increases the log odds of a tie in the cultural spheres network—which we also do not interpret in a strict causal sense because the direction of the influence could also be reversed (0.8275^{*}). Our model does not indicate that political regime type in terms of levels of democratization and economic development corresponds with culture: if two countries have the same level of democratization, the log odds of a tie in the cultural spheres network is only insignificantly increased. The absolute difference in GDP is insignificant as well. Again, the memory-term indicates a significant effect of the lagged network.

Finally, we analyze the network of *colonial legacies*, which has quite a specific topology as shown in Fig. 1.5. This network is rather special since there are few "hubs" with many ingoing ties, and there is a clear distinction between node sets of senders and receivers. We find a positive effect of 2-in-stars. This means that two ingoing ties occur significantly more often than expected by chance, which is obvious from the visual representation in Fig. 1.6. In addition, there are positive effects of spatial proximity and ties in the trade network. While there is no effect of same regime, effects of GPD per capita are negative on outdegree. Accordingly, richer countries name other countries as colonizers less often: overall, richer counties have a considerably lower risk of being colonized.

Overview of the Volume

Social policy fields investigated in this volume are old age and survivor pensions, labor and labor markets, health and long-term care, education and training, and family and gender policy. In Chapter 2, *Breznau* and *Lanver* analyze the introduction of work injury insurance, which often marks the beginning of an emerging welfare state. According to the results, spatial proximity and levels of democratization are the major determinants of adoption, but ties in the trade network also have a positive effect. Emerging education states are analyzed by *Seitzer*, *Besche-Truthe*, and *Windzio* in Chapter 3. They show that cultural proximity has a strong effect on the adoption of compulsory education, but this effect vanishes after controlling for spatial proximity. Similarly, in *Besche-Truthe's* study (Chapter 4) the effect of a tie in the network of cultural proximity becomes insignificant upon the adoption of adult basic education policies after controlling for spatial proximity, GDP per capita, and level of democratization. Moreover, although the introduction of healthcare systems, as analyzed in Chapter 5 by *Polte*, *Haunss*, *Schmid*, *De Carvalho*, and *Rothgang*, mainly occurred in economically prosperous countries before WWII, the effect of GDP decreases in subsequent periods. In addition, the effect of spatial proximity decreases over time, whereas the effect of trade networks seems to increase. Another important policy in aging societies is long-term care, analyzed by *Fischer*, *Polte*, and *Sternkopf* in Chapter 6. Aside from geographic proximity, there seems to be no horizontal diffusion via networks. Rather, the introduction of long-term care systems depends on problem pressure (population 75+), political empowerment of women, GDP per capita, and levels of democratization.

In their study on the introduction of paid maternity leave, family allowances, and the adoption of workplace childcare regulations, *Böger*, *Son*, and *Tonelli* (Chapter 7) show that while paid maternity leave was an important issue on the agenda of the International Labour Organization (ILO), family allowances tend to depend more on domestic factors. In contrast, there seem to be effects of colonial legacies, particularly

in former French colonies, with regard to workplace childcare regulations. The ILO is in the focus of *Hahs* study on the ratification of the C111 Anti-Discrimination Legislation in Employment and Occupation (Chapter 8). Ties in the network of colonial legacies and spatial proximity seem to drive the diffusion process, but the former effect is strongly confounded with a country's legal origin.

Interestingly, exposure to other countries due to similarity in culture has a negative effect on the adoption of antidiscrimination legislation supporting the LGBTQ+ community, whereas there are positive exposure effects in the network of global trade (see the study of *Seitzer* in Chapter 9).

Chapter 10 by *Schmitt* and *Obinger* critically reviews the results and the research design applied in this volume. They appreciate the macro-quantitative approach to social policy diffusion, but also recognize its limitations. Analyzing network diffusion highlights the global interdependence, but does not tell us much about the precise mechanism at work in a respective country dyad or subnetwork. These mechanisms also depend on country-specific factors and sometimes on idiosyncratic situations that we cannot generalize to other interdependent constellations. Future research on policy diffusion should thus systematically consider mixed-methods designs and apply a combination of macro-quantitative data and in-depth case study analyzes.

Literature

Anderson-Levitt, Kathryn M. 2007. "A World Culture of Schooling? Local Meanings, Global Schooling." In *Local Meanings, Global Schooling: Anthropology and World Culture Theory*, edited by Kathryn M. Anderson-Levitt. New York: Palgrave Macmillan.

Barbieri, Katherine, and Omar M. G. Keshk. 2016. "Correlates of War Project Trade Data Set Codebook, Version 4.0." Last accessed: March 17, 2021. https://correlatesofwar.org/.

Basáñez, Miguel. 2016. *A World of Three Cultures: Honor, Achievement and Joy*. Oxford: University Press.

Beck, Nathaniel, Kristian S. Gleditsch, and Kyle Beardsley. 2006. "Space Is More Than Geography: Using Spatial Econometrics in the Study of Political Economy." *International Studies Quarterly* 50: 27–44.

Becker, Bastian. 2019. "Colonial Dates Dataset (COLDAT)." https://doi.org/10.7910/DVN/T9SDEW.

Berry, Brian J. L. 1972. "Hierarchical Diffusion: The Basis of Developmental Filtering and Spread in a System of Growth Centers." In *Man, Space, and Environment: Concepts in Contemporary Human Geography*, edited by Paul Ward English and Robert C. Mayfield, 340–359. Oxford: University Press.

Besche-Truthe, Fabian, Helen Seitzer, and Michael Windzio. 2020. "Cultural Spheres—Creating a Dyadic Dataset of Cultural Proximity." SFB 1342 Technical Paper Series 5. Bremen.

Boschma, Ron. 2005. "Proximity and Innovation: A Critical Assessment." *Regional Studies* 39 (1): 61–74.

Busemeyer, Marius R. 2009. "From Myth to Reality: Globalisation and Public Spending in OECD Countries Revisited." *European Journal of Political Research* 48: 455–482.

Cameron, David R. 1978. "The Expansion of the Public Economy: A Comparative Analysis." *American Political Science Review* 72 (4): 1243–1261.

Cliff, Andrew. 1979. "Quantitative Methods: Spatial Diffusion." *Progress in Human Geography* 3 (1): 143–152.

Craig, John E. 1981. "The Expansion of Education." *Review of Research in Education* 9 (1): 151–213.

Dobbin, Frank, Beth Simmons, and Geoffrey Garrett. 2007. "The Global Diffusion of Public Policies: Social Construction, Coercion, Competition, or Learning?" *Annual Review of Sociology* 33: 449–472.

Dodd, Stuart C. 1950. "The Interactance Hypothesis: A Gravity Model Fitting Physical Masses and Human Groups." *American Sociological Review* 15 (2): 245–256.

Düpont, Nils, Ivo Mossig, and Michael Lischka. 2022, forthcoming. "Economic Interdependencies and Social Expenditures Revisited." In *International Impacts on Social Policy: Short Histories in a Global Perspective*, edited by Frank Nullmeier, Delia González de Reufels, and Herbert Obinger. Cham: Palgrave Macmillan.

Eiser, Lara, Michael Lischka, and Tobias Tkaczick. 2020. "Calculating Distances Between Capital Cities in ArcGIS Using the CShapes Dataset." SFB 1342 Technical Paper Series 1/2020. Bremen: SFB 1342.

Emirbayer, Mustafa, and Jeff Goodwin. 1994. "Network Analysis, Culture, and the Problem of Agency." *American Journal of Sociology* 99 (6): 1411–1454.

Franzese, Robert J., and Jude Hays. 2007. "Spatial Econometric Models of Cross-Sectional Interdependence in Political Science Panel and Time-Series-Cross-Section Data." *Political Analysis* 15 (2): 140–164.

Gilardi, Fabrizio. 2016. "Four Ways We Can Improve Policy Diffusion Research." *State Politics and Policy Quarterly* 16 (1): 8–21.

Glückler, Johannes, and Parick Doreian. 2016. "Editorial: Social Network Analysis and Economic Geography—Positional, Evolutionary and Multi-Level Approaches." *Journal of Economic Geography* 16 (6): 1123–1134.

Grabher, Gernot. 2006. "Trading Routes, Bypasses, and Risky Intersections: Mapping the Travels of 'Networks' Between Economic Sociology and Economic Geography." *Progress in Human Geography* 30 (2): 163–189.

Harris, Jenine K. 2014. *An Introduction to Exponential Random Graph Modeling*. London: Sage.

Head, Keith, and Thierry Mayer. 2014. "Gravity Equations: Toolkit, Cookbook, Workhorse." In *Handbook of International Economics*. Vol. 4, edited by Gita Gopinath, Elhanan Helpman, and Kenneth Rogoff, 131–195. Amsterdam: Elsevier.

Henrich, Joseph. 2020. *The Weirdest People in the World: How the West Became Psychologically Peculiar and Particularly Prosperous*. UK: Allen Lane.

Huntington, Samuel P. 1993. "The Clash of Civilizations?" *Foreign Affairs* 72 (3): 22–49.

Inklaar, Robert, Harmen de Jong, Jutta Bolt, and Jan van Zanden. 2018. "Rebasing 'Maddison': New Income Comparisons and the Shape of long-run Economic Development." GDC Research Memorandum GD-174. Last accessed March 17, 2021. https://ideas.repec.org/p/gro/rugggd/gd-174.html.

Jahn, Detlef. 2016. Globalisierung und Vergleich. In *Handbuch Vergleichende Politikwissenschaft*, edited by Hans-Joachim Lauth, Marianne Kneuer, and Gert Pickel, 861–869. Wiesbaden: Springer.

Krugman, Paul R., Maurice Obstfeld, and Marc J. Melitz. 2018. *International Economics: Theory and Policy*. 11th ed. Harlow: Pearson.

Kuhlmann, Johanna, Delia González de Reufels, Klaus Schlichte, and Frank Nullmeier. 2020. "How Social Policy Travels: A Refined Model of Diffusion." *Global Social Policy* 20 (1): 80–96.

Kvist, Jon. 2004. "Does EU Enlargement Start a Race to the Bottom? Strategic Interaction Among EU Member States in Social Policy." *Journal of European Social Policy* 14 (3): 301–318.

Leifeld, Philip, Skyler J. Cranmer, and Bruce A. Desmarais. 2016. "Temporal Random Graph Models with Btergm: Estimation and Bootsrap Confidence Intervals." *Journal of Statistical Software* 83 (6): 1–36.

Lindert, Peter H. 2004. *Growing Public: Social Spending and Economic Growth Since the Eighteenth Century: Volume 1. The Story*. Cambridge: University Press.

Lührmann, Anna, Marcus Tannenberg, and Staffan I. Lindberg. 2018. "Regimes of the World (RoW): Opening New Avenues for the Comparative Study of Political Regimes." *Politics and Governance* 6 (1): 60–77.

Magetti, Martino, and Fabrizio Gilardi. 2016. "Problems (and Solutions) in the Measurement of Policy Diffusion Mechanisms." *Journal of Public Policy* 36 (1): 87–107.

Maoz, Zeev. 2011. *Networks of Nations: The Evolution, Structure, and Impact of International Networks, 1816–2001*. Cambridge: University Press.

Meyer, John W., John Boli, George M. Thomas, and Francisco O. Ramirez. 1997. "World Society and the Nation-State." *American Journal of Sociology* 103 (1): 144–181.

Mossig, Ivo, and Michael Lischka. 2022, forthcoming. "Globalization, Economic Interdependencies and Economic Crises." In *International Impacts on Social Policy: Short Histories in a Global Perspective*, edited by Frank Nullmeier, Delia González de Reufels, and Herbert Obinger. Cham: Palgrave Macmillan.

Nocaj, Arlind, Mark Ortmann, and Ulrik Brandes. 2015. "Untangling the Hairballs of Multi-Centered, Small-World Online Social Media Networks." *Journal of Graph Algorithms and Applications* 19 (2): 595–618.

Obinger, Herbert, Carina Schmitt, and Peter Starke. 2013. "Policy Diffusion and Policy Transfer in Comparative Welfare State Research." *Social Policy and Administration* 47 (1): 111–129.

Rieger, Elmar, and Stephan Leibfried. 2003. *Limits to Globalization: Welfare States and the World Economy*. Oxford: Blackwell.

Rogers, Everett M. 2003. *Diffusion of Innovations*. 5th ed. New York: Free Press.

Rose, David C. 2019. *Why Culture Matters Most.* Oxford: University Press.

Schmitt, Carina. 2019. "Quantitative Methoden in der international vergleichenden Sozialpolitikforschung." In *Handbuch Sozialpolitik*, edited by Herbert Obinger, Carina Schmitt, and Manfred G. Schmidt, 337–359. Wiesbaden: Springer.

Schmitt, Carina, and Herbert Obinger. 2013. "Spatial Interdependencies and Welfare State Generosity in Western Democracies, 1960–2000." *Journal of European Social Policy* 23 (2): 119–133.

Seitzer, Helen, Fabian Besche-Truthe, and Michael Windzio. 2021, forthcoming. "The Introduction of Compulsory Schooling Around the World: Global Diffusion Between Isomorphism and 'Cultural Spheres'." In *Global Pathways to Education—Cultural Spheres, Networks, and International Organizations*, edited by Kerstin Martens and Michael Windzio. Cham: Palgrave Macmillan.

Shen, Cristopher Y. 2020. "Logistic Growth Modelling of COVID-19 Proliferation in China and Its International Implications." *International Journal of Infectious Diseases* 96: 582–589.

Shields, Robin, and Francine Menashy. 2017. "The Network of Bilateral Aid to Education 2005–2015." *International Journal of Educational Development* 64: 74–80.

Simmons, Beth A., and Zachary Elkins 2004. "The Globalization of Liberalization: Policy Diffusion in the International Political Economy." *American Political Science Review* 98 (1): 171–189.

Singer, Judith D., and John B. Willett 2003. *Applied Longitudinal Data Analysis: Modeling Change and Event Occurrence*. Oxford: University Press.

Starke, Peter, and Jale Tosun 2019. "Globalisierung und Diffusion." In *Handbuch Sozialpolitik*, edited by Herbert Obinger, Carina Schmitt, and Manfred G. Schmitd, 181–201. Wiesbaden: Springer.

Staudacher, Christian. 2005. *Wirtschaftsgeographie regionaler Systeme*. Wien: WUV.

Swank, Duane 2010. "Globalization." In *The Oxford Handbook of the Welfare State*, edited by Francis G. Castles, Stephan Leibfried, Jane Lewis, Herbert Obinger, and Christopher Pierson, 318–330. Oxford: University Press.

Valente, Thomas W. 1995. *Network Models of the Diffusion of Innovations*. Cresskill, NJ: Hampton Press.

Vega Yon, George, and Thomas W. Valente. 2017. "netdiffuseR: Analysis of Diffusion and Contagion Processes on Networks." https://doi.org/10.5281/zenodo.1039317, R package version 1.22.3, https://github.com/USCCANA/netdiffuseR.

Windzio, Michael. 2018. "The Network of Global Migration 1990–2013: Using ERGMs to Test Theories of Migration Between Countries." *Social Networks* 53: 20–29.

Windzio, Michael, Céline Teney, and Sven Lenkewitz. 2019. "A Network Analysis of Intra-EU Migration Flows: How Regulatory Policies, Economic Inequalities and the Network-Topology Shape the Intra-EU Migration Space." *Journal of Ethnic and Migration Studies* 45: 1–19.

Windzio, Michael, and Kerstin Martens. 2021, forthcoming. "The Global Development, Diffusion, and Transformation of Education Systems: Transnational Isomorphism and 'Cultural Spheres'." In *Global Pathways to Education—Cultural Spheres, Networks, and International Organizations*, edited by Kerstin Martens, and Michael Windzio. Basingstoke: Palgrave Macmillan.

Zeileis, Achim, Susanne Köll, and Nathaniel Graham. 2020. "Various Versatile Variances: An Object-Oriented Implementation of Clustered Covariances in R." *Journal of Statistical Software* 95 (1): 1–36.

2

The Global Diffusion of Work-Injury Insurance: The Role of Spatial Networks and Nation Building

Nate Breznau and Felix Lanver

Introduction[1]

Work-injury laws, also historically known as *workmen's compensation* and *accident insurance*, are among the oldest welfare state laws and often marked by scholars as the beginning of the welfare state (Abbott and DeViney 1992; Flora and Alber 2009). They extended the basic principles of responsibility for damages done to persons or property

[1]This chapter is a product of the research conducted in the Collaborative Research Center "Global Dynamics of Social Policy" at the University of Bremen. The center is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)—project number 374666841—SFB 1342.

N. Breznau (✉) · F. Lanver
University of Bremen, Bremen, Germany
e-mail: nbreznau@uni-bremen.de

F. Lanver
e-mail: lanver@uni-bremen.de

M. Windzio et al. (eds.), *Networks and Geographies of Global Social Policy Diffusion*, Global Dynamics of Social Policy,
https://doi.org/10.1007/978-3-030-83403-6_2

found in civil and common law traditions. Their implementation coincided with new, dangerous forms of employment in factories, mechanized extraction, and construction that came with industrialization. The workers, families, and communities affected by these new industrial risks demanded protection, putting pressure on policymakers (Wilensky 1975; Kangas 2010).

Usually, the first work-injury law introduced in a state was *employer liability*. Although these laws often standardized compensation levels and explicitly covered work-related damages, they did little to reduce worker subversions and revolts. They mostly did not insure against risk because the burden of proof of harm fell on the worker and compensations were small and limited in duration (Flora and Alber 2009). More advanced and effective laws involved the creation of *social insurance*. These placed all employees into an insurance scheme, with automatic entitlements to compensation unless otherwise proven by the employer or insurance agency in court. Social insurance offered financial predictability, less workplace violence, and protection of both employers and employees from legal battles (Tripp 1976; Berkowitz and Berkowitz 1984; Pavalko 1989).

Employer liability laws tended to pave the way for social insurance laws. However, history suggests no standardized trajectory (Haggard and Kaufman 2008). Types of work-injury laws are only weakly correlated with industrialization and democratization, leaving functional theories limited in their capacity to explain cross-country patterns of welfare state development (Alber 1982). For example, Britain was the earliest industrializing society and quite democratic, but a latecomer to social insurance in 1934. Germany was less industrialized and less democratic, but a pioneer in 1884. Meanwhile, France was similarly developed as Germany and slightly more democratic, but only introduced social insurance 10 years later in 1894 (Breznau and Lanver 2020).

Factors of political economy are likely responsible for such variation. Work-injury social insurance, and the general implementation of social insurance across policy domains, is an important strategy in political rule. Social protection laws shift the burden of individual risk to the collective level, meaning that workers and rulers become bound together with a common welfare interest. The extent of these provisions often depends

on the success of left/labor parties and special interests. In general, this strategy is an adaptation of military conscription. Dating back to the Greeks and Romans, ruling powers used the promise of veteran benefits to motivate and compensate soldiers engaged in potentially deadly work to defend the territory and its people (Ierley 1984). Soldier provisions often included forms of health care, pensions, survivor benefits, and compensation for injuries obtained on duty. The utility of welfare provisions for expanding and defending a nation's borders simultaneously aided in developing and expanding allegiance of soldiers to that nation. This process can be transferred to workers and their support of their organizations, political parties, and the national government (Obinger et al. 2018).

Theoretical Framework: Nation-State Institution and Codification

The idea of a nation-state and democratic rule of law was quite new in the late 1800s when states first started making national work-injury policies. It was precisely the expansion of rights by a state that led to workers having new forms of power to exert in the state (voting, the right to organize). At the same time, the architects and policymakers developing nation-states were able to build their own bases of power by offering these rights (Marshall 1950), and with these rights came institutional developments like social insurance and the stable bureaucratic structures to implement it that strengthened the worker-state relationship. The allegiance of workers in all their forms was crucial to nation-building because they represented the largest segments of society demographically and were increasingly exposed to resistance tactics that threatened the state through urban concentration and the spread of Communist doctrine.

Theories of power resources and institutions argue that politics and the ability of special interests to organize and exert power influenced the timing and scope of work-injury laws. As argued by Korpi (1983), the agents of the working class—especially unions, socialist movements, and "left"-parties—competed with employer organizations and special

interest groups for influence in development of social, economic, and political institutions via the state. The mobilization of the working class, motivated in particular by the spread of new socialist ideas, imposed pressure on the old and new power elites, forcing them to take strategic action. It is thus a combination of power resources and ruling strategies which fostered the stabilizing role of social insurance in nation state-building. The Communist movements were just one example of the threat of revolution that lurked among populations in early European state-building after the French Revolution (Breznau 2020).

In Bismarckian Germany, for example, the introduction of social insurance went hand-in-hand with the *Sozialistengesetze*, which were various laws prohibiting a range of socialist, social-democratic, and communist associations. These laws were dismantled in 1890 due to the continued success of the socialist party and its allies; however, by this point Germany had introduced the world's first national, and relatively comprehensive work-injury social insurance scheme. Arguably, this contributed to the failure of a socialist revolution despite strong socialist organization, because the state became strong through public legitimacy, not only the use of force. In a similar vein, Béland and Koreh (2019) suggest that in both Canada and Israel social insurance policies played a prominent role in state-building, despite extremely different historical and institutional trajectories. Just as with taxes, the authors stress the importance of revenue raising in contributory schemes, emphasizing the possibility to use those programs to expand state fiscal capacities and legitimacy. As states legislate in more areas and control or regulate more forms of insurance, the state itself becomes indispensable to the economy and social welfare.

Whether giving or regulating or simply reacting to worker revolts, state-building was certainly not a linear, "friendly" process, but one of contradictions and conflict. Nation-building entails attempts to vest the highest level of power and authority into nation-state governance, a power to which all other power resource groups (parties, unions, employer organizations, etc.) are subjugated. From a Gramscian perspective, this would be construction of a hegemonic state through both coercion (strong laws against revolutionary organizations) and consent (providing citizenship, new rights, and social insurance).

State leaders and policymakers did not operate in isolation. They constantly engaged in policy learning from other states as they competed not only for strengthening local, regional, and global power and stability. This was facilitated by international organizations, political treaties, and trade. Liu and Leisering (2017) argue that the adoption of Bismarckian systems was the product of international norm-setting by the International Labor Organization (ILO). For example, Japan directly imported German civil law and later Bismarckian social insurance principles in its (strong) state development, and the latter was specifically intended to head off labor problems witnessed across Europe (Gordon 1985). The Communist party was certainly an international organization by the late 1800s and had great influence on worker movements even before the ILO and in countries across the globe from the USA to Japan.

It is therefore our main contention that work-injury and especially social insurance were particularly important in the process of nation-building. Given that work-injury protection in the form of social insurance tended to preclude or coincide with other forms of social security (pensions and unemployment protection, for example), it should be a key event in the construction of successful nations. As it requires legitimacy and a clear nation-state within which to enact the policy, it should come in the early stages of nation-state development. Therefore, we hypothesize that *social insurance is more likely in the years immediately after nation state formation*.

At the same time, employer liability policies were often enacted to placate rather than empower workers. They paid lip service to worker movements and calls from elites or humanistic organizations to help the lot of the suffering workers. In many cases they were simply laws to achieve recognition and clout internationally, as with appearing 'in line' with the powerful ILO; workmen's compensation being among the earliest conventions (C012 1921 and C017 1925). Given that employer liability laws did not specifically link workers with the state in a solidaristic way because they left the burden of proof (thus risk) on the workers, we expect that enactment of *employer liability laws is not more likely in the years immediately after nation state formation*.

We incorporate our unique hypotheses within the larger theoretical perspective motivating the collective research in this book. Namely, we are also investigating the development of social policy as a process of globalization, so we test our hypotheses while simultaneously attempting to account for diffusion and historical trajectories. Diffusion processes related to colonialism, trade, migration, and culture are often theorized and tested in the development of social spending or the introduction of welfare state laws (Collier and Messick 1975; Schmitt 2015; Egger et al. 2017); but we are aware of no study that simultaneously accounts for both density of adoption among network ties and event history trajectories to estimate the likelihood of adopting work-injury insurance.

Data and Methods

All data and replication materials are available in our Project Repository.[2] We use the Global Work-Injury Policy Dataset (GWIP v1.0) (Breznau and Lanver 2020) to measure the year of introduction for our dependent variables *first law* and *first social insurance*. We recode the latter to the year when all formal blue-collar workers were *de jure* covered. Some countries introduced a first social insurance law that covered only certain segments and we do not count this. To be consistent with our nation-building theory, the law should apply to the industrial, blue-collar workforce whose allegiance is arguably necessary for national success, and certainly strong development in a global capitalist economy. Full information on all covariates is available for 151 countries from 1880 to 2010.

Our primary test variable is the year that a country became an independent state and the four years following. We also include the year prior to state formation to account for any measurement error associated with chopping time data into yearly points; although in only two cases, a law appeared the year before state formation. We would argue this is not coincidental but a part of the state formation which starts

[2] https://github.com/nbreznau/work_inj_diff.

many months or years prior to a formal declaration of independence. To identify state formation, we take the institution of a state government that had autonomous or semi-autonomous (usually under the purview of a monarch) domain over policymaking most often established via a constitution and covering consistent borders or people as our criteria. For example, Germany in 1871 and Japan in 1890.

Our other independent variables in the analysis account for modernization and political regime by measuring Gross Domestic Product (GDP) per capita in ten thousand 2010$US and the degree of democratization using the regime scale from the *Varieties of Democracy* project. The latter is a continuous measure from most authoritarian to most democratic. Next, we incorporate four network variables measuring colonialism, culture, trade, and spatial proximity. These variables are described in detail in Chapter 1. Briefly, culture refers to similarities in time-varying indicators of political liberties, rule of law, gender roles, dominant religion, language group, government ideology, and Huntington's classification of civilizations. Trade refers to dyadic trade densities provided from the *Correlates of War* data and spatial proximity refers to capital distances. As network variables, they measure both dyadic network linkages and the rate of diffusion among closer ties. Thus, their effects are weighted, a process also described in more detail in Chapter 1. See also the methods of Valente (1995).

We tested two network diffusion effects of colonialism, one normalized where the effect of colonialism is constant after colonialism ends and one where former colonies are still treated as part of the colonial network after independence. This matters little empirically, as in both cases the point estimates are close to zero and/or show huge confidence intervals (Models 4 and 5 in both Appendix Tables). Consistent with modernization arguments, we tested the robustness of our findings using percent of the labor force in agriculture for a restricted 83 country sample using the *Banks CNTS* data, but it was not any more informative than our GDP variable and thus not reported here (see Project Repository for these results).

Results

We start with a descriptive portrayal of the event of nation-state formation in Fig. 2.1. Each row of the figure on the *y*-axis is a single country plotted across the years 1880–2010. We centered the year measure so that year of state formation is zero. Thus, the black vertical line is when each state became independent. The dark grey segments represent time periods in each nation's history where there was no work-injury coverage. The brown segments indicate a country has employer liability, and the green segments indicate a work-injury social insurance scheme.

Figure 2.1 shows that social insurance is something ubiquitously introduced after nation-state formation. This means that establishing a

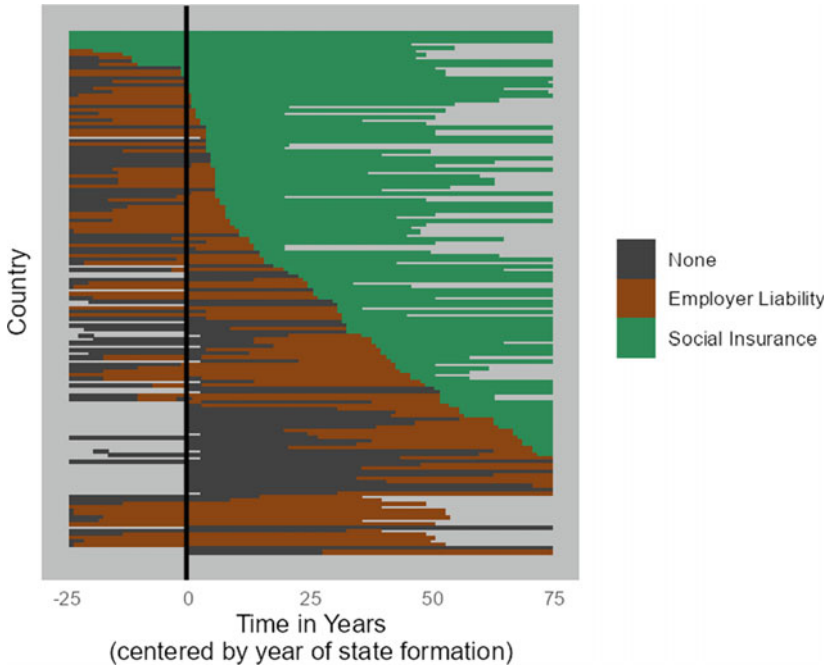


Fig. 2.1 Nation-state formation as a "treatment" effect for the introduction of work-injury law

constitution, declaring independence, or various other events that established a politically self-ruling state entity are changes in state status that occur prior to social insurance introduction. Of 150 countries that enacted any law, 133 (89%) introduced social insurance. Of the countries that introduced social insurance by 2010, 25 (19%) introduced it during state formation. Moreover, many countries that have not introduced social insurance are much younger (indicated by the missing segments in the lower right of Fig. 2.1). Whether this is a causal relationship, we cannot conclude; however, the fact that many states establish social insurance at the moment of statehood or within the first 4 years thereafter suggests that social insurance is often part of state and nation-building, given of course that many other factors are at play, and nation building is a process that is continual rather than discrete. Further evidence comes from our regression models whose main coefficients are displayed in Fig. 2.2 (full results found in Tables 2.1 and 2.2 in the Appendix).

In Fig. 2.2, the blue lines refer to Model 2 and the red lines to Model 3 (see Tables 2.1 and 2.2 in Appendix), these models are identical except for the inclusion of network exposure by spatial proximity. Moreover, Models 2 and 3 are otherwise identical for the dependent variables first law (left panel, Models "A" in Table 2.1) and first social insurance

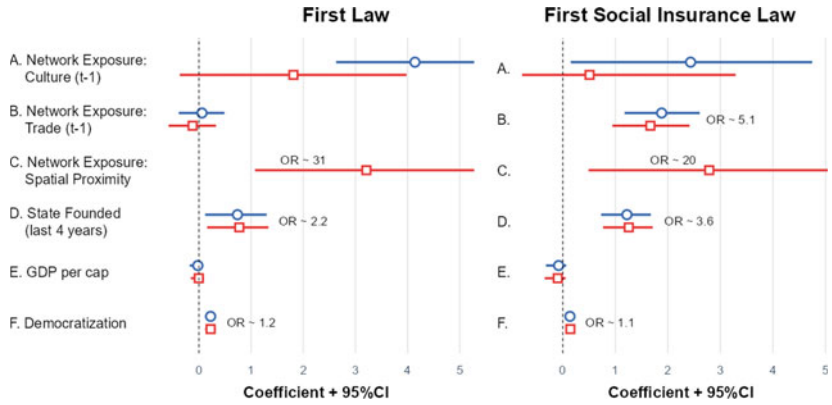


Fig. 2.2 Discrete-time hazard diffusion models of work-injury law in 150 countries, 1880–2010, Log-Odds

(right panel, Models "B"). The results reveal that spatial proximity, state-founded, and democratization all exhibit positive statistical associations with the yearly likelihood of adopting a first law. The effects are considered important because they reflect a plausible statistical range that is significantly greater than zero with a 95% confidence interval (CI) after robust clustering standard errors by country. The "OR ~" labels added to the plot for the significant coefficients are exponentiated coefficients, "odds ratios," representing the increase in likelihood of adoption in any given year with a one-point increase in that variable, all else equal.

The spatial proximity variable is weighted by both the distance between the states and the percentage of members adopting a first law, thus it is difficult to interpret. However, we can say that the difference between having few other states nearby adopting and most states nearby adopting is a 31-fold increase in the likelihood of adoption in a given year. The CI is very wide, so this is not a highly reliable value and might range from just a few times more likely to 50 times more likely.

The state-founded variable suggests a 2.2-fold increase in likelihood of adopting a first law, and the democratization variable has a 1.2-fold increase. However, we have to keep in mind that odds ratios are always relative to the actual baseline likelihood of adoption in a given year. This is difficult to pinpoint because of the time period dummies necessary in this type of model. In Table 2.1 we see that an average likelihood of adoption in any given period of a first law (Model 3A) is 0.003 or roughly 0.3% all else equal. The state-founded variable represents a (2.2*0.3% =) 0.66% likelihood of adoption. The window of five years of state formation is our test variable, thus the likelihood of adopting at some point in the entire five-year period is 3.3%.[3] The democratization variable is measured on a scale from 0 to 9, so we can say that when a state goes from a score of 2 (or "rather authoritarian") to a score of 7 ("rather democratic") the odds actually increase by (5*1.2 =) sixfold leading to a likelihood of (6*0.3% =) 1.8%; a perceptibly large increase.

[3] Cumulative probability over X years calculated as $1 - (100 - [percent\ likelihood\ in\ year]\hat{}X/100\hat{}X)$.

The results are slightly different for adoption of a first social insurance law. Here, network exposure to trading partners matters as well as the other significant effects for any first law. We can say that the state-founded variable is even more influential. Taking again a rough average of 0.3% baseline likelihood (Model 3B) a country is (3.6*5 =) 18-fold more likely to adopt during state formation, which is an overall likelihood of (0.3*18 =) 5.4%, a considerably sized likelihood in a five-year-period.

Note that our selection of Models 3A and 3B was supported by a better fit to the data than Models 1 or 2 or any robustness checks in both dependent variables' cases.

Discussion

A political economy perspective on institutions suggests that democratic regimes are more likely to enact universal policies because the citizens are relatively equal, at least in comparison to authoritarian regimes where certain groups are often targeted to maintain power (Grünewald 2021). The measure is fraught with uncertainty, however, as who qualified as a voting citizen changed dramatically over time. Women were excluded early in democratic development and often racial/ethnic/religious groups as well. Moreover, workers were not citizens in early democracies and the franchise extended only slowly from high-status landowners or nobility to petty bourgeoisie to the working masses who were also at first mostly working in informal or subsistence labor.

What is ostensibly striking is the lack of association of GDP with likelihood of adoption. We are careful here because democracy could be seen as a process of modernization, or at least as a form of institutional isomorphism along a modernizing trajectory. Therefore, we do not interpret the GDP coefficient as evidence against the modernization thesis. It is more likely an artifact of event history modeling in many countries. The ranking of countries in 1900 is roughly the same in 2000 in terms of GDP, and this means that most countries follow more or less a

yearly, linear trajectory in GDP growth. Therefore, GDP tracks time in the hazard model and fails to introduce unique explanatory variance. To demonstrate why modernization probably matters despite the insignificant GDP coefficient, we divide our countries into a mean split between "high" and "low" GDP in 1900. Then we plot the cumulative hazard rates of adoption in Fig. 2.3 by group. The darker blue hazard lines show that those with higher GDP in 1900 are more likely to adopt sooner than those with lower GDP in 1900. This is evidence of the role of GDP, but we could of course divide the sample into more and less democratized and possibly "Western and non-Western cultural spheres" and plot a similar hazard rate trajectory. As these are all interrelated (Breznau et al. 2011, footnote 5), we do not argue for a direct effect of GDP *per se* but are careful not to rule out development and modernization as playing an important role, also indicated by a large effect of democratization in our models.

What is not so often explored in the social security and welfare state development literature is the concept of spatial proximity. The classic study by Collier and Messick (1975) and work by Castles and colleagues (Castles and Mitchell 1992) suggests that there are families of nations when it comes to social policy adoption timing. Thus, the early adopters were European, then came the British influence sphere (New World

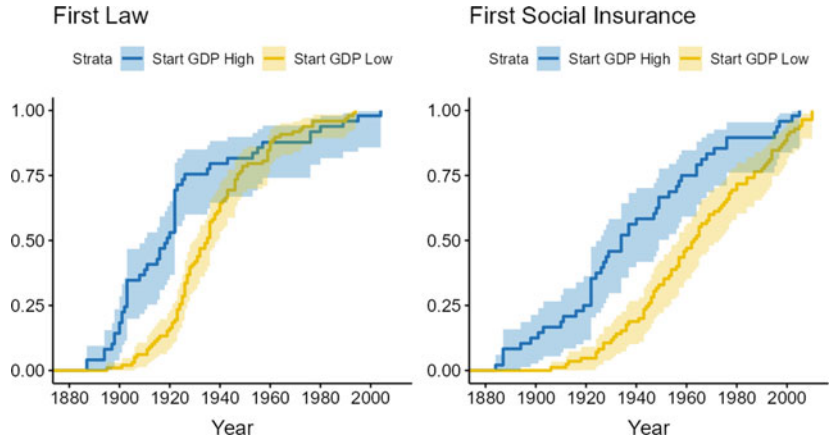


Fig. 2.3 Cumulative hazard rates of adoption by low versus high GDP in 1900

and Japan), and then Latin America and so forth. Our study reveals more about the mechanisms behind this process than the previous works because it includes multivariate event history modeling with network diffusion effects. This gives a direct statistical link of dyadic ties and network weighting as a model of the theoretical reality of social exchange and transmission of ideas through the convenience of spatial contact.

In a way, our study opens a new area for researchers to attempt to disentangle trade—what is passed through actions related to economic exchange—from the transmission of ideas based on both convenience and political networks. We assume that ideas passing through international organizations such as the ILO, religious and charity organizations, the Communist party, and university exchanges are endogenous to our measure of trade partnerships. States that trade more with each other also have exchanges in these other areas. This is often facilitated by shared culture, language, or geopolitical agendas. As our reproducible code and data are freely available, we look forward to researchers expanding on our ideas and models. Nonetheless, the trade effect is striking, and we are not aware of a strong theory of policy diffusion based on trade in the welfare state literature.

Conclusion

Using an event history time-series model of 150 countries from 1880 to 2010 with the inclusion of network diffusion variables, we show that state formation is an important statistical predictor of the introduction of a first work-injury law in a given nation's history. It is an even more important predictor of a first social insurance law, increasing the likelihood of adoption during the five-year early state formation phase by 18-fold. This points to the important role of social insurance in state-building. Of course, stronger states with more wealth or geopolitical power were more likely to adopt social insurance, especially earlier in their histories, as with the colonial empires of Western Europe and later the Russian Communist Party 'empire' constructed via the Soviet

Union where countries adopted social insurance as part of the system of socialism. Both western and eastern Europe saw social insurance arrive after the start of industrialization, but the former did it without workers overthrowing their governments. In both cases, workers attaining social protections, in addition to expanded rights in the transition out of serfdom, represented a means of constructing a nation in addition to a state (western Europe) or a nation in opposition to the existing state (Russian and Communist revolutions). The cohesiveness of the nation, or what many refer to as solidarity, was built on this enfranchisement and protection of workers, who in exchange offered more efficient or effective labor to improve the state.

We argue that state formation and strengthening are compatible with power resource theories. Once established, the state is vying for complete control over the individuals and organizations within it. Moreover, without a productive workforce that has a sense of national unity, the state is less likely to be as economically competitive or as defensible against outside invasions. We expect a similar mechanism is at play between states and industrial workers as with states strategically using social provisions to improve the number of soldiers and their willingness to fight for the nation. Thus, the introduction of a social insurance scheme that covers all formal industrial workers is a monumental state achievement and institutionalizes the state in a way not present beforehand. Essentially, the welfare of the state and worker become coterminous, where each has an interest in the other via social insurance.

There are limitations to this study; in particular, the timing of nation-state formation is difficult to measure. Germany became an independent state in 1871 but before this there was a German people that arguably constituted a nation, albeit within various forms of empire. After that, the geopolitical form of Germany changed during and after the World Wars, and then again with reunification. This is nothing particularly unique to Germany. Poland had shifting borders throughout the nineteenth and early twentieth centuries as did China and countries that once comprised the Soviet Union. Austria is another challenging measurement

case because it was part of the Austro-Hungarian Empire but also operated as a semi-autonomous state introducing social insurance for miners in 1854 independently of the empire. Therefore, we should proceed with caution in interpreting results, as state formation is not a discrete event in many cases but an ongoing contested process. Finally, even though we found no clear association, colonialism may play a role in work-injury policy because the effect is confounded by culture and spatial proximity, which many former colonies have in common to some extent.

We did not expect an effect of state formation on the introduction of a first work-injury law, as these were largely not social insurance laws but employer liability laws that were ineffectual at staving work-related risks. The effect of state formation on social insurance for blue-collar workers was much larger than on first work-injury laws statistically speaking, but it is not as clear cut as we expected. It is possible that employer liability had a symbolic role in appeasing workers in the very short term and was thus a step in the nation-state construction process, if only as a gesture. As we measured introduction of policies, we do not capture further developments of the state whereby policies are expanded in benefits and coverage and create even more solidarity, i.e. nation building. Given the new global data now available for investigating such phenomena, we see great potential for further investigation of this and other classic research on the welfare state that has been characterized by a focus on the Global North.

Appendix

See Tables 2.1 and 2.2.

Table 2.1 First law regression results

Time-period intercepts	Model 1A	Model 2A	Model 3A	Model 4A	Model 5A
(1880–1902)	0.003*	0.003*	0.003*	0.003*	0.003*
(1903–1928)	0.007*	0.007*	0.006*	0.007*	0.007*
(1929–1954)	0.003*	0.003*	0.002*	0.003*	0.003*
(1955–1979)	0.002*	0.002*	0.001*	0.001*	0.001*
(1980–2010)	0.002*	0.002*	0.001*	0.001*	0.001*
Independent variables					
State founded (last 4 years)		2.093	2.169	2.180	2.180
Network exposure: culture ($t-1$)	67.824*	62.805*	6.114	10.134	10.134
Network exposure: colonial (non-norm)				0.993	
Network exposure: colonial (norm)					0.302
Network exposure: trade ($t-1$)	1.029	1.06	0.886	0.883	0.883
Network exposure: spatial proximity			24.756	31.369*	31.369*
GDP per capita	0.986	0.979	0.997	1.000	1.000
Democratization	1.280*	1.251*	1.252*	1.229*	1.229*
Model statistics					
Countries	150	150	150	150	150
Observations	7766	7766	7766	7766	7766
Log likelihood	−650.477	−647.807	−643.481	−643.114	−643.114
AIC	1318.955	1315.614	1308.962	1310.227	1310.227

*Indicates coefficient is statistically different from zero with a 99% CI. Standard errors adjusted using Huber-White method

Table 2.2 First social insurance regression results

Time-period intercepts	Model 1B	Model 2B	Model 3B	Model 4B	Model 5B
(1880–1902)	0.002*	0.002*	0.002*	0.002*	0.002*
(1903–1928)	0.003*	0.003*	0.003*	0.003*	0.003*
(1929–1954)	0.003*	0.003*	0.002*	0.004*	0.004*
(1955–1979)	0.002*	0.001*	0.001*	0.002*	0.002*
(1980–2010)	0.001*	0.001*	0.001*	0.002*	0.002*
Independent variables					
State founded (last 4 years)		3.390*	3.511*	3.611*	3.611*
Network exposure: culture ($t-1$)	7.010	11.382	1.665	4.830	4.830
Network exposure: colonial (non-norm)				0.983	
Network exposure: colonial (norm)					0.060
Network exposure: trade ($t-1$)	6.783*	6.564*	5.297*	5.130*	5.130*
Network exposure: spatial proximity			16.238*	19.872*	19.872*
GDP per capita	0.911	0.925	0.909	0.906	0.906
Democratization	1.170*	1.146*	1.155*	1.138*	1.138*
Model statistics					
Countries	150	150	150	150	150
Observations	12,162	12,162	12,162	12,162	12,162
Log likelihood	−649.725	−639.206	−636.391	−635.429	−635.429
AIC	1317.450	1298.413	1294.781	1294.858	1294.858

*Indicates coefficient is statistically different from zero with a 99% CI. Standard errors adjusted using Huber-White method

Literature

Abbott, Andrew, and Stanley DeViney. 1992. "The Welfare State as Transnational Event: Evidence from Sequences of Policy Adoption." *Social Science History* 16 (2): 245–274.

Alber, Jens. 1982. *Vom Armenhaus zum Wohlfahrtsstaat: Analysen zur Entwicklung der Sozialversicherung in Westeuropa*. Frankfurt: Campus-Verlag.

Béland, Daniel, and Michal Koreh. 2019. "Social Insurance as Fiscal Policy and State-Building Tool: The Development and Politics of Payroll Contributions in Israel and Canada." *Journal of Social Policy* 48 (1): 1–20.

Berkowitz, Edward, and Monroe Berkowitz. 1984. "The Survival of Workers' Compensation." *Social Service Review* 58 (2): 259–280.

Breznau, Nate. 2020. "The Introduction and Expansion of Work-Injury Law: Testing the Global Role of Worker Agency." Last accessed January 12, 2021. https://osf.io/preprints/socarxiv/kys9w/.

Breznau, Nate, and Felix Lanver. 2020. *Global Work-Injury Policy Database (GWIP): Project Overview and Codebook*, 4. Bremen, Germany: Collaborative Research Center SFB 1342 'The Global Dynamics of Social Policy'. Last accessed January 12, 2021. https://www.socialpolicydynamics.de/f/eb5f6f0e54.pdf.

Breznau, Nate, Valerie A. Lykes, Jonathan Kelley, and M. D. R. Evans. 2011. "A Clash of Civilizations? Preferences for Religious Political Leaders in 86 Nations." *Journal for the Scientific Study of Religion* 50 (4): 671–691.

Castles, Francis, and Deborah Mitchell. 1992. "Identifying Welfare State Regimes: The Links Between Politics, Instruments and Outcomes." *Governance* 5 (1): 1–26.

Collier, David, and Richard E. Messick. 1975. "Prerequisites Versus Diffusion: Testing Alternative Explanations of Social Security Adoption." *American Political Science Review* 69 (4): 1299–1315.

Egger, Peter, Doina Radulescu, and Nora Strecker. 2017. "On the Spread of Social Protection Systems." *International Tax and Public Finance* 24 (4): 550–574.

Flora, Peter, and Jens Alber. 2009. "Modernization, Democratization, and the Development of Welfare States in Western Europe." In *The Development of Welfare States in Europe and America [Originally Published 1976]*, 37–80. New Brunswick and London: Transaction Publishers.

Gordon, Andrew. 1985. *The Evolution of Labor Relations in Japan: Heavy Industry, 1853–1955*. Cambridge, MA: Harvard University Asia Center.

Grünewald, Aline. 2021. "From Benefits and Beneficiaries: The Historical Origins of Old-Age Pensions from a Political Regime Perspective." *Comparative Political Studies* 54 (8): 1424–1458.

Haggard, Stephan, and Robert R. Kaufman. 2008. *Development, Democracy, and Welfare States: Latin America, East Asia, and Eastern Europe*. Princeton: Princeton University Press.

Ierley, Merritt. 1984. *With Charity for All: Welfare and Society, Ancient Times to the Present*. New York: Praeger.

Kangas, Olli. 2010. "Work Accident and Sickness Benefits." In *The Oxford Handbook of the Welfare State*. Last accessed October 2, 2020. https://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199579396.001.0001/oxfordhb-9780199579396-e-.

Korpi, Walter. 1983. *The Democratic Class Struggle*. London and Boston: Routledge.

Liu, Tao, and Lutz Leisering. 2017. "Protecting Injured Workers: How Global Ideas of Industrial Accident Insurance Travelled to China." *Journal of Chinese Governance* 2 (1): 106–123.

Marshall, T. H. 1950. *Citizenship and Social Class and Other Essays*. Cambridge: Cambridge University Press.

Obinger, Herbert, Klaus Petersen, and Peter Starke, eds. 2018. "Introduction: Studying the Welfare-War Nexus." In *Warfare and Welfare: Military Conflict and Welfare State Development in Western Countries*. Oxford: Oxford University Press.

Pavalko, Eliza K. 1989. "State Timing of Policy Adoption: Workmen's Compensation in the United States, 1909–1929." *American Journal of Sociology* 95 (3): 592–615.

Schmitt, Carina. 2015. "Social Security Development and the Colonial Legacy." *World Development* 70: 332–342.

Tripp, Joseph F. 1976. "An Instance of Labor and Business Cooperation: Workmen's Compensation in Washington State (1911)." *Labor History* 17 (4): 530–550.

Valente, Thomas Q. 1995. *Network Models of the Diffusion of Innovations*. New Jersey: Hampton.

Wilensky, Harold L. 1975. *The Welfare State and Equality: Structural and Ideological Roots of Public Expenditures*. Rebound in Cardboard/EX-LIBRARY. Berkeley, CA: University of California Press.

3

Networks of Global Policy Diffusion: The Introduction of Compulsory Education

Helen Seitzer, Fabian Besche-Truthe, and Michael Windzio

Introduction[1]

Compulsory education is a standard most countries nowadays adhere to. Welfare-states are considered responsible for providing universal access

[1]This chapter is a product of the research conducted in the Collaborative Research Center "Global Dynamics of Social Policy" at the University of Bremen. The center is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)—project number 374666841—SFB 1342.

H. Seitzer (✉) · F. Besche-Truthe · M. Windzio
SOCIUM, University of Bremen, Bremen, Germany
e-mail: seitzer@uni-bremen.de

F. Besche-Truthe
e-mail: fbesche@uni-bremen.de

M. Windzio
e-mail: mwindzio@uni-bremen.de

M. Windzio et al. (eds.), *Networks and Geographies of Global Social Policy Diffusion*, Global Dynamics of Social Policy,
https://doi.org/10.1007/978-3-030-83403-6_3

to education (World Conference on Education for All 1990). Education has always played a crucial role in society—it prepares students to contribute to the labor market and society, ensures social order, and permits social mobility at the same time: "Education is prestigious, is thought functional for all sorts of goods, and is seen as both individually and collectively beneficial" (Strang and Meyer 1993, 502). Social status is heavily influenced by education, increasing the demand for institutions of mass education, as it promises social mobility and life-chances otherwise unattainable. In addition, well-organized rational bureaucracies require appropriately qualified employees and citizen (Weymann 2014). In short, education closely corresponds with modernization. However, there are different pathways into modernity (Eisenstadt 1986), which also depend on different cultures and religions. A crucial aspect of education is the transmission of norms and values from one generation to the next. With this, it ensures not only the continuation of traditions but also influences and shapes the persistence of local and national cultures (Morin 2016; Boyer 2018). As a consequence, the content and shape of state-organized education is tied to local culture and practices. At the same time, it is also a result of transnational processes and developments. In this chapter, we elaborate upon the question: what determinants have shaped the global diffusion of compulsory education policies?

Education started to become increasingly important with the rising significance of the individual (Ramirez 1989) and with globalization trends (Griffiths and Imre 2013). This leads us to the assumption that state-regulated education may not only vary in content between cultures but also have varying degrees of significance for societies, resulting in varying time points of compulsory education introduction. Our hypothesis, therefore, is that culture influenced the introduction of compulsory education around the globe. Despite cultural differences, however, modern education systems are remarkably similar. Most schools have two- or three-tier systems (primary, secondary, and tertiary), class structures divided by age-group and front-facing instructions, not to mention the focus on mathematics, reading, sciences, history, and physical and arts education, just to name a few (Anderson-Levitt 2003). Yet, the actual content of these curricula might differ between cultures. The long-term

trend towards isomorphism continues despite remarkable global differences between cultures (Henrich 2020). This perspective, but especially the inclusion of shared cultural traits as a pathway of diffusion, has been ignored in research on the development of social policy for far too long.

State-organized education is the outcome of religious, economic, and political mechanisms that drive a rationalized society and state, secularizing the organizational and institutional rules of the individual's membership in these units (Weber 1972; Weymann 2014). Education allows nation states to shift the focus to the individual, which is now responsible to take its role in differentiated units of a complex society. It provides the cognitive basis for a (post-)industrialized state's rational administration. Secularization and Western rationalization originated from a particular cultural development in the Occident (Weber 1972), whereas other areas in the world followed different cultural pathways into modernity (Eisenstadt 1986), which might also affect the establishment of educational institutions such as compulsory education.

However, one has to keep in mind that culture is not the only influential factor on the introduction of social policies such as education. Diffusion research has shown that the transformation and, especially, diffusion of policies are highly dependent on countries' opportunities for interaction. Therefore, taking a network perspective to study the introduction of compulsory education should not come as a surprise. The diffusion of compulsory education is, in our perspective, dependent on the ties and networks between countries. Therefore, in this chapter, we implement a network diffusion approach by including the exposure to countries that have already adopted compulsory education. The connections in the distinct networks determine the exposure and are, in some cases, volatile over time but also changing in tie strength. We construct the ties between countries through connections of trade, colonial legacies, or spatial proximity.

Furthermore, we include a network of shared cultural characteristics between countries to test the influence of culture on the diffusion of education policy. According to our approach, countries are more closely tied to each other when they share more cultural characteristics. How to define "culture," how culture influences individual behavior,

and how cultures differ around the world, are important but controversial issues in the social sciences (Anderson-Levitt 2012). In our view, "culture" essentially signifies a shared understanding of reality, which is among others represented by beliefs as to how society—and its institutions—should be structured and organized. Furthermore, aspects such as religion, language, and societal values make up the complex concept of "culture" differentiating between social groups. Long-term historical path dependencies led to remarkable differences between global cultures (Weber 1972), and these differences are still important today (Henrich 2020). Our approach to analyze "cultural spheres" provides a non-essentialist concept of culture. It results in a two-mode network approach which provides fuzzy-set clusters with overlapping boundaries and displays a changing structure and membership in these cultural clusters over time (Windzio and Martens 2021). However, we will argue that culture closely relates to other dimensions of multiplex network ties, such as spatial proximity, colonial past, and global trade. If we want to test whether cultural similarity is a relevant "pipe structure" of social policy diffusion, which is in our case compulsory education, we must take into account these correlated networks. Hence, the analyses in this chapter test the diffusion effects of the respective networks against each other. Do we still find effects of cultural similarity on the global diffusion of compulsory education after controlling for colonial history, global trade, and spatial proximity? Or is the diffusion rather a result of a combination of multiplex networks connecting countries globally?

Theory

Policy diffusion as a general umbrella term describes multiple mechanisms through which policies travel from one country to another. The literature mentions, e.g., (1) learning, (2) competition, (3) imitation, or (4) coercion (Dobbin et al. 2007; Obinger et al. 2013). Which of the mechanisms is at work in education policy, however, is difficult to discern using a macro quantitative design. Nevertheless, there are multiple theoretical approaches, exploring reasons for the diffusion of compulsory education. A common approach is Meyer and colleague's *World Society*

theory (Meyer et al. 1997). Another, related explanation can be found in "critical cultural political economy" (CCPE) (Dale 2000) or in Marxist functionalist theories such as the *World Systems Approach* (Wallerstein 2004; Griffiths and Imre 2013). We start our theoretical considerations with *World Society* theory, enhance it with insights from research on global "cultural spheres" and contrast this view with the CCPE approach.

In the globalized world society, individuals and organizations are interested in common institutionalized standards, especially when they interact across different national institutions. Aided by powerful Western states, modern, Western bureaucracies tend to spread around the world (Meyer et al. 1997) because International Organizations (IOs) require predictable organizational standards. World Society revolves around the construction of actor-hood, identity, and legitimization of the state and non-state actors involved in policymaking. In order to gain legitimacy, these actors tend to integrate commonly accepted models or concepts such as human rights or even, the concept of a state itself into their own system. Recognition of statehood by external actors with scientific and professional authority such as other states, IOs, or other non-state actors has always been a crucial dimension of the Western political system. This element, according to Meyer and colleagues, has led to the development of a set of norms and standards, a global culture so to speak, recognized and influenced by all parties of world society (Meyer et al. 1997). The implementation of these norms and standards grants legitimization. Accepting this global culture, however, can be much more a performative act than an integration of these norms in the local belief system (Steiner-Khamsi 2000)—it can be just "myth and ceremony" (Meyer and Rowan 1977). The participation in International Large Scale Assessments, for example, is an often used tool to gain attention, gather funds such as developmental aid, or simply legitimize a country further in the eyes of other nation states (e.g., Kijima 2015). Deviations from the general standardized systems as well as failed implementation are not always a contradiction to the common model. Rather, the confirmation of these deviations as irregular further validates the existence of a common model. However, non-compliance with the implicit rules can have serious negative consequences as well. The non-participation in tests

like PISA is penalized: The Human Capital Index by the World Bank—a scale playing the role as a rationalized other with scientific authority in this instance—is negatively affected for non-participating countries (Liu and Steiner-Khamsi 2020). World society induces isomorphism among education systems, of which compulsory education is a crucial part (Meyer et al. 1997).

The acceptance of a common set of standards makes interactions easier and increases the chances of ties such as trade, which might be beneficial for some states. As a consequence, the perception of national culture and identity became important issues in the domestic politics in many Western countries but also at the global level (Fukuyama 2018). The adoption of policies according to this model requires an understanding of similarities between the systems, which further increases interaction and finally diffusion (Strang and Meyer 1993).

The idea of a world society lends itself to explain the isomorphism of countries' institutions and the frequent proclamation of policy diffusion we see in educational research. Nevertheless, the diffusion process of compulsory education might be shaped and moderated by different cultures in the world. We do not regard cultures as stable entities here but as embedded in a network of socially constructed elements. There is no objective point of reference between different cultures. Aspects of values, attitudes and social behavior in one culture, such as the degree of individualism or collectivism, are just distributed differently in comparison to other cultures. In ontological terms, the individualism in the West gains its existence only in comparison to other cultures that are supposed to be less individualistic. As we know from social network research, components of cultures refer to one another like fuzzy-set clusters and give meaning to each other (Emirbayer and Goodwin 1994; Emirbayer 1997, 299). Here, we are considering additional approaches as influential, especially to account for other globalizing influences than culture, in particular economic aspects. Dale (2000) puts special emphasis on the economy, in that the education systems we see today are not only influenced by national culture but also by capitalism as an economic system. Although the economic system is also an outcome of specific cultural developments (Weber 1972), *Critical Cultural Political Economy*

places emphasis on interrelations between countries shaped by the capitalist system at large. Today's education system prepares students for the needs of the labor market and graduates from education systems are set on a path to repeat and further stabilize the system. In this approach, capitalism is regarded more as a causal force, responsible for shaping education, rather than an outcome (Dale 2000; Robertson and Dale 2015). Knowledge, rather than production, translates into economic success (Dale 2005). Here too, diffusion of social policy occurs, albeit for different reasons than assumed by world society theory. Culture and the need for legitimization are relevant factors in the diffusion of education policy, but CCPE might very well be correct in highlighting the specific influence of the economy in this process.

According to the view that economic processes influence education systems, the production of goods and services determines a society's economic structure and the degree in which information is processed, since information is what modern service economies are about (Hidalgo 2015). Even though global economies are based on the division of labor and comparative cost advantages, implying differences in their economic structure, global trade requires common standards with respect to quality assessment, commercial accounting, and legal issues regarding the respective transaction. If economic transactions go beyond economic exploitation, as we know from colonial dependencies which often came along with a transfer of institutions, trade partners are becoming more closely aligned. Extensive trade between nation states extends communication and can accelerate economic progress, which is why we assume that countries linked in the *network of global trade* often introduced compulsory education in similar historical periods. In other words, strengthened economic intersection increases the need for similar institutionalizations of education systems.

Flipping the argument, we might see that similar institutionalization might be one pre-requisite for diffusion. We assume that *colonial legacies* might prove influential through building path dependency in the institutionalization. Colonial ties between two countries usually imply asymmetric relationships of economic exploitation. Yet, these ties show possible avenues for a colonial power imposing at least some of its institutions upon the colony. This "imperial diffusion" (Kuhlmann et al. 2020)

might have been prevalent in the introduction of compulsory education to pacify conflicts. Additionally, we suspect the influence does not disappear after colonization ends. Former colonies are still exposed to the educational institutions of their colonizers. These colonizers prove to still be influential through development aid, for example (Shields and Menashy 2017), or simply because they are a salient reference country (Dobbin et al. 2007, 453). Thus, compulsory education might diffuse also via networks of colonial legacies. To the contrary, it can also be as equally true that local actors strongly repel institutionalization of education following a Western model (Craig 1981, 192).

Finally, the basic assumption in policy diffusion research is that *spatial proximity* strongly facilitates diffusion. Of course, we agree with the view that "Space is more than Geography" (Beck et al. 2006), and spatial proximity itself is not a mechanism that could explain policy diffusion. Rather, spatial proximity is an indicator of cognitive, social, cultural, and institutional similarity. On the one hand, this indicator is far from being perfect, particularly at the margins of a "cultural sphere" (Windzio and Martens 2021). On the other hand, the determination of spatial distances is comparatively simple and intuitively easy to follow. We can measure spatial proximity itself with less error than the "cultural spheres". We expect spatial distance to have a "retarding" effect on policy diffusion because the opportunity to meet decreases with increasing distance. Possibilities for contact depend on specific mechanisms that might be correlated with spatial proximity. Accordingly, proximity itself is not a mechanism but has the advantage of a simple and precise measurement compared to more complex constructs, such as cultural similarity (Windzio and Martens 2021). Thus, in the following, we empirically test the influence of these different network dimensions on the diffusion of compulsory education and control for levels of democratization and GDP per capita in order to take economic and political heterogeneity between countries into account.

Data and Methods

In this chapter, we analyze the worldwide diffusion of compulsory education. We coded the year of the adoption of first regulation, making education mandatory for the majority of all children in the respective country. For most cases this means the attendance of state-regulated schools. We are interested in the moment when the state intervenes in the education of children and mandates education to be conducted. We, therefore, code the first de jure introduction and disregard actual implementation as well as abolitions. For example, a law enacted in 2000 makes school compulsory in Djibouti, implying school attendance. However, 1 in 5 children of primary school age is not attending school.[2] Another example is Singapore, where high enrollment rates precede compulsory education: Here, compulsory schooling was only enacted in 2003 with enrollment rates already reaching more than 90%, even 20 years prior to that (Tan 2010). Our data collection is based on the "World Education Encyclopedia" by Marlow-Ferguson (2002) and the Bloomsbury "Education around the World Series" (e.g., Brock and Alexiandou 2013). We expand the data with extensive research on concrete laws and a myriad of additional secondary sources.

Lastly, we tried to code according to geographic region as best as possible. North Macedonia, for example, is coded similarly to Serbia and Slovenia because at the time of adoption it was part of the Kingdom of Serbs, Croats, and Slovenes and only later gained independence (Spasenović et al. 2015). Croatia, on the other hand, introduced compulsory education earlier. For federal states, we decided to code the first law on compulsory schooling enacted by the central authority. If this was not possible, we coded the first time of adoption of compulsory schooling of the first political entity within the territory, for example, this included Tasmania in 1868 for Australia.

Figure 3.1 shows the number of introductions per year (yellow) as well as the cumulative introduction rate of compulsory education (red). The figure shows that there are only a few points in time where multiple introductions took place in the same year, for example, around 1920.

[2] https://www.unicef.org/djibouti/education.

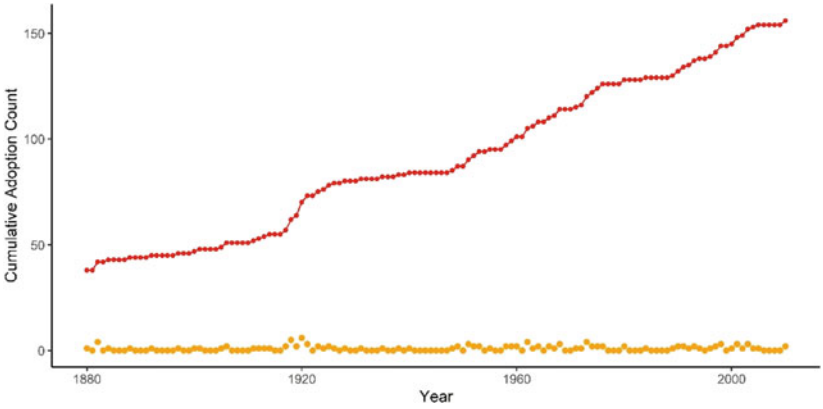


Fig. 3.1 Cumulative introduction of compulsory education

Consequently, the cumulative introduction function (red dotted line) is increasing relatively linear. We, therefore, do not assume a strong dependence on certain time periods over the course of history.

We assume diffusion through networks of shared cultural similarity (membership in cultural spheres), colonial legacies, trade, and geographical proximity from 1880 to 2010. For this purpose, we analyze data on cultural characteristics of $N = 164$ countries, including indicators of political liberties, rule of law, gender roles, dominant religion, language group, government ideology, classification of civilization, and colonial past (Besche-Truthe et al. 2020). We generated quartiles of continuous measurements, e.g., for the index of gender relations, in order to get discrete categories for a valued two-mode network. If two countries share a characteristic, they connect to each other in the network. Most countries establish several relations, for example, by sharing the same language group and the largest religious group. The higher the number of ties in this network, the closer the cultural proximity between two countries. Rather than homogenous clusters and clear-cut "fault lines," this method yields a network of "cultural spheres" with relations of varying intensity between countries. The cultural spheres network is time-varying due to the time-varying measurement of most cultural indicators. Elsewhere, we used the metaphor of a "pipe structure" as the underlying structure of the diffusion process (Windzio and Martens 2021), where the "pipe

diameter" is the number of ties in a dyad and thus, the degree of similarity of two countries. Larger pipe diameters lead to a higher weight of a tie and indicate higher "cultural exposure" of country A to country B. This might increase the likelihood of "contagion", given that a specific policy has not yet been adopted in one of the two countries. We regard networks of cultural spheres, spatial proximity, global trade, and colonial legacies as the underlying pipe structures of the diffusion process. In the spatial proximity network, countries' ties are weighted by the inverse of the distance of their capitals, and it is therefore the only time-independent network. Trade and colonial legacies, on the other hand, differ over time, where the former shows the logarithmized sum of the value of all traded goods between two countries. For the latter, we utilize two different operationalizations of colonial legacy. First, we weigh the influence of multiple former colonizers against each other. Second, we assume an overall receding influence after decolonization, while assuming the influence of two colonizers might be stronger than for entities with just one colonizer (for a detailed description of the data, see Chapter 1 in this volume). We report the estimation using the latter operationalization in the appendix.

Missing data in our control variable GDP per capita from Varieties of Democracy (Inklaar et al. 2018) was interpolated with a logistic function to account for the nonlinear rise of GDP. Where there was no data from the first observation in 1880, the data from the income group of the respective countries was used as a starting point. The values were transferred onto a different scale to represent the share of GDP at the respective time points to the maximum value achieved during our time of observation. The data was then transformed onto a logit scale, interpolated linearly, and transformed back through an inverse logit function and onto the original scale. This procedure produces the rise of GDP in a logistic shape, providing a more realistic use of the indicator as a linear interpolation would. The democracy index stems from the V-Dem Project (Coppedge et al. 2019). Here, missing data points were interpolated linearly. For our analysis, we utilize the *R* package `netdiffuseR` (Vega Yon and Valente 2021) which defines exposure as the share of j adopters in the ego-centered network of node i ($i \neq j$) at time t and is supposed to affect the adoption rate *between* t and $t + 1$ (Valente

1995). If a country is only connected to other countries that already have adopted compulsory schooling, exposure is 1. If none have adopted, exposure is 0 (for details of these concepts, see Chapter 1 in this volume). The introduction of compulsory schooling (no compulsory schooling = 0 and introduction of compulsory schooling = 1) during the window of observation is the dependent variable in our discrete-time logistic hazard model. Once a country has introduced compulsory schooling, it drops out of the risk set. Introductions after 2010 are right-censored, adoptions before the window of observation begins (before 1880) are not considered in the risks set but contribute to the network-exposure of countries that have not yet adopted. Since compulsory education is an older social policy than other policy fields dealt with in this volume, we do not consider the same number of countries in the regression, as some countries had introduced compulsory education before 1880. Thus, from the initial set of 164 we only keep 117 countries. However, the full set of countries contributed to the estimation of exposure. Further explanations on the data and analysis can be found in the introductory chapter of this volume.

Results

To answer the question of the influence of different networks on the diffusion and consequently introduction of compulsory education, we first employed a diffusion model to estimate the effects of contagion in different networks. These coefficients were then used in a time-discrete logistic hazard model, estimating the influence of contagion on the final outcome, the adoption of compulsory education. Time is modeled as a step function, which means that for every time period of around 25 years, a new constant is assumed. In doing so, we account for unobserved heterogeneity that develops over time. Figure 3.2 shows the spread of compulsory education around the globe. The map indicates that among the first countries to implement compulsory education, Western or English-speaking countries are very prominent. Additionally, some Middle and South American countries can be counted among the early adopters.

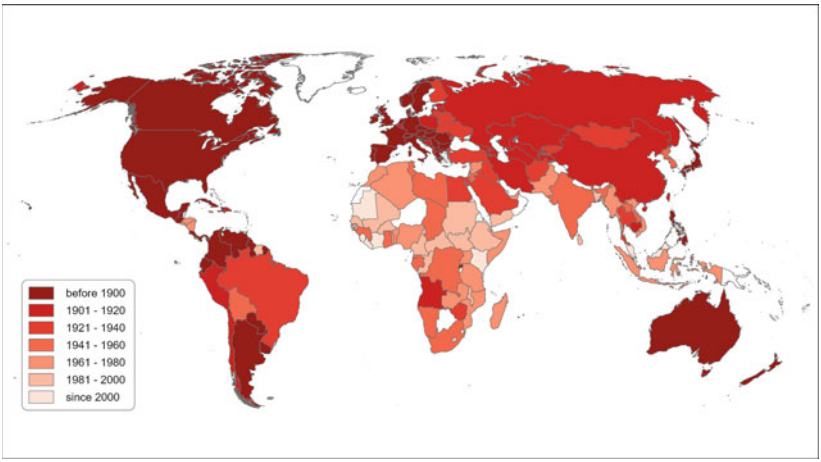


Fig. 3.2 The global diffusion of compulsory education

Table 3.1 shows the outcomes of the logistic hazard models. First, we estimated the time rates, then included measures for GDP per capita, a democratization index, and the networks, added step wise. Exposure in the networks of cultural spheres as well as trade and geographical proximity is estimated with a one-year lag. The final regression coefficients are corrected with a standard error correction for clustered standard errors, to account for times when countries to be known as separate entities today, were one political unit. This implicates that during these times adoptions could have been dependent on the political overlap, hence the correction of standard errors. The coefficients were transformed to hazard ratios. The interpretation, therefore, goes as follows: Coefficients greater than 1 indicate a positive effect while coefficients smaller than 1 indicate a negative effect of the variable in question. The hazard ratios for the networks represent the odds of adopting compulsory education, given the exposure though the network in question to countries, who have already adopted compulsory education.

Table 3.1 The introduction of compulsory education in $N = 117$ countries

	(1)	(2)	(3)	(4)
1880–1914	0.001***	0.001***	0.001***	0.001***
1915–1929	0.002***	0.002***	0.002***	0.001***
1930–1954	0.001***	0.001***	0.001***	0.0005***
1955–1979	0.001***	0.001***	0.001***	0.0004***
1980–2010	0.001***	0.001***	0.001***	0.0002***
trade existence (=1, else = 0)			5.469***	4.124***
GDP per capita/US$10,000	1.020	1.021	1.020	0.977
democratization	1.069	1.065	0.995	1.027
networks				
cultural spheres netw.: w. exposure (lag 1 year)	128.387***	136.015***	26.357**	1.349
colonies netw.: w. exposure		1.213	1.344	1.151
trade netw.: w. exposure (lag 1 year)			0.843	0.744
spatial proximity netw.: w. exposure (lag 1 year)				127.716***
Observations	8614	8614	8614	8614
Log Likelihood	−550.627	−550.401	−534.053	−524.384
Akaike Inf. Crit	1117.254	1118.802	1090.107	1072.769

Note $^{+}p < 0.1$; $*p < 0.05$; $**p < 0.01$; $***p < 0.001$

Regarding the control variables neither the GDP per Capita nor the democratization index are significant in any of the included models. Interestingly, the cultural spheres network is significant and positive for three of the four models. Cultural similarity, therefore, significantly increases the odds of adopting compulsory education. The colonial legacies network as well as the trade network show insignificant effects; exposure in these networks does not have a significant impact on the adoption of compulsory education. Geographical proximity, on the other hand, has a positive impact. In addition to its significant and positive coefficient, geographical proximity diminishes the cultural spheres term's coefficient to non-significance.

Accordingly, in Models (1) to (3) there is no effect of colonial legacies or ties in the global trade network, whereas the effect of ties in

the cultural spheres network is positive, strong, and highly significant. Modeling an overall receding influence via linkages with former hegemons shows a significant positive influence of the colonial legacy network at first sight (see Table 3.2 in Appendix). However, when excluding territories which have been part of the USSR when they introduced compulsory education, the effect vanishes.[3] Hence, we conclude that, regardless of the operationalization, colonial rule and legacies do not have an overall effect, but rather, affect isolated cases of imperial diffusion. However, post-colonial links are not significant "pipes" through which compulsory education policy diffuses.

After controlling for spatial proximity, the strong effect of the cultural spheres network vanishes which indicates that exposure in both networks is highly correlated. We should not conclude from these results that spatial proximity is the only crucial factor for diffusion of compulsory education. Simply for the reason, that spatial proximity itself cannot be a mechanism of diffusion, but rather, is a catch-all indicator. Spatial proximity, thereby also, indicates similarity in institutional forms and culture. Even though we captured the influence of culture by controlling for our cultural spheres network, our cultural spheres are construed by theoretical considerations and particular methods (Windzio and Martens 2021; Besche-Truthe et al. 2020). In contrast to the simple measurement of spatial proximity, the complex procedure to generate cultural spheres is prone to measurement error, which is certainly the reason why the strong effect of the latter disappears after controlling for the former.

Conclusion

In this paper, we tested the impact of four networks of potential policy diffusion on the implementation of compulsory education around the globe. Education, as a crucial part of today's welfare state, is influenced not only by national but also international forces. When looking at modes of diffusion for education policy, culture is a factor that has previously rarely been considered. To test its impact, we utilize a projected

[3] Model not included.

two-mode network of different cultural characteristics such as language, religion, and gender roles. Culture is influencing education, as education does not only prepare students for the labor market but also ensures the continuation of local values and traditions. Similar educational standards promote communication and interaction between countries, increasing the opportunities of policy diffusion. Similarly, a trade network as well as colonial legacies as channels for policy diffusion have been considered as well. Additionally, a network of geographical proximity, GDP per capita, and a democratization index were considered as control variables.

The results show, that even when controlling for democratization and GDP per capita, culture does indeed matter. Exposure through the cultural similarity network was consistently significant and positive, until the geographical proximity was brought in. Neither colonial legacies nor trade could produce significant results, even without controlling for cultural spheres. This is an unexpected outcome, as one could assume that similar educational standards might emerge through the need of standardization for trade. Unfortunately, we do not assess imbalances in trade or goods. In any case, trade as a "pipe structure" of policy diffusion was not proven significantly influential. Similarly, colonial relationships clearly show that they did not influence the diffusion of compulsory education. The suppression of the cultural spheres effect through the exposure effect from the geographical proximity network is, however, not as surprising. The correlation of exposure in these very networks is 0.919 (see Chapter 1 in this volume), signifying that closely located countries often share similar cultural traits, explaining the correlation between the networks.

In the end, this result is not easily interpretable. On the one hand, the effect of the cultural spheres network on diffusion vanishes after controlling for spatial proximity, on the other hand, researchers often regard spatial proximity just as an indicator of mechanisms that are often embedded in communication, social interaction, and culture. Since the measurement of cultural spheres is much more complex, and the construct itself depends on contingent decisions made by the researchers, the resulting measurement error is a crucial disadvantage for the cultural

spheres network, when compared with spatial proximity and testing the significance of influences on diffusion. We should, therefore, not conclude that the network of cultural proximity has no influence, and spatial proximity is the crucial determinant because of the measurement error and the lack of theoretical meaning of spatial proximity. In other words, a theoretical explanation by spatial proximity cannot be done independently of other, more social or cognitive arguments (Beck et al. 2006).

As discussed previously, the membership in cultural spheres does influence the introduction of compulsory education, at least to some degree. This result goes in line with our theoretical assumption that education is not only derived from singular national factors and history but that legitimization and adaption to external units is an important aspect of policy diffusion. The increasing isomorphism of education systems or at least the global agreement that education should be accessible for all and, therefore, compulsory, are determined by cultural and geographical proximity. The fact that neither the trade network nor GDP per capita showed significant results, do not negate the economic influence education policy is subjected to, but rather, signify that these measures are not indicative of this influence. When GDP per capita and trade are taken out of the analysis, the model fit declines.[4] Research on education policy diffusion should not ignore economic factors but should include cultural factors in addition to the "usual suspects." We do not attempt to disprove Robertson and Dale's theoretical approach; we simply support the development of this hypothesis further and consider culture in addition to economic factors with a more substantial approach than previous theories do.

Culture is an explanation for the global diffusion of compulsory education in line with sociological neo-institutionalism. This theory argues in favor of a global diffusion of institutional forms and

[4] Model not included.

content within education. As argued in the section on theory, neo-institutionalism expects a global spread of Western bureaucratic institutions, even though their adoption seems to be in some countries rather myth and ceremony than a serious implementation (Meyer and Rowan 1977). In addition, this process of diffusion is shaped by cultural spheres. These cultural spheres, however, are considerably correlated with spatial proximity between countries. Future research should systematically account for the interaction of network-exposure and historical time periods in order to test, if or how the respective network effects change over time.

Limitations

As any other study, this analysis has its limitations. First, the quality of data dating back to 1880 might influence the result. The difficulty of modeling longitudinal analyses with a changing country sample for the same geographical area should be kept in mind. Units such as the USSR as well as Austria-Hungary, for example, have been taken into account by correcting for clustered standard errors. Nevertheless, this method has its weaknesses too. Second, as briefly discussed, education policy is highly shaped by the activities of International Organization such as the OECD. A network of membership in international organizations could have been added to the analysis to account for this diffusion channel as well, but this effect was left for future researchers to discover. Despite these limitations, we are convinced that the model presented here still demonstrates interesting results, as it reveals not only the strong influence of culture on education but also shows the weak influence of democratization and GDP on the adoption of compulsory education.

Appendix

See Table 3.2.

Table 3.2 The introduction of compulsory education in $N = 117$ countries—non-normalized exposure in colonial legacies network

	(1)	(2)	(3)	(4)
1880–1914	0.001***	0.001***	0.001***	0.0004***
1915–1929	0.002***	0.002***	0.002***	0.001***
1930–1954	0.001***	0.001***	0.001***	0.0003***
1955–1979	0.001***	0.001***	0.0004***	0.0002***
1980–2010	0.001***	0.001***	0.0004***	0.0001***
state existed (=1,else = 0)			6.836***	5.123***
GDP per capita /US$10,000	1.020	1.020	1.018	0.976
democratization	1.069	1.069	0.995	1.025
networks				
cultural spheres netw.: w. exposure (lag 1 year)	128.387***	129.283***	36.141**	2.059
colonies netw.: w exposure non-normalized		1.007	1.666*	1.586*
trade netw.: w. exposure (lag 1 year)			0.864	0.758
spatial proximity netw.: w. exposure (lag 1 year)				113.730***
Observations	8614	8614	8614	8614
Log Likelihood	−550.627	−550.627	−532.155	−522.491
Akaike Inf. Crit	1117.254	1119.254	1086.309	1068.982

Note $^{+}p < 0.1$; $*p < 0.05$; $**p < 0.01$; $***p < 0.001$

Literature

Anderson-Levitt, Kathryn M. 2003. "A World Culture of Schooling?" In *Local Meanings, Global Schooling: Anthropology and World Culture Theory*, edited by Kathryn M. Anderson-Levitt, 1–41. New York: Palgrave Macmillan.

Anderson-Levitt, Kathryn M., eds. 2012. *Anthropologies of Education: A Global Guide to Ethnographic Studies of Learning and Schooling*. New York: Berghahn Books.

Beck, Nathaniel, Kristian S. Gleditsch, and Kyle Beardsley. 2006. "Space Is More Than Geography: Using Spatial Econometrics in the Study of Political Economy." *International Studies Quarterly* 50 (1): 27–44.

Besche-Truthe, Fabian, Helen Seitzer, and Michael Windzio. 2020. "Cultural Spheres—Creating a Dyadic Dataset of Cultural Proximity." SFB 1342 Technical Paper Series 5. Bremen.

Boyer, Pascal. 2018. *Minds Make Societies: How Cognition Explains the World Humans Create*. New Haven: Yale University Press.

Brock, Colin, and Nafsika Alexiandou. 2013. *Education Around the World: A Comparative Introduction*. Education Around the World Series. London: Bloomsbury Academia.

Craig, John E. 1981. "Chapter 4: The Expansion of Education." *Review of Research in Education* 9 (1): 151–213.

Coppedge, Michael, John Gerring, Carl H. Knutsen, Staffan I. Lindberg, Jan Teorell, David Altman, Michael Bernhard, et al. 2019. "V-Dem Codebook v9": Varieties of Democracy (V-Dem) Project.

Dale, Roger. 2000. "Globalization and Education: Demonstrating a 'Common World Educational Culture' or Locating a 'Globally Structured Educational Agenda'?" *Comparative Education Review* 50 (4): 427–448.

Dale, Roger. 2005. "Globalisation, Knowledge Economy and Comparative Education." *Comparative Education* 41 (2): 117–149.

Dobbin, Frank, Beth Simmons, and Geoffrey Garrett. 2007. "The Global Diffusion of Public Policies: Social Construction, Coercion, Competition, or Learning?" *Annual Review of Sociology* 33 (1): 449–472.

Eisenstadt, Shmuel N. 1986. "The Axial Age Breakthroughs—Their Characteristics and Origins." In *The Origins and Diversity of Axial Age Civilizations*, edited by Shmuel N. Eisenstadt, 1–29. Albany: State University of New York Press.

Emirbayer, Mustafa. 1997. "Manifesto for a Relational Sociology." *American Journal of Sociology* 103 (2): 281–317.

Emirbayer, Mustafa, and Jeff Goodwin. 1994. "Network Analysis, Culture, and the Problem of Agency." *American Journal of Sociology* 99 (6): 1411–1454.

Fukuyama, Francis. 2018. *Identity: The Demand for Dignity and the Politics of Resentment*. New York: Farrar Straus and Giroux.

Griffiths, Tom G., and Robert Imre. 2013. *Mass Education, Global Capital, and the World: The Theoretical Lenses of István Mészáros and Immanuel Wallerstein*. New York, NY: Palgrave Macmillan.

Henrich, Joseph. 2020. *The Weirdest People in the World: How the West Became Psychologically Peculiar and Particularly Prosperous*. London: Allen Lane.

Hidalgo, César A. 2015. *Why Information Grows: The Evolution of Order, from Atoms to Economies*. London: Allen Lane.

Inklaar, Robert, Harmen de Jong, Jutta Bolt, and Jan van Zanden. 2018. "Rebasing 'Maddison': New Income Comparisons and the Shape of Long-Run Economic Development." GDC Research Memorandum GD-174. Last accessed March 24, 2021. https://ideas.repec.org/p/gro/rugggd/gd-174.html.

Kijima, Rie. 2015. "Why Participate? Cross-National Assessments and Foreign Aid to Education." In *The Impact of International Achievement Studies on National Education Policymaking*, edited by Alexander W. Wiseman, 35–61. Emerald Group Publishing.

Kuhlmann, Johanna, Delia González de Reufels, Klaus Schlichte, and Frank Nullmeier, 2020. "How Social Policy Travels: A Refined Model of Diffusion." *Global Social Policy* 20 (1): 80–96.

Liu, Ji, and Gita Steiner-Khamsi. 2020. "Human Capital Index and the Hidden Penalty for Non-Participation in ILSAs." *International Journal of Educational Development* 73 (March).

Marlow-Ferguson, Rebecca. 2002. *World Education Encyclopedia: A Survey of Educational Systems Worldwide*. Detroit: Gale Group.

Meyer, John W., John Boli, George M. Thomas, and Francisco O. Ramirez. 1997. "World Society and the Nation-State." *American Journal of Sociology* 103 (1): 144–181.

Meyer, John W., and Brian Rowan. 1977. "Institutionalized Organizations: Formal Structure as Myth and Ceremony." *American Journal of Sociology* 83 (2): 340–363.

Morin, Olivier. 2016. *How Traditions Live and Die: Foundations of Human Interaction*. New York: Oxford University Press.

Obinger, Herbert, Carina Schmitt, and Peter Starke. 2013. "Policy Diffusion and Policy Transfer in Comparative Welfare State Research." *Social Policy & Administration* 47: 111–129.

Ramirez, Francisco O. 1989. "Reconstituting Children: Extension of Personhood and Citizenship." In *Social Structure and Aging: Age Structuring in Comparative Perspective*, edited by David I. Kertzer and K. W. Schaie, 143–165. Hillsdale, NJ: L. Erlbaum Associates.

Robertson, Susan L., and Roger Dale. 2015. "Towards a 'Critical Cultural Political Economy' Account of the Globalising of Education." *Globalisation, Societies and Education* 13 (1): 149–170.

Shields, Robin, and Francine Menashy. 2017. "The Network of Bilateral Aid to Education 2005-2015." *International Journal of Educational Development* 64: 74–80.

Spasenović, Vera, Hebib Emina, and Slavica Maksić. 2015. "Serbia." In *The Education Systems of Europe*, edited by Wolfgang Hörner, Hans Döbert, Lutz R. Reuter, and Botho von Kopp. Cham: Springer.

Steiner-Khamsi, Gita. 2000. "Transferring Education, Displacing Reforms." In *Discourse Formation in Comparative Education*, edited by Jürgen Schriewer, 4th ed., 155–187. Peter Lang.

Strang, David, and John W. Meyer. 1993. "Institutional Conditions for Diffusion." *Theory and Society* 22 (4): 487–511.

Tan, Jason. 2010. "Compulsory Education in Singapore—Who Benefits?" *Asia Pacific Journal of Education* 30 (4): 401–418.

Valente, Thomas W. 1995. *Network Models of the Diffusion of Innovations*. Cresskill, NJ: Hampton Press.

Vega Yon, G. & Valente, T. W. 2021. *netdiffuseR: Analysis of Diffusion and Contagion Processes on Networks*, R package version 1.22.3, https://doi.org/10.5281/zenodo.1039317.

Wallerstein, Immanuel M. 2004. *World-Systems Analysis: An Introduction*. Durham: Duke University Press.

Weber, Max. 1972. *Wirtschaft und Gesellschaft: Grundriß der verstehenden Soziologie*. Tübingen: Mohr.

Weymann, Ansgar. 2014. *States, Markets and Education: The Rise and Limits of the Education State*. Palgrave Macmillan.

Windzio, Michael, and Kerstin Martens. 2021. "The Global Development, Diffusion, and Transformation of Education Systems: Transnational Isomorphism and 'Cultural Spheres'." In *Global Pathways to Education: Cultural Spheres, Networks, and International Organizations*, edited by Michael Windzio and Kerstin Martens, 1–35. London: Palgrave Macmillan.

World Conference on Education for All. 1990. *Meeting Basic Learning Needs: A Vision for the 1990s: World Conference on Education for All Background Document*. Inter-Agency Commission (UNDO, UNESCO, UNICEF, WORLD BANK) for the World Conference on Education for All. Last accessed March 2, 2021. http://www.unesco.org/education/information/pdf/11_92.pdf.

4

The Global Diffusion of Adult Basic Education

Fabian Besche-Truthe

Introduction[1]

Adult Basic Education (ABE) policies regulate and ensure access to training in basic reading, writing, and numeracy skills for those who did not have the chance to attain these skills in formal education. The policies are supposed to advance individuals' economic possibilities and foster inclusion into society at large (e.g., UNESCO 2015). As a policy field, ABE is situated between education policy and active labor market policy (ALMP) as well as being ingrained in human rights discourses. Data on first introductions of ABE policy show an accelerating surge in

[1]This chapter is a product of the research conducted in the Collaborative Research Center "Global Dynamics of Social Policy" at the University of Bremen. The center is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)—project number 374666841–SFB 1342.

F. Besche-Truthe (✉)
SOCIUM, University of Bremen, Bremen, Germany
e-mail: fbesche@uni-bremen.de

M. Windzio et al. (eds.), *Networks and Geographies of Global Social Policy Diffusion*, Global Dynamics of Social Policy,
https://doi.org/10.1007/978-3-030-83403-6_4

national policy adoption from the 1960s onwards. This chapter empirically investigates the spread of ABE policies all over the globe. In my analysis, I take domestic variables into account, but focus primarily on nation states' interdependencies. As we know from the extensive canon of policy diffusion research (e.g., Gilardi 2016; Obinger and Schmitt 2011; Dobbin et al. 2007), clustered policy adoption involves communication between actors. Thus, diffusion essentially happens in multiplex networks through which actors are connected to each other (Valente 1995). This chapter highlights the diffusion of ABE policies by asking: What are the main network determinants for the adoption of first ABE legislation? In my analysis, I draw on the global network data that is used throughout this edited volume. Precisely, these networks are depicting *cultural similarity*, *colonial legacies*, *trade*, and *geographic proximity*.

The adoption of ABE policy marks a political act in which actors, at least nominally, problematize the existence of adults without formal schooling and consciously opt for taking on the problem as a matter of the nation state. It becomes a responsibility which needs to be institutionalized in law. Passing a policy, however, does not at all safeguard its implementation. Nonetheless, with policy adoption countries signal their valuation of the policy's theorized impact and gain legitimacy in the global system of nation states. Adopting a policy on ABE makes sense economically and rationally as well as from a human rights perspective. Countries not adopting would have the burden of proof for non-adoption.

This chapter advances on the de jure adoption of ABE as both a compensatory and a preventive social policy. On the one hand, it is targeted at adults (and often adolescents) who fell through the cracks in the formal education system, i.e., compensating for inferiority in children's education, sometimes being called "second chance education" (UNESCO Institute for Statistics 2012, 25). On the other hand, education in general and adult education in particular are framed as directly impacting the economic and social development of an individual, thereby preventing later costs for the social security system (e.g., World Bank 1995); essentially following the logic of better (or any institutionalized) education equals better and safer (regular) jobs. Especially the Organization for Economic Co-Operation and Development

(OECD) is a key player in connecting skills with economic progress (e.g., https://oecdskillsforjobsdatabase.org).

While the influence of IOs on global education discourses is unquestionable, the diffusion of ABE policy is still a blind spot with little to no global macro studies. Using network diffusion analysis, I aim to estimate the influence of networked relations of nation states on ABE policy adoption. This chapter progresses with a short introduction of the global discourse on ABE and the topic itself. After a brief section on theories of policy diffusion, I will turn to the empirical part testing possible hypotheses on the influence of domestic as well as relational variables. Lastly, I will present the estimations and draw conclusions that ought to motivate future research.

Adult Basic Education

Global discourse on institutionalized adult education started in 1949 when the UNESCO commenced the first "Conférence Internationale sur l'Education des Adultes" (CONFINTEA) in Helsingør, Denmark—a recurring conference bringing together policymakers, NGOs and experts on topics concerning adult education (Knoll 2008).

A Google Ngram (in Appendix) suggest, discourse on "Adult Education" as well as its French translation peaked in the 1950s but stayed at a high rate until decreasing in the 1980s, only to be exceeded by the more encompassing term "Lifelong Learning". IOs like the UNESCO and specifically its sister organization the UNESCO Institute for Lifelong Learning (UIL) were of significant impact in the emergence and evolution of international conversations on the issues of lifelong learning (LLL) and, accordingly, adult education (Jakobi 2009). This chapter focuses on the diffusion of one part of the vast thematic complex of LLL, which is adult basic education. The "Recommendation on Adult Learning and Education", which was adopted at the UNESCO General Conference in 2015, states that adult education comprises informal, non-formal, and formal education which aims at fostering adults' participation in society and work (UNESCO 2015, 6). The idea of developing and enriching capabilities for living and working give those learning

schemes a very important role in the education system of the respective state. This chapter deals with ABE policy as the constitutive part of state-led adult education endeavors, which are also specifically targeted at marginalized groups.

There are several ways of raising the skill level of a society, but offering basic education to those who did not gain any formal education in childhood is, in combination with widening access to school education in general, the most effective. It is situated in an ingrained human rights discourse in which "Education for All" problematizes the existence of un- or undereducated adults. The topic of adults' skill development indisputably gained importance in global education and economic policy (Jakobi 2009, 55f.). Debate increased despite isolated critiques from the World Bank (Torres 2009), mainly concerned with missing returns on investment in adult education in general. Nevertheless, ABE policies have spread around the globe quite rapidly.

The map in Fig. 4.1 depicts the de jure adoptions of ABE policies for 164 countries. In comparison to other social policies dealt with in this volume, the map shows that diffusion of ABE policies started rather late with Finland in 1921 as the first country to introduce; followed by Turkey in 1929, and the USSR as well as Germany in 1957 and 1953,

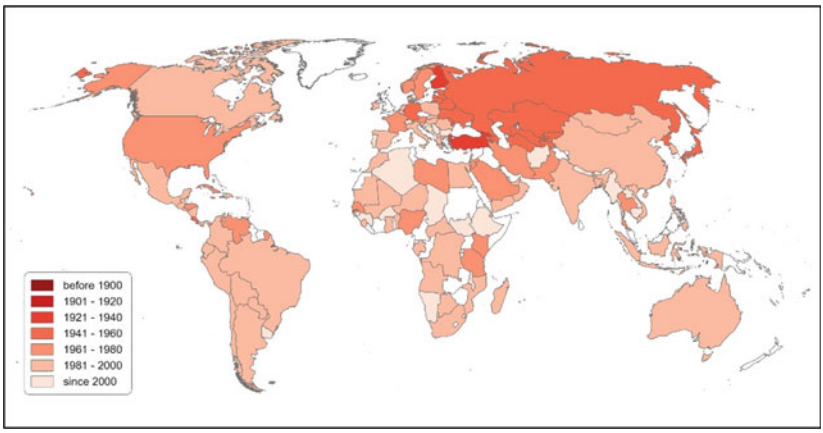


Fig. 4.1 ABE policy adoption map

respectively. The bulk of adoptions started in the 1960s and accelerated in the 1990s and 2000s (see below).

The UNESCO has been pushing for adult education since its foundation (Jakobi 2009, 67f.) with its "Conférence Internationale sur l'Education des Adultes" (CONFINTEA) hosted by the UIL. The 1985 conference in Paris "established a new right—the right to learn for all, throughout life. Special attention was to be paid to marginalized groups such as women, youth, the elderly, minorities […]" (Bhola 1989, 57).

Now, virtually all IOs active in education or economy refer to the strategy of learning and skill formation throughout the whole lifetime as key for successful education and economic systems (see, e.g., OECD 2012; UNESCO 2017; World Bank 2003; World Conference on Education for All 1990); intergovernmental organizations follow the same path (European Council 2011; African Union 2016). The rise in attention to the educational needs of adults is part of the general universalizing trend in education. According to Weymann, inclusive education for everyone at every stage of their life is the "undisputed normative goal" (2016, 19; translation by author). The goal is to create equal opportunities by providing access to adequate competences and knowledge and avoiding the emergence of a disadvantaged group of both low- and not formally skilled workers (see Spilker 2013, 102).

Theories of Policy Diffusion

The mechanisms behind global policy adoption trends can be as diverse as policies themselves. Indeed, one of the main ideas behind this edited volume is to test different assumptions within different (social) policy fields. Dobbin et al. (2007) describe four major theoretical strands when it comes to diffusion research: *constructivism*, *coercion*, *competition*, and *learning*. Elkins and Simmons (2005) take a stricter route when they confine diffusion to a process driven by *uncoordinated interdependence*. In its rawest form, in this volume, diffusion is defined as "any process where prior adoption of a trait or practice in a population alters the probability of adoption for remaining non-adopters" (Strang 1991, 325). With these mechanisms and definitions in mind, it is no surprise that

a myriad of scholars has argued for different paths of policy diffusion. These paths are, furthermore, very diverse depending on the policy field and, sometimes, on the country sample used. In the following, I attempt to summarize past evidence and theoretical bases that might be relevant for the diffusion of ABE. Accordingly, I introduce the networks which serve to depict possible diffusion avenues.

Constructivism

In a constructivist view, policy adoption is a matter of ideology with policies representing appropriate and legitimate means to important ends. Both are socially constructed, thus, shifting over time and space (Dobbin et al. 2007, 451). Especially in the field of education policy, a lot of scholarship is situated in neo-institutionalist accounts, which, in its purest form, is the most popular in the constructivist camp. These scholars see shifts in recognizing problems that are universal to all states and bring up universal solutions for those problems rooted in the *world society* (Meyer et al. 1997). All around the globe, actors, including nation states, legitimize themselves by holding on to universally legitimized world models like citizenship, the need for education, capitalist economy, etc. The supposedly "best" models gain such a strength that their raison d'être is their rationality, legitimization without being questioned, and universal applicability (Meyer et al. 1997).

ABE being framed as a human right is both an indicator for the normative institutionalization as well as cause for further institutionalization. Spilker finds that (in Germany) the discourse on educational opportunities has shifted toward risk groups that, due to a lack of education, are unable to participate in the globalized world (2013, 74). Illiteracy and lack of skills are major problems that need to be tackled by governments, creating an enormous pressure on states to enact policies. Refusal to offer new educational opportunities through ABE appears as a failure to render assistance (Spilker 2013, 225). Moreover, the global discourse specifically targets whole political entities that are not sufficiently participating in the globalized world (e.g., UNESCO 2017).

The emergence of the norm of formally skilled and educated citizens of every age is shaping policies all over the globe. The norm itself is shaped and carried throughout the international sphere not only by states but especially through professionals and epistemic communities which are most likely found in IOs and science (Meyer et al. 1997, 166). In this light, the "institutional conditions for diffusion" (Strang and Meyer 1993) and not national differences are key in understanding the phenomenon itself. Diffusion is greatly accelerated in instances where actors fall into the same category and conceptions of formal organizations are institutionalized (Strang and Meyer 1993, 490–491). For the latter that means that "theoretical accounts of practices simplify and abstract their properties and specify and explain the outcomes they produce" (Strang and Meyer 1993, 497). Actors, on the other hand, are theorized as sufficiently similar so that practices can have similar effects all over the globe.

The ensuing institutionalization culminates in an impressive isomorphism of state structures and policies that are not easily explained by classic functionalist theories. Consider, for example, the cumulative adoption plot in Fig. 4.2: On the *x*-axis one sees the year of observation and the *y*-axis represents the percentage of countries in the specific World Bank income group that have adopted an ABE policy. We can discern that the general trend of policy adoptions only started in 1960 and accelerated until almost 90% of high-income and around 70% of low-income countries adopted an ABE policy. Differences in slopes between the income groups are hardly visible. This is in line with neo-institutionalist theory, in that the global discourse seems to render other influences nugatory. Following this logic, one would assume no statistically significant influence of either national factors or interdependencies. On the other hand, a lot of scholars decidedly diverge from the teleological neo-institutionalism. Though I am unable to test the underlying micro-mechanisms of policy adoption, I aim at testing the influence of the macro-structures nation states have built. In line with this edited volume, it is clear that countries have multiplex ties with one another, i.e., they have ties in different dimensions. I regard these networks as the underlying structure through which communication, and, hence, diffusion happens. This underlying structure can be best explained by

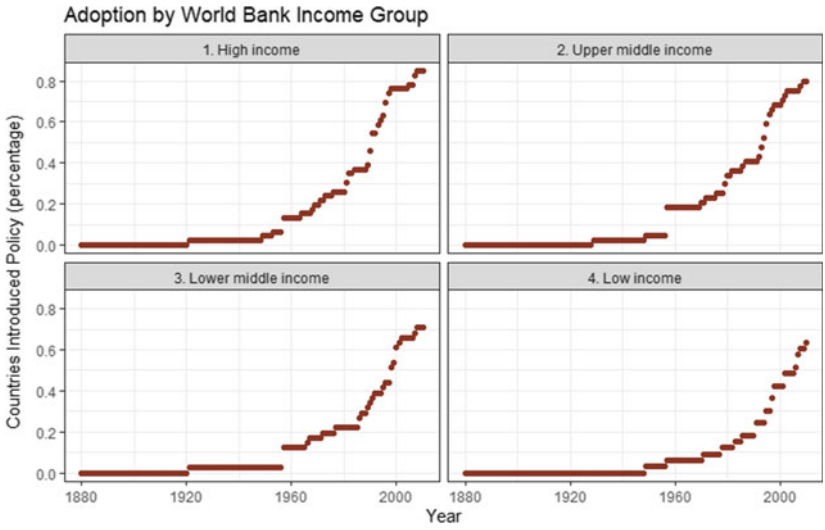


Fig. 4.2 ABE policy adoptions by income group

a "pipe-structure" (Martens and Windzio 2021). The innovation, in this case ABE policy, travels through the pipes and actors that are exposed to other actors that already adopted a policy should have a higher risk of adopting the policy itself (see below). The underlying structures, investigated in this chapter, are cultural similarity, colonial legacies, trade, and spatial proximity. In the following, I will give a short overview of all these structures.

Cultural Similarity

Since education is inherently intertwined with culture, i.e., is reproduced by and reproduces specific cultural configurations, being exposed to a culturally similar country that has already introduced ABE might prove influential. The influence of world society is not ignored, but rather thought to be not as influential as neo-institutionalists would suspect. Hence, external ideational influences are translated into cultural configurations and, thereby, probably so much skewed that the general pattern

of adoptions of ABE policies is affected. For instance, values of meritocracy, i.e., the individual being the locus of development, would prompt a state to address under-education when the problem comes up in political debate (Ramirez 1989). On the other hand, adoptions of ABE might be delayed in countries that show more familialistic community structures. In these compositions, the penetration of the global discourse might take longer to be actualized through policy (Pfau-Effinger 2005; Boli et al. 1985). This would constitute waves of diffusion in which the exposure inside cultural spheres has an impact on the rate of adoption. For this purpose, I will estimate the effects of a network of cultural similarities. The basis for that is a two-mode network which connects countries with cultural characteristics such as dominant religion, civil and gender liberties, government ideology, and language group (for a detailed description see Chapter 1 in this volume). Through a one-mode projection on the country set, the resulting network links countries to one another if they share cultural characteristics. Furthermore, the ties are weighted by the number of shared characteristics and through their time-variant nature, the network is time-variant itself (Besche-Truthe et al. 2020). With this approach, we build a flexible and more encompassing definition of culture which shows overlapping cultural spheres rather than rigid boundaries between groups of countries. Staying true to the pipe metaphor, one can discern that the more similar countries are, the larger the pipe is through which ABE policy can diffuse.

Colonial Legacies

In a world full of power imbalances coercion theorists argue that hegemonic actors exercise a lot of influence over weaker actors. I include a network depicting power imbalances as countries' colonial relations. Contrary to some widely used operationalization like, e.g., the Gravity Model by CEPII in which a colonial tie is constant over time and either existent or non-existent, this network is based on time-variant data spanning as far back as the sixteenth century and includes formerly overlooked forms of "colonization" such as the Ottoman Empire or the USSR. The raw data stems from the COLDAT dataset by Becker (2019).

Additionally, I am able to not only catch "imperial diffusion" (Kuhlmann et al. 2020, 85) but account for past colonial relationships as well. Thus, I assume the influence of a previous colonial power that has already ended getting proportionally smaller to the currently existing colonial power. When the country then becomes completely independent, the proportions of influence no longer differ from each other (for a detailed description see Chapter 1 in this volume). Since a comprehensive theory describing the mechanism of post-colonial ties between countries on policy diffusion in a macro-perspective is missing, I use the possibility to report a second operationalization of the experience of colonial legacy, in that they have an overall declining strength on the diffusion process (see Appendix). Lastly, the network is directed—which means I assume that only the metropole influences the diffusion process and not vice versa.

In the colonial ties network, I expect to find metropoles which introduced ABE and which extended the policy to countries still under colonial rule (Kuhlmann et al. 2020). This could be especially valid for tight colonial interlinkages based on political ideologies. For instance, Obinger and Schmitt (2011) demonstrate that social policy making was subject to political regime competition during the Cold War. Introducing policies to advance the average education of the work force not only helps in technological advancement but keeps (colonial) subjects satisfied and "in line" with the current ideology by projecting a caring state as well as promising opportunities for better pay in higher skilled jobs. Additionally, former colonies receive a significantly higher amount of donations from their former occupiers than other countries (Shields and Menashy 2019). Furthermore, former colonies, to some extent, orientate themselves toward the metropoles either positively or negatively. On the one hand, policies might be emulated because they appear on the public agenda and are perceived as valuable (Dobbin et al. 2007, 453). Path dependencies laid out through institutionalizations during the period of colonization might play a huge role as well (Kuhlmann et al. 2020). On the other hand, knowledge about policy adoptions in former metropoles could very well culminate in a strong retention of this very policy, which would manifest in a negative or at least non-significant relation. In short, relations with a higher intensity might increase the possibility for contact

and orientation on policy models of the metropole, especially because this network can catch possible path-dependencies that started with colonization. Nevertheless, the opposite could be true, which would manifest itself in negative coefficients.

Trade and Geography Network

Based on Marxist research, policies are increasingly influenced by interlinkages of countries as a direct result of economic and social globalization (Dale 1999). We see the influence mostly in policies with direct impacts on the economy, e.g., neoliberal tax policy (Swank 2006). Diffusion is rarely observed for policies that take a long time to become fruitful like infrastructure investments (Dobbin et al. 2007, 458). If economic competition plays a huge role in policy diffusion, one would expect reinforcement of existing power imbalances. Already powerful countries could have larger impacts on the spread of policies than weaker countries; with, for instance, Swank showing the pivotal role of US tax policy in the neo-liberalization of Western tax regimes (Swank 2006). On a similar note, Jahn (2006) shows a "race to the bottom" in social spending through economic ties in the OECD.

Also, research on active labor market policies in the EU shows free-rider effects of neighboring countries (Franzese and Hays 2006). I suspect these effects to also be visible in the global trade network: If one country has the upskilling policy of ABE in place, it might demotivate a strongly connected country to implement the same, thus slowing the diffusion process. Although education expansion has been shown to be a result of a growing integration into the global economy (Griffiths and Imre 2013, 51), it is unclear what to expect when taking the trade network as structural basis for the diffusion of ABE policy. Especially in this case, the intermediary role between education and ALM policy might dampen economic impacts. The data used to build an undirected time-variant trade network were drawn from the "Correlates of War Project" (Barbieri and Keshk 2016). Total trade values between two countries were logarithmically transformed and are used as relational weights (for a detailed description see Chapter 1 in this volume).

Lastly, I consider countries' geographic proximity as a structure of the multiplex ties which aides in establishing communication channels through which diffusion can happen. In this network, countries are more strongly connected the geographically nearer they are to each other (for a detailed description see Chapter 1 in this volume). With increased proximity, I believe, the probability of direct connection of large numbers of the population, cross-border work arrangements, politically institutionalized meetings, research endeavors, etc. increases as well. Additionally, a neighboring country serves in most cases as a more prominent ground for comparison. Exposure to policies in the geographic proximity network is, therefore, a catch-all indicator which still can show significant influence on the diffusion of ABE policies (Maggetti and Gilardi 2016, 93). Thus, it functions as a control variable which non-geographic interdependencies need to withstand. More directly, however, in combination with education and skills, we find these effects of positive externalities through policies of adjacent states for example in the phenomenon of *brain drain*. The 2019 Global Education Monitoring Report, for instance, finds that persons who emigrate are on average highly educated (UNESCO 2018, 38). If the supply of adults with basic skills is met through immigration from nearby countries, a state would not need to invest in basic skills of its own population. By looking at geographic proximity and trade relations, I hope to consider free-rider effects, especially in circumstances of positive externalities (see also Franzese and Hays 2006).

Methods

The empirical part of this chapter will test the influence of the described networks as structural bases for diffusion. As dependent variable, first introductions of ABE policies were collected for $N = 164$ countries. I define ABE as education targeted at adults with low or no proficiency in basic skills, with the explicit aim to teach these skills. For instance, the North Macedonian Law on Primary Education (Official Gazette of R. Macedonia No. 44/95) qualifies because in Article 6 it stipulates: "The **primary education of adults** can be organized in a mainstream primary school" (emphasis added by Fabian Besche-Truthe). Another example

would be the Brazilian Lei de Diretrizes e Base da Educação Nacional section V, article 37, which determines that adult education should be geared toward those who did not have either access to or continuity in primary and secondary education at the right age. It is the first actual mentioning of ABE in Brazilian federal education laws, despite its long history of literacy campaigns from civil society. These civil society literacy programs, however, do not qualify as being coded, with this chapter dealing with the momentum of nation states taking responsibility in ABE.

In accordance with the edited volume at hand, the time frame of inquiry spans from 1880 to 2010. Although the first introduction happened in 1921, in theory, countries were at risk of adopting an ABE policy at all times. The exposure variables have been calculated using the *netdiffuseR* package (Yon and Valente 2017), and I predict hazard ratios by using a *discrete-time logistic hazard model*. Network exposure is calculated as the weighted average of alters that already adopted ABE policy ego is connected to. If, for instance, ego trades equally with two countries, and one of them has already adopted ABE policy, the exposure would be $1/2 = 0.5$. For all networks, the weights distinguishing between strong and weak connections are taken into account (for a detailed description see Chapter 1 in this volume).

To control for time-dependency, i.e., unobserved heterogeneity, I control for time as a piecewise constant rate function. Other chapters in this volume choose rather steady time intervals of 25 years each, but I diverge from this operation because, first, since adoptions start quite late, I would assess time periods without any event which would greatly distort the estimation. Secondly, in accordance with theories described above, I believe the global discourse to have a great determining effect on the overall susceptibility of nation states to introduce ABE policies. Thus, I make use of the CONFINTEA as the determining cut points of time slices. Figure 4.3 shows these points in accordance with counts of yearly adoptions. Especially the conference in Paris was revered by Western countries claiming that a new "right to education for all" was instituted (Bhola 1989). Other commentators simply see the conference as a shift toward a neo-liberalist direction (Knoll 2008, 141). Indeed, one can surmise a spike in yearly adoptions between the conferences of Paris in

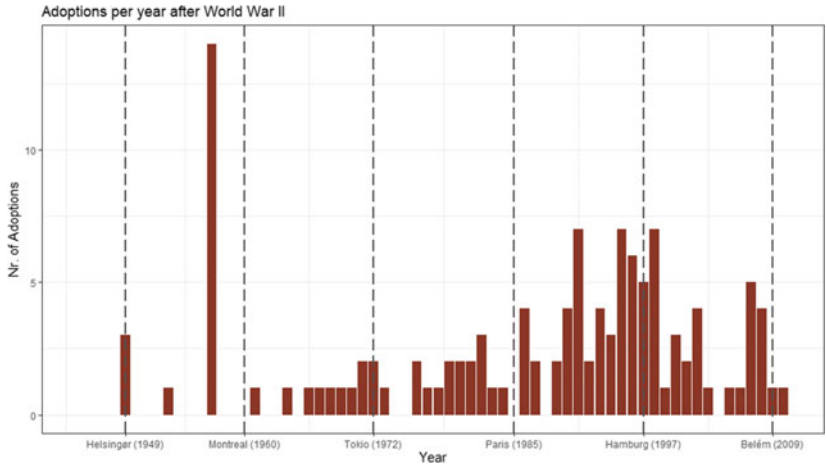


Fig. 4.3 ABE policy adoptions per year (*Note* The largest number of adoptions [third bar from the left] is due to the USSR introducing ABE which is automatically valid for a high number of single countries as well)

1985 and Hamburg in 1997. All in all, this builds the base of a vertical, i.e., top-down, diffusion against which other effects and interdependencies need to align. Technically it means that for every period between conferences a new baseline hazard of policy adoption is assumed.

As control variables, I introduce GDP per capita (Inklaar et al. 2018) and levels of democratization (Lührmann et al. 2018). Both have been interpolated for missing data points as described in Chapter 1 of this volume. Including the former is supposed to control for both economic performance and states' financial capabilities. I presume that more educated persons are needed if high economic performance should be maintained. Moreover, economic performance serves as a proxy for state budgetary opportunities to actually implement ABE policy which would make it more likely that the policy is adopted in the first place.

Also, I suspect the more democratic a system is, the more possibility there is for participation and actively trying to influence political decisions toward more social spending (Lindert 2004), which includes opening education for the masses. On the other hand, democracies might

prove resilient to ABE because marginalized groups have less opportunity to actually participate although it is a free democracy. As shown by Paglayan (2021), autocracies have expanded school education by a large margin to keep the populace in line. Education is here a double-edged sword, it serves as enculturation in the nation state's will but at the same time can give individuals the means to overthrow the status quo (Griffiths and Arnove 2015, 91). Though the USSR is among the first actors to introduce ABE, other non-democratic regimes fall into the group of late adopters.

Lastly, I include a variable representing the problem pressure. My suspicion is straightforward: The higher the number of adults without formal educational attainment is, the higher is the pressure to implement ABE as a salvation for these individuals and a quick upskilling of the population. Thus, I depict the percentage of adults without any formal schooling attainment, i.e., they did not finish primary school (Barro and Lee 2015). Also, high rates of persons with no formal schooling should make the global discourse fall on open ears more easily. Especially because IOs might publicly problematize these statistics while depicting them as easily fixable through adult education policies. Furthermore, with the average of formally unskilled adults over extended periods of time, I do, in part, proxy the general capabilities, performance and past importance of formal, state-led education. Large values indicate a suboptimal inclusion rate as well as a potential undervaluing of the state's formal education. The data in five-year intervals has been linearly interpolated.

Finally, I face a problem with non-independent observations: There are historical time periods in which several countries did not exist because they were part of a larger, embracing unit, e.g., Croatia was part of Yugoslavia. In the following network diffusion model, I address this statistical non-independence by correcting for heteroscedasticity with robust standard errors (for a detailed description see Chapter 1 in this volume).

Results

Table 4.1 presents results of the discrete time logistic hazard estimations in hazard ratios. These are interpretable analogously to odds ratios, i.e., a positive relationship is signified by ratios larger than 1 and a negative relationship by estimations between 0 and 1.

Table 4.1 Diffusion of adult basic education

	(1)	(2)	(3)	(4)	(5)	(6)
1880–1948	0.0003***	0.0003***	0.0001***	0.0001***	0.0001***	0.0003***
1949–1959	0.009***	0.008***	0.002***	0.002***	0.003***	0.007***
1960–1971	0.003***	0.003***	0.0005***	0.0005***	0.001***	0.003***
1972–1984	0.005***	0.004***	0.001***	0.001***	0.002***	0.004***
1985–1996	0.008***	0.005***	0.001***	0.001***	0.005***	0.008***
1997–2010	0.003***	0.002***	0.001***	0.001***	0.004***	0.006**
trade existed (=1, else = 0)			7.171**	7.269**	3.547	2.336
cultural spheres netw.: w. exposure (lag 1 year)	59.900**	61.677**	120.875***	51.247+	12.720	27.508
colonies netw.: w. exposure		2.277**	2.357**	2.337**	2.803*	2.635*
trade netw.: w. exposure (lag 1 year)			0.158**	0.138**	0.332	0.099*
spatial proximity netw.: w. exposure (lag 1 year)				3.485	0.940	0.999
GDP per capita/US$10,000					1.103	1.118
democratization					1.038	1.043
percentage adults w/o schooling					0.993	0.980*
trade netw.: w. exposure: percentage adults w/o schooling						1.041+
Observations	18,190	18,190	18,190	18,190	14,445	14,445
Log Likelihood	−598.944	−591.409	−581.906	−581.431	−476.715	−473.804
Akaike Inf. Crit	1211.888	1198.819	1183.811	1184.862	981.429	977.607

Note $^{+}p < 0.1$; $*p < 0.05$; $**p < 0.01$; $***p < 0.001$

The six models presented here are built in an additive fashion, introducing exposure in different networks one at a time and subsequently adding national factors as controls. After several estimations, I opted to include the interaction effect of exposure in the trade network and problem pressure. The significance levels as well as model fit statistics justify this decision.

First, while refraining from substantially interpreting the effects of the different time slices, it is worth noting that they are all significant and somewhat differing in size. That means that the baseline hazard to adopt ABE policy is different considering the time between CONFINTEA meetings and the highest after the one in Paris (1985–1997). Although this might reflect other similar global or domestic developments, I suspect it as being consistent with the neo-institutional account of differing strengths of norms in world society.

Exposure to culturally similar countries that already adopted an ABE policy proves to be a significant positive influence even when considering exposure in some other networks. In combination with the spatial proximity network, it is only significant on the 10% level and after including the pressure variable, the effect becomes insignificant, hinting at only a small role of culture in the diffusion process. On the other hand, the colonial ties network has a robust and positive effect on the adoption risk. Regardless of additional variables, the estimated hazard ratio stays almost the same with, e.g., 2.635* in the last model. One confounding influence, however, is that Russia, being defined as a colonizer, influences the adoption of ABE policy in almost all USSR countries. Indeed, when deleting these countries from the estimation and running the models again, exposure in the colonial ties network no longer proves to be a significant influence (see Table 4.3 in Appendix).

Trade, as hypothesized, has a negative influence on the risk of adoption of ABE all models. This leads me to believe that strong trade relations with a country that already had implemented ABE decreases the adoption risk. The estimation, however, shows a huge limitation: through estimating an interaction with problem pressure we see that exposure in trade networks affects countries with differing strengths.

As shown in Fig. 4.4 a country with a large formally unskilled population has a higher risk of policy adoption with exceeding exposure in

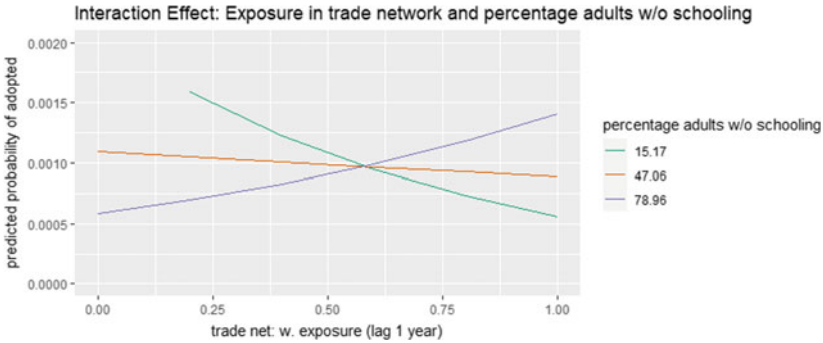


Fig. 4.4 Interaction effects (*Note* The graph shows the predicted probabilities of adopting ABE in relation to exposure in the trade network. The lines represent the change in predicted probabilities for a country with the mean percentage of adults without formal schooling [47.06] as well as for countries with a value of one standard deviation below [15.17] or beyond [78.96] the mean)

the trade network than countries with generally lower percentages of unskilled adults. Exposure in the trade network still has a negative effect on risks of policy adoption, however, the smaller the percentage of adults with formal education gets, the more dampened is this effect. Although this difference through interaction is quite small, it hints at the free-rider effects described by Franzese and Hays (2006) being stronger in countries with larger shares of formally educated adults, e.g., OECD countries.

The described effects even hold against controlling for geographic exposure to ABE policies. It makes it all the more enlightening to see the robustness with the coefficients being not strongly affected by controlling for exposure through spatial proximity as well as economic development and democratization.

In sum, we can for certain discern two specific network effects. On the one hand, links through (past) colonial relationships significantly increase the risk of adopting. Hence, we see a case of *imperial diffusion* (Kuhlmann et al. 2020) in that the USSR's early adoption of ABE policies impacted all the dependent countries as well. Not considering USSR countries in the regression estimation, while still having them contribute to network exposure, makes democratization borderline significant on the 10% level, though with a rather small coefficient of 1.087^{+} (see

model 1 in Table 4.3 in Appendix). This somewhat hints at a certain degree of regime competition between the East and West, in that democratic non-USSR states seem to have a slightly higher risk of adopting, all other things equal.

On the other hand, high exposure to trade partners that already adopted ABE decreases the risk of policy adoption for countries by the quite large factor of 0.099*, although a higher margin of formally uneducated adults slows this dampening effect down. Nevertheless, with a total adoption rate of 75% the diffusion itself will probably not be entirely stopped.

Lastly, considering the operationalization of an overall receding influence of colonial legacies, i.e., non-normalized exposure rates, only a few differences are discernable. The results, presented in Table 4.2 in the Appendix, clearly affirm the weakness of the previously mentioned interaction effect since it loses significance. Solely the main effect of the percentage of adults without formal schooling shows a negative influence on the adoption risk, corroborating the assumption that a weak state education system slows down the adoption of new (inclusive) education policies. Again, not considering USSR countries in the estimation shows that exposure through colonial ties is, although significant in the full sample, mainly influenced by the USSR (see Appendix Table 4.3).

Conclusion

This chapter dealt with the diffusion of policies on adult basic education by estimating the effects of network determinants on the adoption of first ABE policy. I stressed the policy as marking a specific political act in which states problematize the existence of adults without formal schooling and consciously opt for taking on the problem as a matter of the nation state. In that regard, ABE with its preventive and compensatory rectification intersects not only with human rights discussions and extensions but also fits into the spread of human capital theory after

World War II. The surge is mirrored in the concurrent adoptions of ABE policies which sped up in the 1980s and 1990s. By 2010 almost 90% of all countries assessed had introduced ABE policy. I utilized network diffusion analysis to macro-quantitatively assess which of the multiplex ties of countries around the globe were most prevalent. In doing so, I utilized four different social networks, connecting countries to each other: *cultural similarity*, *colonial legacies*, *trade*, and *spatial proximity*. I hypothesized that especially the global discourse in the world society is very influential in the diffusion. Following neo-institutionalist theory, domestic variables as well as interlinkages would be rendered nugatory over time.

Accordingly, the results show no striking effects. Cultural similarity, which shows a strong influence on the diffusion of generic education policies, has no robust influence in the case of ABE. On the other hand, exposure through colonial ties and operationalized in two different ways significantly increases the risk of policy adoption. That is, however, a sign of imperial diffusion of the USSR imposing upskilling policies on its satellite states.

Lastly, one can discern possible free-rider effects in that exposure in the trade network tends to decrease the adoption risk more strongly for countries that have a low number of formally uneducated adults than it does for countries with a large percentage of adults without formal schooling. Nevertheless, the effect is small and weak.

In a nutshell, all the results lead me to believe in a diffusion process that might not be fully erratic but is also not structured through interdependencies between countries. With these results in mind, it is worth considering neo-institutionalist accounts (e.g., Meyer et al. 1997) which predicted these results. Policies travel around the world and get more and more dispersed. I believe that ABE policies get adopted because of "taken-for-granted" knowledge of their usefulness and necessity, rather than via any diffusion mechanism that is discernable on this macro-level.

Nevertheless, what has not been considered is the decidedly strong discursive power of IOs on topics like ABE, lifelong learning, and education systems in general. As "rational others" (Meyer et al. 1997, 156), IOs

have the opportunity to influence countries either directly or indirectly to adopt policies. This assumption does not claim that IO influence is per se harmful or actually forces countries to adopt policies they otherwise would despise; it just confirms that more research needs to be done on how IOs maneuver, change, and influence the macro-structure of a world society. Additionally, it might be worthwhile to focus on ABE as a labor market policy and operationalize trade asymmetries and real competition between countries.

Appendix

See Fig. 4.5 and Tables 4.2, 4.3.

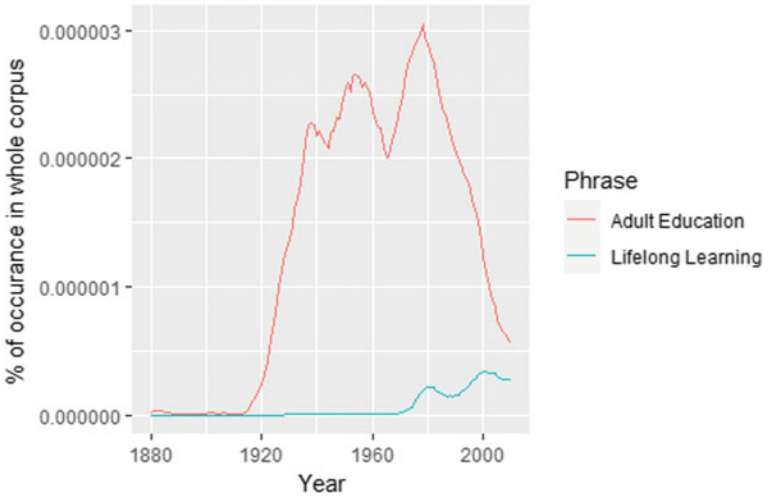


Fig. 4.5 Google Ngram for "adult education" and "lifelong learning"

Table 4.2 Diffusion of adult basic education results with non-normalized exposure in network of colonial legacies

	(1)	(2)	(3)	(4)	(5)	(6)
1880–1948	0.0003***	0.0003***	0.0001***	0.0001***	0.0001***	0.0003***
1949–1959	0.009***	0.007***	0.002***	0.002***	0.004***	0.007***
1960–1971	0.003***	0.002***	0.0004***	0.0004***	0.001***	0.003***
1972–1984	0.005***	0.003***	0.001***	0.001***	0.002***	0.003***
1985–1996	0.008***	0.004***	0.001***	0.001***	0.005***	0.008***
1997–2010	0.003***	0.002***	0.001***	0.0005***	0.004***	0.005**
trade existed (=1, else = 0)			7.115**	7.199**	3.126	2.224
cultural spheres netw.: w. exposure (lag 1 year)	59.900**	114.031***	195.071***	66.091*	9.197	16.555
colonies netw.: w. exposure		5.732***	5.761***	5.819***	8.038***	6.877***
trade net: w. exposure (lag 1 year)			0.175**	0.147**	0.447	0.162
spatial proximity netw.: w. exposure (lag 1 year)				4.909	1.601	1.652
GDP per capita / US$10,000					1.080	1.095
democratization					1.046	1.051
percentage adults w/o schooling					0.991	0.980
trade net: w. exposure: percentage adults w/o schooling						1.035
Observations	18,190	18,190	18,190	18,190	14,445	14,445
Log Likelihood	−598.944	−586.811	−577.593	−576.803	−472.636	−470.642
Akaike Inf. Crit	1211.888	1189.621	1175.186	1175.605	973.272	971.284

Note $^{+}p < 0.1$; $*p < 0.05$; $**p < 0.01$; $***p < 0.001$

Table 4.3 Diffusion of adult basic education. Results without considering USSR countries. Model 2 uses non-normalized exposure in network of colonial legacies

	(1)	(2)
1880–1948	0.0004***	0.0004***
1949–1959	0.003***	0.003***
1960–1971	0.004***	0.004***
1972–1984	0.007***	0.007***
1985–1996	0.014**	0.014**
1997–2010	0.009**	0.008**
trade existed (=1, else = 0)	1.138	1.166
cultural spheres netw.: w. exposure (lag 1 year)	27.446	29.213+
colonies netw.: w. exposure	1.642	
non-normalized, colonies netw.: w. exposure		1.278
trade net: w. exposure (lag 1 year)	0.134	0.157
spatial proximity netw.: w. exposure (lag 1 year)	0.961	1.203
GDP per capita / US$10,000	1.077	1.049
democratization	1.089+	1.075
percentage adults w/o schooling	0.985	0.985
trade net: w. exposure: percentage adults w/o schooling	1.042+	1.043+
Observations	13,675	13,675
Log Likelihood	−429.564	−429.564
Akaike Inf. Crit	889.128	889.128

Note $^{+}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Literature

African Union. 2016. Continental Education Strategy for Africa (CESA). CESA 16–25.

Barbieri, Katherine, and Omar M. G. Keshk. 2016. "Correlates of War Project Trade Data Set Codebook, Version 4.0." Last accessed March 24, 2021. http://correlatesofwar.org.

Barro, Robert J., and Jong-Wha Lee. 2015. *Education Matters: Global Schooling Gains from the 19th to the 21st Century*. New York: Oxford University Press.

Becker, Bastian. 2019. "Colonial Dates Dataset (COLDAT)." https://doi.org/10.7910/DVN/T9SDEW.

Besche-Truthe, Fabian, Helen Seitzer, and Michael Windzio. 2020. "Cultural Spheres—Creating a Dyadic Dataset of Cultural Proximity." SFB 1342 Technical Paper Series 5. Bremen.

Bhola, Harbans S. 1989. *World Trends and Issues in Adult Education*. London: Kingsley.

Boli, John, Francisco O. Ramirez, and John W. Meyer. 1985. "Explaining the Origins and Expansion of Mass Education." *Comparative Education Review* 29 (2): 145–170.

Dale, Roger. 1999. "Specifying Globalization Effects on National Policy: A Focus on the Mechanisms." *Journal of Education Policy* 14 (1): 1–17.

Dobbin, Frank, Beth Simmons, and Geoffrey Garrett. 2007. "The Global Diffusion of Public Policies: Social Construction, Coercion, Competition, or Learning?" *Annual Review of Sociology* 33 (1): 449–472.

Elkins, Zachary, and Beth Simmons. 2005. "On Waves, Clusters, and Diffusion: A Conceptual Framework." *The ANNALS of the American Academy of Political and Social Science* 598 (1): 33–51.

European Council. 2011. "Council Resolution on a Renewed European Agenda for Adult Learning." European Council, December 20.

Franzese, Robert J., and Jude C. Hays. 2006. "Strategic Interaction Among EU Governments in Active Labor Market Policy-Making." *European Union Politics* 7 (2): 167–189.

Gilardi, Fabrizio. 2016. "Four Ways We Can Improve Policy Diffusion Research." *State Politics Policy Quarterly* 16 (1): 8–21.

Griffiths, Tom G., and Robert F. Arnove. 2015. "World Culture in the Capitalist World-System in Transition." *Globalisation, Societies and Education* 13 (1): 88–108.

Griffiths, Tom G., and Robert Imre. 2013. *Mass Education, Global Capital, and the World: The Theoretical Lenses of István Mészáros and Immanuel Wallerstein*. New York, NY: Palgrave Macmillan.

Inklaar, Robert, Harmen de Jong, Jutta Bolt, and Jan van Zanden. 2018. "Rebasing 'Maddison': New Income Comparisons and the Shape of Long-Run Economic Development." GDC Research Memorandum GD-174. Last accessed March 24, 2021. https://ideas.repec.org/p/gro/rugggd/gd-174.html.

Jahn, Detlef. 2006. "Globalization as 'Galton's Problem': The Missing Link in the Analysis of Diffusion Patterns in Welfare State Development." *International Organization* 60 (2): 401–431.

Jakobi, Anja P. 2009. *International Organizations and Lifelong Learning: From Global Agendas to Policy Diffusion*. Transformations of the State. Basingstoke: Palgrave Macmillan.

Knoll, Joachim H. 2008. "Zur Geschichte der UNESCO-Weltkonferenzen für Erwachsenenbildung - von Helsingör (1949) bis Hamburg (1997)." *Bildung und Erziehung* 61 (2): 129–150.

Kuhlmann, Johanna, Delia González de Reufels, Klaus Schlichte, and Frank Nullmeier. 2020. "How Social Policy Travels: A Refined Model of Diffusion." *Global Social Policy* 20 (1): 80–96.

Lindert, Peter H. 2004. *Growing Public: Social Spending and Economic Growth Since the Eighteenth Century*. Cambridge, UK: Cambridge.

Lührmann, Anna, Marcus Tannenberg, and Staffan I. Lindberg. 2018. "Regimes of the World (RoW): Opening New Avenues for the Comparative Study of Political Regimes." *Politics and Governance* 6 (1): 60–77.

Maggetti, Martino, and Fabrizio Gilardi. 2016. "Problems (and Solutions) in the Measurement of Policy Diffusion Mechanisms." *Journal of Public Policy* 36 (1): 87–107.

Martens, Kerstin, and Michael Windzio. 2021. "The Global Development, Diffusion, and Transformation of Education Systems: Transnational Isomorphism and Cultural Spheres". In *Global Pathways to Education—Cultural Spheres, Networks, and International Organizations*, edited by Kerstin Martens and Michael Windzio, 1–35. Global Dynamics of Social Policy. Cham: Palgrave Macmillan.

Meyer, John W., John Boli, George M. Thomas, and Francisco O. Ramirez. 1997. "World Society and the Nation-State." *American Journal of Sociology* 103 (1): 144–181.

Obinger, Herbert, and Carina Schmitt. 2011. "Guns and Butter? Regime Competition and the Welfare State during the Cold War." *World Politics* 63 (2): 246–270.

OECD. 2012. "Lifelong Learning and Adults." In *Education Today 2013: The OECD Perspective*.

Paglayan, Agustina S. 2021. "The Non-Democratic Roots of Mass Education: Evidence from 200 Years:" *American Political Science Review* 115 (1): 179–198.

Pfau-Effinger, Birgit. 2005. "Culture and Welfare State Policies: Reflections on a Complex Interrelation." *Journal of Social Policy* 34 (1): 3–20.

Ramirez, Francisco O. 1989. "Reconstituting Children: Extension of Personhood and Citizenship." In *Social Structure and Aging: Age Structuring in Comparative Perspective*, edited by David I. Kertzer, and K. W. Schaie, 143–165. Hillsdale, NJ: L. Erlbaum Associates.

Shields, Robin, and Francine Menashy. 2019. "The Network of Bilateral aid to Education 2005–2015." *International Journal of Educational Development* 64: 74–80.

Spilker, Niels. 2013. *Lebenslanges Lernen als Dispositiv - Bildung, Macht und Staat in der neoliberalen Gesellschaft*. Münster: Westfälisches Dampfboot.

Strang, David. 1991. "Adding Social Structure to Diffusion Models." *Sociological Methods & Research* 19 (3): 324–353.

Strang, David, and John W. Meyer. 1993. "Institutional Conditions for Diffusion." *Theory and Society* 22 (4): 487–511.

Swank, Duane. 2006. "Tax Policy in an Era of Internationalization: Explaining the Spread of Neoliberalism." *International Organization* 60 (4): 847–882.

Torres, Rosa M. 2009. *From Literacy to Lifelong Learning: Trends, Issues and Challenges in Youth and Adult Education in Latin America and the Caribbean: Regional Synthesis Report*. UNESCO Institute for Lifelong Learning.

UNESCO. 2015. *Recommendation on Adult Learning and Education.*

UNESCO. 2017. *Education for Sustainable Development Goals: Learning Objectives*. Paris.

UNESCO. 2018. *Global Education Monitoring Report 2019*. Paris.

UNESCO Institute for Statistics. 2012. *International Standard Classification of Education: ISCED 2011.* Montreal, Quebec: UNESCO Institute for Statistics.

Valente, Thomas W. 1995. *Network Models of the Diffusion of Innovations*. Second printing. Quantitative Methods in Communication. Cresskill, NJ: Hampton Press.

Weymann, Ansgar. 2016. *Bildungsstaat: Aufstieg, Herausforderungen, Perspektiven*. Stichworte: Wissen kompakt. Wiesbaden: Springer VS.

World Bank. 1995. *Priorities and Strategies for Education: A World Bank Review*. Washington, DC: The World Bank.

World Bank. 2003. *Lifelong Learning in the Global Knowledge Economy: Challenges for Developing Countries: A World Bank Report*. Directions in Development. Washington, DC: World Bank.

World Conference on Education for All. 1990. *Meeting Basic Learning Needs: A Vision for the 1990s: World Conference on Education for All Background Document*. Inter-Agency Commission (UNDO, UNESCO, UNICEF, WORLD BANK) for the World Conference on Education for All.

Yon, George G. V., and Thomas W. Valente. 2017. *NetdiffuseR: Analysis of Diffusion and Contagion Processes on Networks*. Zenodo.

5

The Emergence of Healthcare Systems

Alexander Polte, Sebastian Haunss, Achim Schmid, Gabriela de Carvalho, and Heinz Rothgang

Introduction[1]

Healthcare systems address basic and often immediate human needs for medical care in case of illness or injury. Of all welfare policies, health is probably the area where the lack of a functioning system has the most severe and direct negative consequences. Nevertheless, healthcare systems that guarantee access to medical services for relevant parts of

[1]This chapter is a product of the research conducted in the Collaborative Research Center "Global Dynamics of Social Policy" at the University of Bremen. The center is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)—project number 374666841—SFB 1342.

A. Polte (✉) · S. Haunss · A. Schmid · G. de Carvalho · H. Rothgang
University of Bremen, Bremen, Germany
e-mail: alexander.polte@uni-bremen.de

S. Haunss
e-mail: sebastian.haunss@uni-bremen.de

M. Windzio et al. (eds.), *Networks and Geographies of Global Social Policy Diffusion*, Global Dynamics of Social Policy,
https://doi.org/10.1007/978-3-030-83403-6_5

the population were, globally, not the norm during most of the twentieth century. State-run or sponsored hospitals go back a long time, but meaningful healthcare systems only started to emerge at the end of the nineteenth century, together with old age pension systems and often in conjunction with work injury protection (Schmitt et al. 2015). Today, there are only a few countries left without at least a rudimentary healthcare system. Unfortunately, this doesn't mean that access to necessary healthcare services is available to everyone. Often, medical services are inadequate and do not meet the needs of the population.

A healthcare system, therefore, is more than the existence of a certain number of hospitals or medical doctors. In line with the established literature, we understand healthcare systems as the sum of all formal arrangements concerning the financing, regulation and provision of qualified health services within a society dealing specifically with healthcare as an area of social protection (Roemer 1991; Freeman and Frisina 2010; Rothgang 2021). Here, we are only interested in systems in which the state is substantially involved in at least one of the aforementioned dimensions of healthcare. We call this a *healthcare system under public responsibility*. Such a system is introduced when (a) the first nationwide legislation is passed, (b) entitlements to healthcare benefits are secured by law, and (c) the elements of the healthcare system are integrated (de Carvalho and Fischer 2020). Today, based on this comparatively demanding definition, we find healthcare systems that establish entitlements to healthcare for increasingly larger parts of their population in the vast majority of countries (Fig. 5.1).

A. Schmid
e-mail: aschmid@uni-bremen.de

G. de Carvalho
e-mail: decarvalho@uni-bremen.de

H. Rothgang
e-mail: rothgang@uni-bremen.de

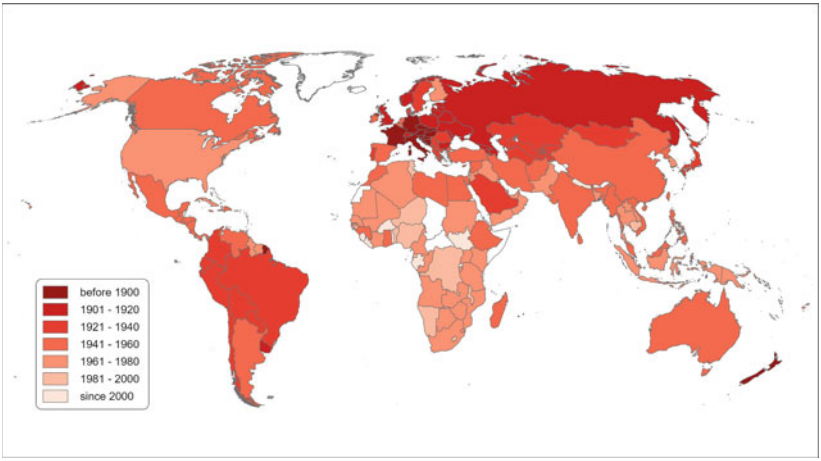


Fig. 5.1 Adoption of healthcare systems through time

What has driven the remarkable expansion of healthcare systems from a handful of countries at the end of the nineteenth century to almost all countries at the beginning of the twenty-first century? Was it a logical consequence of industrial development and/or increasing wealth? Did healthcare systems develop as a result of democratization, or was it a slow diffusion process whereby states copied the policy innovation from their neighbors?

In what follows, we start with a literature review on theories that might explain the introduction of healthcare systems. The explanatory model we use in the modeling is informed by these theories as well as by the general framework of diffusion theory as laid out in the introductory chapter of this book. After presenting the results of the statistical analysis we then review the theory and draw some conclusions on how the introduction of healthcare systems can be explained.

Theoretical Background: Factors Influencing the Introduction of Healthcare Systems

Although scholarship on the emergence of healthcare systems is often limited to descriptive case studies, lacking large-scale comparisons and generally neglecting countries of the Global South,[2] there does exist an extensive body of literature dealing with the introduction and reforms of social policies. This section reviews this literature to layout possible explanations for the emergence of healthcare systems. In doing so, we distinguish between domestic factors on the one hand and horizontal as well as vertical interdependencies on the other.

Domestic Factors

The emergence of public protection against the major risks of sickness as well as old age, work accidents, or unemployment have been explained as a result of modernization processes related to industrialization and urbanization (e.g., Wilensky 1974). The claim of the *modernization hypothesis* is that these developments have damaged traditional means of social protection, but the resulting economic growth provided the resources to establish public social protection programs, including health insurance as one of the major schemes. In particular, for larger samples of countries at varying stages of economic development, per-capita GDP, or other indicators for the level of industrialization have been found to correspond with earlier adoption of social protection schemes (Collier and Messick 1975; Usui 1994). The level of industrialization has been found to increase the likelihood of introducing health insurance among 43 African nations (Kangas 2012). In a study of 177 territories and independent states over the period 1820–2013, Schmitt et al. (2015) identify a positive effect of GDP on the adoption of health insurance. However, the effect disappears if the sample is reduced to independent states. By contrast, Cutler and Johnson (2004), who study a smaller sample of 20

[2] Following de Carvalho et al. (2021) we operationalize the "Global South" as all low to upper middle-income countries according to the World Bank (2019) classification.

OECD and Latin American countries, find evidence that higher levels of GDP per capita slow down the implementation of national health insurance defined as compulsory coverage for a broad class of people.

Modernization processes also apply to the medical system. By the second half of the nineteenth century, medical progress helped to establish public health and sanitation measures to control epidemics of infectious or parasitic diseases (Trein 2018). The colonial powers disseminated European medical knowledge globally and, in the inter-war period, also began to promote the education of local medical professions, albeit still focusing on disease control and mother and child health (Bruchhausen 2020). Since the 1930s more sophisticated medical interventions have evolved, enabling the development of effective cures for many diseases (OECD 1987). Health-specific problem pressure, as manifested by recurrent epidemics or indicators of population health status, stimulate public healthcare policies. In particular, as therapies become more sophisticated and expensive, regulation of access and third-party financing are required (Moran 2000). Both health-specific problem pressure and dissemination of medical knowledge, as represented for example by the foundation of medical schools, may pave the way for the formation of a public healthcare system. These two correlations can be reformulated as a *capabilities hypothesis*—countries with more advanced medical infrastructure and knowledge may introduce healthcare systems earlier—and a *problem pressure hypothesis*—medical needs may speed up the development of a healthcare system.

Conflict and power resource theories have highlighted the role of democratic representation and the power of left-wing parties and unions in the emergence and evolution of welfare states (Korpi 1983). Based on a sample of 76 nations, Cutright (1965) finds that, on a similar level of economic development, nations with more representative governments introduce social security programs earlier. At the same time, studies highlight the role of monarchies or autocratic governments as early adopters of social policy (Flora and Alber 1981; Mares and Carnes 2009). Early implementation of social policy is explained as a means to appease and control workers, to acquire output legitimacy, and stabilize regimes with weak or without democratic legitimacy. Apart from the political regime type, institutional characteristics of political systems contribute

to the explanation of timing and expansion of social policies. Blake and Adolino's (2001) analysis of 20 advanced economies suggest that federalism and a fragmented executive slow down the introduction of national health insurance. Immergut's (1992) comparative case study of health policy implementation in France, Sweden, and Switzerland shows that the numbers of veto points in the legislative process provide opportunities for opponents of healthcare reforms to block legislation seeking to implement or expand public health insurance. The literature pertaining to the *regime type hypothesis* is thus undecided whether democracies or autocracies are more likely to create healthcare systems.

Interdependencies

Over the past few decades, new strands of research have emerged to address the limitations of classical comparative social policy studies, which have not been fully able to systematically capture the transnational context and interventions that may impact social policies (Deacon 2007; Yeates 2008). Nowadays, social policies in every country face similar challenges that may require solutions beyond the nation-state level (e.g., demographic changes, growing inequality, global socioeconomic crises). The *global social policy* literature and the *international interdependencies* framework seek to address this shortcoming by accounting for the transnational contexts within which social policymaking is developed (Deacon 2007; Kaasch 2012; Obinger et al. 2013). They emphasize the role of international organizations (IOs) in shaping social policies, especially for the countries of the Global South where the possibilities for both financial and technical resource mobilization are frequently limited or non-existent. Relating to the healthcare field, the literature shows how IOs can be influential for the adoption, reform, and maintenance of healthcare policies (see e.g., Walt and Gilson 1994; Marmor et al. 2009). These organizations operate as (a) financing agents through loans and aid, (b) champions of regulation and rights, (c) sources of ideas and normative standards, (d) facilitators of policy exchange, and (e) disseminators of models and prescriptions (Kaasch 2013). Since the introduction of the first healthcare system in 1883 in Germany, IOs have always

been involved in the field, notably the Pan American Health Organization (PAHO), the Office International d'Hygiène Publique (OIHP), the League of Nations Health Organization (LNHO), and the World Health Organization (WHO) in the early period, and the WHO and the World Bank more recently. In what we call the *IO hypothesis*, we thus assume that the likelihood of implementing a healthcare system increases or accelerates with the creation of policy field-specific IOs.

The most substantial and influential way in which IOs operate within the healthcare field is through loans and/or aid, either by means of direct transfers and interventions or via the support of recipient countries' domestic policies and institutions (Addison et al. 2015). The literature shows that often the disbursement of loans is tied to conditions aligned with the donors' agenda, which has a massive impact on domestic social policies (Babb and Carruthers 2008; Clements et al. 2013; Kaasch 2013). Although there is considerable scholarly work on aid and healthcare, this is mainly limited to the last 30 years (see e.g., McCoy et al. 2009; Dodd and Lane 2010), when aid in all its forms exponentially increased: For instance, from 1990 to 2016, aid from donors provided more than US$531 billion to economies of the Global South for financing healthcare (Institute for Health Metrics and Evaluation (IHME) 2017). Existing scholarship, therefore, mainly focuses on how aid shapes and/or influences preexisting systems, but does not address whether aid affects the emergence of healthcare arrangements. In order to fill this gap, we examine the *development assistance hypothesis*, assuming that the likelihood of a country introducing a healthcare system increases as aid grows.

Another recent strand that attempts to explain the introduction and expansion of social policies is the *warfare and welfare hypothesis* concerning the linkages between war and the welfare state. This relationship was already studied in the 1950s (Titmuss 1958); more recently, Obinger et al. (2018) have addressed this in a global perspective. According to this strand of theory, military conflicts and war experiences are a driving force behind changes in the welfare state. Demands for redistribution and risk-pooling that emerged in the aftermath of the Second World War and resulted in access expansion to social security in Europe are a classic illustration of the warfare and welfare hypothesis

(Dryzek and Goodin 1986; Obinger et al. 2018). Obinger and Schmitt (2018, 2020) argue that war enhances state capacity, encourages social protection demands, and increases social spending. The expansion of the state is interpreted as a consequence of wars. It strengthens the legal system and the assertiveness of jurisdiction and has the capacity to bolster democratization. The horrors of military conflicts heighten demands for social protection in order to provide income, employment, education, and housing for invalids, war victims, and their dependents. Lastly, wars impact social spending levels via newly created social protection schemes and the introduction of income and inheritance taxation. Even though case studies and, to a lesser extent, comparative work on the linkages between social policies implementation and wars are abundant for richer countries (Kasza 2002; Ferrera 2018; Lloyd and Battin 2018; Obinger and Schmitt 2020), this relationship has not been fully examined in non-Western countries.

Finally, we assume that diffusion patterns that have been observed in other areas of social policy (Kangas 2012; Schmitt et al. 2015) may also influence the political decision to establish a healthcare system. This might be policy learning among neighboring states or between states among which strong relationships of political exchange exist. One interdependency that has not yet been addressed sufficiently in comparative welfare state research, but which is prominent in studies on transnational political networks (Maoz 2011) is trade relations. Following the theoretical reasoning in this book (see Mossig et al. 2021, in this volume), we therefore also assume that cultural ties, colonial ties, geographic proximity, and the network of trade relations may influence the introduction of a healthcare system. We assume that these four networks may build the underlying structure for the policy diffusion process in general and for the diffusion of the idea of creating a healthcare system in particular. The networks can be seen as avenues or channels through which communication and information about social policies can travel. Under the heading of the *network hypothesis* we seek to test whether countries are more likely to introduce healthcare systems if they are closely connected through one or more of these networks to other countries that have already established a healthcare system.

Modeling the Introduction of Healthcare Systems

As previously mentioned, we are interested in determining at what point in time a government takes responsibility for healthcare, and we define healthcare system introduction as (a) passing the first nationwide legislation, (b) legally establishing entitlements to healthcare benefits, and (c) integrating the elements of the healthcare system.[3] For our analysis we utilize the R package netdiffuseR (Vega Yon and Valente 2021) to model the adoption of healthcare systems over time (Valente 1995). In order to operationalize the *dependent variable* we created a dataset containing the *de jure* introduction dates for all countries with more than 500,000 inhabitants in 2017, taking into account the first nationwide legislation that defines the population group receiving benefits and an institution or a set of institutions responsible for healthcare. In order to test the eight hypotheses lined out in the theory section above we then have to operationalize the respective *independent variables*, once again distinguishing between domestic factors and interdependencies. This description is followed by a short section on data preparation.

Domestic Factors

To address the assumption of the *modernization hypothesis* that the creation of a healthcare system may be easier for wealthy countries and that therefore countries with a higher GDP per capita may introduce a healthcare system earlier than poorer countries, we include data on GDP per capita as introduced in Chapter 1 to measure a country's wealth. For the analysis we convert the values to units of US$10,000.

Another variable to capture domestic institutional developments that may precede the creation of healthcare systems and can serve as a measure for the *capabilities hypothesis* is data on founding years of medical schools. The binary variable indicates whether a country has an operational

[3] An in-depth description of our conceptualization and operationalization can be found in de Carvalho and Fischer (2020).

medical school ("1") or not ("0"). The data is based on the "World Directory of Medical Schools" (www.wdoms.org). We see this as a proxy for higher levels of medical knowledge.

While the introduction of healthcare systems may depend on the availability of resources and financial capability, it may also be a response to urgent healthcare needs. In line with the *problem pressure hypothesis* we assume that a higher problem pressure may induce countries to introduce a healthcare system earlier than their counterparts with a lesser burden of disease. In the model we use two indicators to measure problem pressure or burden of disease, namely, *life expectancy* and *child mortality*. Neither indicator is ideal because they only reflect the effect of poor health on mortality in general and on mortality of one, especially vulnerable population group. But these indicators are the only alternatives available with reasonable accuracy for the whole historical period under observation. Both indicators were obtained from the Gapminder project (Gapminder 2017). Life expectancy is measured as the average number of years a newborn child is expected to live if current mortality patterns were to stay the same.[4] Child mortality describes the number of children which die below the age of five years per 1000 children born alive.[5]

In line with the other chapters in this book and to address the *regime type hypothesis*, we include as a measure of regime type the *level of democratization* in our analysis. As introduced in Chapter 1, the index ranges from low levels of democracy (closed autocracy = 0) to high levels of democracy (liberal democracy = 9).

Interdependencies

In order to address the *IO hypothesis* and the *development aid hypothesis* we also include three variables that capture the health-related institutional landscape before system introduction. These are the role of the World Health Organization and its regional organizations, the availability of medical education and research facilities, and the sum of

[4] Source link: https://www.gapminder.org/data/documentation/gd004/.

[5] Source link: https://www.gapminder.org/data/documentation/gd005/.

external health-related funds, namely bilateral development assistance for health (DAH). The inclusion of these variables reflects the possibility that being actively involved in international health politics may speed up the introduction of domestic healthcare systems. We include a binary variable with a default value of "0," which is set to "1" for a period of 10 years around a country's involvement in the *foundation of four early international health organizations*; the Pan American Health Organization (PAHO) in 1902, the Office international d'hygiène publique (OIHP) in 1907, the League of Nations Health Organization (LNHO) in 1920, and finally the foundation of the World Health Organization (WHO) in 1948. Because the foundation of these institutions was preceded by multilateral negotiation, our international organizations variable becomes active for the countries involved in the negotiations already one year before the official founding dates ($t - 1$).

The *Development Assistance for Health* indicator is defined by the sum of values of all DAH commitments in constant 2011 US$ received from international donors in a given year. All data points were obtained from the "AidData Core Research Release, v3.1"[6] data set (Tierney et al. 2011). Incoming dyadic project level commitment amounts have been transformed to yearly country-level aggregates.

The motivation for our decision to include a variable that measures in which years a country was involved in wars lies on the one hand in the argument that wars will likely increase the healthcare needs of affected populations. *Involvement in wars* can thus be interpreted as another measure of *problem pressure*. On the other hand, the inclusion of a variable that measures involvement in wars also addresses the recent claim of the *welfare and warfare hypothesis* that the military played an active role in advancing social policies in general and health services in particular to secure healthier and fitter recruits (Obinger 2020). In this study, we include war as a binary variable, which is coded "1" for countries that are affected by war in a given year and "0" for those who are not. Since

[6] Source link: https://www.aiddata.org/data/aiddata-core-research-release-level-1-3-1.

we expect that wars increase the problem pressure only after a certain time, we decided to lag the start of the war effect by one year ($t + 1$). The end of a war is lagged by two years ($t + 2$), because it is unlikely that war-induced healthcare needs of the population immediately cease to exist with the end of the conflict. The war effect used in our model accounts for both intra-state wars as well as inter-state wars as defined by the "Correlates of War" project (Sarkees and Wayman 2010), from which the original data was obtained.

The operationalization of the networks is described in detail in Chapter 1. The proximity network measures the inverse of the distances between countries' capitals, the trade network measures the volume of trade between country pairs. The network of cultural proximity results from clustering similarities in religion, gender relations, civil liberties, rule of law, government ideology, language, and colonial relations. And the colonial network represents ties between colonizers and colonies.

Data Preparation

Following Aiken and West (1991), we centered several continuous variables of our models to facilitate a more straightforward and meaningful interpretation of the estimated coefficients. We did so by subtracting the grand mean from every value, so that variable values equal to the mean value of the sample in the respective year are exactly at "0" after this procedure. While centering may help us to better interpret the results of our model, it does not affect the overall meaning of the model or its effect sizes, because the variable values are merely proportionally shifted (Aiken and West 1991). The following continuous variables are centered: life expectancy in years, child mortality per 1000 born, development assistance for health, GDP, and regime type. As proposed in the introductory chapter, we also addressed the issue with non-independent observations by using cluster-robust standard errors (Zeileis et al. 2020).

Findings

Table 5.1 presents the log hazard rates for our models of introduction of healthcare systems. Statistically significant effects with p-values lower than 0.1 are printed in bold to facilitate better readability. Model 1

Table 5.1 Network diffusion of healthcare systems—log-hazard ratios

	Dependent variable: Introduction Year of Healthcare Systems	
	Model 1	Model 2
1880–1913	**−4.418 (1.339)*** **	**−3.903 (1.512)*** **
1914–1945	**−4.421 (1.274)*** **	**−6.047 (1.433)*** **
1946–1978	**−4.280 (1.377)*** **	**−5.327 (1.506)*** **
1979–2010	**−5.042 (1.473)*** **	**−6.017 (1.583)*** **
Existence	**2.268 (0.419)*** **	**2.787 (0.488)*** **
Foundation of IOs	0.019 (0.274)	−0.009 (0.279)
Medical Schools	−0.417 (0.264)	−0.382 (0.262)
Life Expectancy in Years	0.003 (0.020)	0.013 (0.023)
Child Mortality per 1 k born	**−0.005 (0.002)** **	**−0.004 (0.002)** *
Development Assistance for Health	0.027 (0.032)	0.028 (0.032)
GDP	0.086 (0.064)	**5.475 (1.613)*** **
Regime Type	**−0.157 (0.053)*** **	**−0.181 (0.056)*** **
Wars	0.111 (0.424)	0.109 (0.439)
Network: Culture	1.139 (0.881)	0.642 (0.901)
Network: Colonies	0.220 (0.318)	0.402 (0.328)
Network: Proximity	**2.688 (0.857)*** **	**10.167 (2.989)*** **
Network: Trade	−0.242 (0.523)	**−10.272 (4.201)** **
Interaction: 1914–1945*GDP		**−6.588 (1.794)*** **
Interaction: 1946–1978*GDP		**−5.393 (1.614)*** **
Interaction: 1979–2010*GDP		**−5.309 (1.708)*** **
Interaction: 1914–1945*Proximity		**−7.167 (3.180)** **
Interaction: 1946–1978*Proximity		**−7.946 (3.127)** **
Interaction: 1979–2010*Proximity		**−8.287 (4.228)** *
Interaction: 1914–1945*Trade		**11.663 (4.091)*** **
Interaction: 1946–1978*Trade		**9.661 (4.033)** **
Interaction: 1979–2010*Trade		**7.988 (4.094)** *
Observations	10,771	10,771
Log Likelihood	−650.898	−623.706
AIC	1335.797	1299.412
McFadden's R^2	0.176	0.211

Note: $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$

contains the complete set of variables, in Model 2 we added interaction effects between process-time control variables and GDP per capita, network exposure by geographic proximity, and the trade network.[7]

We defined four time periods as intervals for the piecewise constant step function for our *discrete time logistic hazard models*. The first period covers the years from 1880, the start of our observation period, until 1913, the last year before the beginning of the First World War. The second period from 1914 is historically shaped by the societal and political interruptions of two world wars, and ends in the year of the capitulation of the axis powers in 1945. Starting in the aftermath of Second World War and the beginning of the Cold War, the third period from 1946 until 1978 is characterized by the bloc conflict between the two superpowers USA and USSR, and their two competing ideologies, and it is at the same time a period in which much of the current system of international organizations was created—a period of increasing economic globalization (Su 2002), and decolonization (Betts 2004). The final time period covers the more recent past and extends from 1979 until the end of our observation period 2010. It is shaped by the rise of globalization, the rise and climax of neoliberalism, the collapse of the socialist bloc in the 1990s and the "so-called golden age of development assistance for health" (Dieleman et al. 2017) in the first decade of the twenty-first century.

Among our explanatory variables, Model 1 identifies significant effects only for child mortality, regime type, and proximity. The negative correlation for the regime-type variable indicates that non-democratic states are likely to introduce healthcare systems at an earlier point in time than democratic states. Concerning the *regime type hypothesis*, our findings therefore support the strand of literature which highlight the role of autocratic regimes in the emergence of social policies. Here, it has to be considered that the early healthcare systems often cover groups pivotal to maintaining political power such as the military, state employees, or

[7] The exposure in networks of trade and geographic proximity have been centered by the grand mean like the "GDP per Capita" variable.

workers in the manufacturing industries. Plausible motives for the introduction of social policies under autocratic regimes include the forging of loyalty, striving for output legitimacy, and the appeasement of workers and socialist movements. Moreover, in autocratic regimes there tend to be less veto points to consider in the legislative process, which reduces the chances of bills granting entitlements to healthcare being blocked or rejected.

A positive statistically significant correlation with the proximity variable shows that the introduction of healthcare systems followed regional patterns with mostly European countries among the early adopters, many South American countries following in the second time period, a large number of Asian and North African countries introducing healthcare systems in the third time period. Among the 28 countries that introduced healthcare systems after 1978 only three were not in Africa.

The effect for child mortality is negative, indicating that countries with lower child mortality rates were more likely to introduce healthcare systems earlier than countries with higher child mortality rates. Contrary to the assumption of the *problem pressure hypothesis* that higher problem pressure may drive the introduction of healthcare systems, the negative sign of the child mortality variable suggests that it is rather countries with better infant health which are more likely to introduce healthcare systems earlier. Since child mortality is often caused by poverty-related illnesses (Black et al. 2010), improved infant health may thus rather be seen as an indicator for better social conditions that usually accompany higher GDP. However, the model does not show a statistically significant correlation between levels of GDP per capita and the introduction of a healthcare system. This finding seems to contradict the existing knowledge of healthcare system emergence (Schmitt et al. 2015).

Model 2 offers an explanation for the puzzling GDP result. There, we have added interaction effects that capture the time dependence of several of our independent and network exposure variables. The introduction of the interaction effects with time periods implies that for each variable the main effect and the interaction effect must be added up to get the overall effect of the independent variable in the respective period. Including these interaction effects significantly improves the

overall model fit and explained variance. By adding interaction terms for GDP and the last three time periods, the main GDP effect which now represents the log hazard rate of GDP per capita in the first time period becomes positive and significant. We thus see a correlation between GDP per capita and the likelihood of a healthcare system being introduced in the first time period (1880–1913). Hence, early adopters were more likely to be found among rich countries than among poor ones. In the earliest period of observation, mostly comparatively affluent European states such as Germany, Austria-Hungary, Norway, Russia, and Luxemburg, or Uruguay and Cuba in South America, introduced health systems. In the remaining time periods healthcare systems were introduced in countries with GDP per-capita levels above and below the average. Seemingly, other factors like nation-building in former colonies gain more importance while the wealth of a nation loses its predictive power. The model therefore does not support a general *modernization hypothesis*. Only for the pioneering states did higher levels of economic development strongly correlate with earlier healthcare system introduction.

Looking at the other interaction effects the model shows significant correlations between adoption and geographical proximity with a declining magnitude over time. This indicates that regional patterns structure the introduction of healthcare systems, but the importance of proximity to states that have already introduced a healthcare system decreases over time. This reflects on the one hand a saturation process in which the importance of proximity naturally declines with growing cumulative adoption. On the other hand, it also reflects that early adopters were already widely distributed over the globe and can be found in Europe, South America, Asia, and Oceania.

When looking at trade flows, we see a negative significant correlation for the baseline effect for the first period and positive and significant interaction effects between trade flows and process time compared to the first time period. This indicates that for early adopters, trade relations were clearly not a diffusion channel for healthcare system introduction. Compared to the first period, the negative effect of trade relations seems to be damped in later years, with the result that the overall effect is not

stable. The negative and insignificant trade exposure coefficient in Model 1, which accounts for the complete time period, also suggests no clear correlation.

The two other network effects—cultural similarity and colonial ties—are not significant, which means that from the networks included in our models only geographical proximity seems to be a candidate for explaining the introduction of healthcare systems for all time periods and for all countries of the world. As Table 5.2 in the appendix shows, an alternative, non-normalized operationalization of colonial network exposure does not substantially alter these results. Of course, this does not preclude the possibility that they were highly important for specific cases.

None of the other variables show statistically significant effects in either of the two models. Nor do they become significant when controlling for the possibility that they may only affect the hazard rate of health system introduction in specific time periods. Being part of one of the groups of countries that founded the major health-related international organizations has not had a measurable impact on these countries' politics in terms of creating domestic healthcare systems. Some countries, such as Austria, Hungary, or France, had already established health systems before the first international organization was founded. Some, like Cuba or Uruguay, fitted the expected pattern, and others, like the USA, participated in all institution-building processes but only created a domestic healthcare system much later. Our models thus do not provide support for the IO hypothesis. One reason for this may be that the role of IOs is possibly more relevant for shaping the structure of healthcare systems than for spurring their introduction. But this aspect is outside the scope of this article.

The foundation of medical schools does not seem to be related to the introduction of healthcare systems, either. Both indicators—international organizations and medical schools—may be more closely related to a country's concern for public health, which does not directly translate into the creation of a healthcare system. We thus find no support for the *capabilities hypothesis*, but obviously, the existence of medical schools is only a very rough measure of medical knowledge and capabilities in the area of health.

The amount of development assistance for health, for which data was only available for the last two time periods, also does not seem to make a difference regarding the willingness of a country to establish a healthcare system, nor does involvement in wars seem to translate into healthcare system creation. The finding that these indicators and also the life expectancy indicator remains not significant in our models, in combination with the negative significant effect of child mortality, strongly suggests that health-related problem pressure does not seem to induce countries to introduce healthcare systems. Fighting the burden of diseases with public health measures does not necessarily go hand in hand with creating entitlements for medical services.

Conclusion

The first major conclusion we can draw from our analysis is that none of the factors highlighted in the theory section is able to fully explain the timing of healthcare system introduction worldwide. Nevertheless, we clearly see regional diffusion patterns and some domestic factors show significant correlation with the hazard rate of introducing healthcare systems. This observation suggests that full explanations should go beyond the realm of traditional comparative welfare state analysis and incorporate ideas from global social policy research, diffusion research, and global history.

As in other instances (e.g., Rothgang and Schneider 2015) the explanation of change demands a complex framework that takes different strands of theory on board and combines domestic factors and international interdependencies.

Starting our review of hypotheses on *domestic factors*, our models clearly reject a strict *modernization hypothesis* that assumes a universal correlation between economic development and wealth on the one hand and the creation of healthcare systems on the other. We rather come up with a highly interesting result: The hypothesis holds for our first period of observation, i.e., for the introduction of healthcare systems before

First World War. In this period the introduction of a health system was more likely in more affluent countries, thus confirming modernization theory. In subsequent periods, however, other factors like nation-building in former colonies have gained importance, leading to a decline in the influence of wealth on the introduction of healthcare systems.

Turning to the *capabilities hypothesis*, we find no evidence to support it. The absence of a statistical correlation in our model may, however, reflect the relatively crude operationalization of this hypothesis due to a lack of better data for the whole period.

The negative correlation between child mortality seems to strongly refute the *problem pressure hypothesi*s and suggests that problem pressure rather decreases the likelihood of earlier healthcare system introduction. This interpretation is, however, misleading. Based on reports from several case studies we rather assume that typically, public health measures in the area of hygiene, water supply, etc., precede the introduction of a healthcare system. Only after such public health measures have brought on a decline in (child) mortality figures, states introduce healthcare systems under conditions of already lower problem pressure.

The literature on the *effects of regime types* already suggests that in some instances autocracy increases the likelihood of healthcare systems being introduced. Our findings support the observation that healthcare systems often predate democracy. While democratic representation is not a necessary condition for the introduction of a healthcare system, the likely motives of non-democratic regimes for implementing social protection suggest that these policies are not independent of democratization processes, as they seek to stifle the growth of democratic movements.

According to the *IO hypothesis* we should see a jump in the number of healthcare systems being introduced after the WHO or its preceding health-related international organizations were founded. Figure 5.2 shows that this is not the case. Healthcare systems are introduced at a relatively constant rate over time, with small peaks especially in years in which empires like the Austro-Hungarian empire (in 1888) or the Russian empire (in 1912) introduced systems. Correspondingly, the diffusion models show no significant effect of the foundation of IOs.

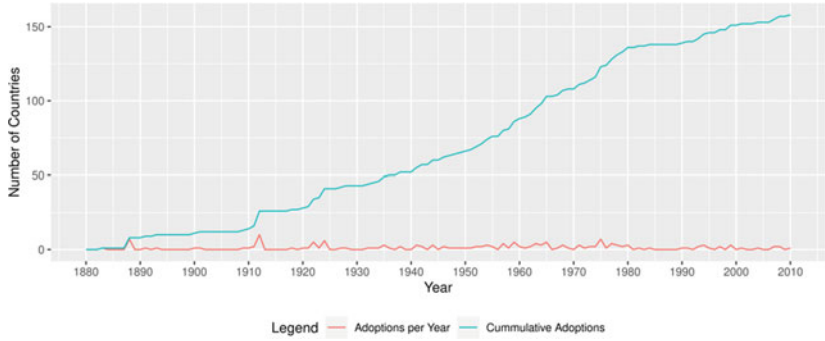


Fig. 5.2 Introduction of healthcare systems over time

Our analysis does not support the *warfare and welfare hypothesis* at all. While the literature has shown that wars have accelerated and even driven social policy developments in some countries, they do not seem to be drivers of healthcare system introduction, globally and over time.

Finally, we find mixed support for the *network hypothesis*. Trade networks cannot explain policy diffusion. While gaining some importance over time they do not seem to represent relevant channels of policy diffusion regarding healthcare systems. Nor do the links created through cultural similarity and colonial ties offer a universal explanation of healthcare system introduction. But the introduction of healthcare systems clearly followed a regional pattern with European countries coming first, and (South-)American, Asian, and African countries following roughly in this order. Whether this result reflects actual policy learning or follows mainly other logics, e.g., the timing of decolonization and nation-building, needs to be assessed with other methods. Based on our knowledge of healthcare systems around the world, we actually assume that it is more likely the *type* than the *timing* of the system introduction that is influenced through transnational policy diffusion networks.

While our results shed some light on possible factors influencing the emergence of healthcare systems worldwide, our analysis clearly has its limitations. Our model can only explain about 21% of the variance in the data. Clearly, other factors not included in our model and case-specific idiosyncrasies play an important role in the decision of a country to create a healthcare system. The long time frame also severely limits the possibility to operationalize some of our hypotheses, as data on many of the—theoretically interesting—variables is unavailable for most of the countries prior to the 1980s. This is especially true for more qualitative data, e.g., on the strength of progressive political actors, which might have enabled us to operationalize the otherwise promising power resource theory. Data on networks other than the four most basic networks included in our model is especially hard to come by. Therefore, it was not possible to test policy-specific relational aspects.

Nevertheless, our modeling for the first time systematically tests many of the assumptions present in the social policy literature which usually looks at individual countries or smaller samples of countries mostly from the OECD world. It shows that so far, no universal model of healthcare system introduction emerges from these assumptions. In the other hand, it highlights regional diffusion and the time-dependent relevance that some of the factors we have identified nevertheless have in a global social policy perspective.

Appendix

See Table 5.2.

Table 5.2. Network diffusion of health care systems—additive modeling approach

	Health care system introduction—hazard ratios				
	(1)	(2)	(3)	(4)	(5)
1880–1913	−4.590***	−4.620***	−4.362***	−4.418***	−4.429***
1914–1945	−4.625***	−4.672***	−4.363***	−4.421***	−4.534***
1946–1978	−4.660***	−4.747***	−4.197***	−4.280***	−4.476***
1979–2010	−5.453***	−5.531***	−4.950***	−5.042***	−5.224***
Existence	2.165***	2.185***	2.186***	2.268***	2.295***
Foundation of IOs	0.038	0.045	−0.007	0.019	0.065
Medical Schools	−0.340	−0.340	−0.434*	−0.417	−0.348
Life Expectancy in Years	0.011	0.011	0.003	0.003	0.001
Child Mortality per 1 k born	−0.005***	−0.005***	−0.005**	−0.005**	−0.005**
Development Assistance for Health	0.029	0.028	0.027	0.027	0.027
GDP	0.090	0.090	0.094	0.086	0.091
Regime Type	−0.139***	−0.140***	−0.158***	−0.157***	−0.157***
Wars	0.201	0.201	0.101	0.111	0.106
Network: Culture	1.255	1.236	1.140	1.139	1.434
Network: Colonies		0.078	0.214	0.220	
Network: Colonies (non-normalized)					0.427
Network: Proximity			2.577***	2.688***	2.829***
Network: Trade				−0.242	−0.179
Observations	10,771	10,771	10,771	10,771	10,771
Log Likelihood	−656.524	−656.482	−651.082	−650.898	−649.820
Akaike Inf. Crit	1341.048	1342.964	1334.165	1335.797	1333.641

Note $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$

Literature

Addison, Tony, Miguel Niño-Zarazúa, and Finn Tarp. 2015. "Aid, Social Policy and Development." *Journal of International Development* 27 (8): 1351–1365.

Aiken, Leona S., and Stephen G. West. 1991. *Multiple Regression: Testing and Interpreting Interactions*. Thousand Oaks: Sage.

Babb, Sarah L., and Bruce G. Carruthers. 2008. "Conditionality: Forms, Function, and History." *Annual Review of Law and Social Science* 4 (1): 13–29.

Betts, Raymond F. 2004. *Decolonization*. 2nd ed. New York: Routledge.

Black, Robert E., et al. 2010. "Global, Regional, and National Causes of Child Mortality in 2008: A Systematic Analysis." *The Lancet* 375 (9730): 1969–1987.

Blake, Charles H., and Jessica R. Adolino. 2001. "The Enactment of National Health Insurance: A Boolean Analysis of Twenty Advanced Industrial Countries." *Journal of Health Politics, Policy and Law* 26 (4): 679–708.

Bruchhausen, Walter. 2020. "Global Health in the Colonial Era: The Expansion of European Medicine." *EGO—European History Online*. Last accessed January 10, 2021. http://ieg-ego.eu/en/threads/theories-and-methods/knowledge-transfer/walter-bruchhausen-global-health-in-the-colonial-era-the-expansion-of-european-medicine.

de Carvalho, Gabriela, and Johanna Fischer. 2020. "Health and Long-Term Care System Introduction and Reform—Concepts and Operationalisations for Global and Historical Comparative Research." *SFB 1342 Technical Paper Series* 3.

de Carvalho, Gabriela, Achim Schmid, and Johanna Fischer. 2021. "Classifications of Health Care Systems: Do Existing Typologies Reflect the Particularities of the Global South?" *Global Social Policy* 21 (2): 278–300.

Clements, Benedict, Sanjeev Gupta, and Masahiro Nozaki. 2013. "What Happens to Social Spending in IMF-Supported Programmes?." *Applied Economics* 45 (28): 4022–4033.

Collier, David, and Richard E. Messick. 1975. "Prerequisites Versus Diffusion: Testing Alternative Explanations of Social Security Adoption." *The American Political Science Review* 69 (4): 1299–1315.

Cutler, David M., and Richard Johnson. 2004. "The Birth and Growth of the Social Insurance State: Explaining Old Age and Medical Insurance Across Countries." *Public Choice* 120 (1): 87–121.

Cutright, Phillips. 1965. "Political Structure, Economic Development, and National Social Security Programs." *American Journal of Sociology* 70 (5): 537–550.

Deacon, Bob. 2007. *Global Social Policy & Governance*. Los Angeles: Sage Publications.

Dieleman, Joseph, et al. 2017. "Evolution and Patterns of Global Health Financing 1995–2014: Development Assistance for Health, and Government, Prepaid Private, and Out-of-Pocket Health Spending in 184 Countries." *The Lancet* 389 (10083): 1981–2004.

Dodd, Rebecca, and Christopher Lane. 2010. "Improving the Long-Term Sustainability of Health Aid: Are Global Health Partnerships Leading the Way?." *Health Policy and Planning* 25 (5): 363–371.

Dryzek, John, and Robert E. Goodin. 1986. "Risk-Sharing and Social Justice: The Motivational Foundations of the Post-War Welfare State." *British Journal of Political Science* 16 (1): 1–34.

Ferrera, Maurizio. 2018. "Italy: Wars, Political Extremism, and the Constraints to Welfare Reform." In *Warfare and Welfare: Military Conflict and Welfare State Development in Western Countries* edited by Herbert Obinger, Klaus Petersen, and Peter Starke, 99–126. Oxford: Oxford University Press.

Flora, Peter, and Jens Alber. 1981. "Modernization, Democratization and the Development of Welfare States in Western Europe." In *The Development of Welfare States in Europe and America*, edited by Peter Flora and Arnold Joseph Heidenheimer, 37–80. New Brunswick: Transaction Books.

Freeman, Richard, and Lorraine Frisina. 2010. "Health Care Systems and the Problem of Classification." *Journal of Comparative Policy Analysis: Research and Practice* 12 (1–2): 163–178.

Gapminder. 2017. "Free Data from www.gapminder.org." *CC BY-4: Creative Common Attribution Licence 4.0*. https://gapm.io/data_license.

Immergut, Ellen M. 1992. *Health Politics: Interests and Institutions in Western Europe*. Cambridge: Cambridge University Press.

Institute for Health Metrics and Evaluation (IHME). 2017. *Financing Global Health 2016: Development Assistance, Public and Private Health Spending for the Pursuit of Universal Health Coverage*. Seattle, WA: IHME.

Kaasch, Alexandra. 2012. "Global Social Policy." *InterAmerican Wiki: Terms—Concepts—Critical Perspectives*. Last accessed January 5, 2021. www.uni-bielefeld.de/cias/wiki/g_Global_Social_Policy.html.

Kaasch, Alexandra. 2013. "Contesting Contestation: Global Social Policy Prescriptions on Pensions and Health Systems." *Global Social Policy: An Interdisciplinary Journal of Public Policy and Social Development* 13 (1): 45–65.

Kangas, Olli E. 2012. "Testing Old Theories in New Surroundings: The Timing of First Social Security Laws in Africa." *International Social Security Review* 65 (1): 73–97.

Kasza, Gregory J. 2002. "War and Welfare Policy in Japan." *The Journal of Asian Studies* 61 (2): 417–435.

Korpi, Walter. 1983. *The Democratic Class Struggle*. London: Routledge & Kegan Paul.

Lloyd, Christopher, and Tim Battin. 2018. "Reinforcements for the Wage-Earners' Welfare State? The Effects of the Two World Wars on Australia's Model of Welfare." In *Warfare and Welfare: Military Conflict and Welfare State Development in Western Countries*, edited by Herbert Obinger, Klaus Petersen, and Peter Starke, 230–259. Oxford: Oxford University Press.

Maoz, Zeev. 2011. *Networks of Nations: The Evolution, Structure, and Impact of International Networks, 1816–2001*. Cambridge: Cambridge University Press.

Mares, Isabela, and Matthew E. Carnes. 2009. "Social Policy in Developing Countries." *Annual Review of Political Science* 12 (1): 93–113.

Marmor, Theodore R., Richard Freeman, and Kieke G. H. Okma. 2009. "Comparative Policy Analysis and Health Care: An Introduction." In *Comparative Studies and the Politics of Modern Medical Care*, edited by Theodore R. Marmor, Richard Freeman, and Kieke G. H. Okma, 1–23. New Haven: Yale University Press.

McCoy, David, Sudeep Chand, and Devi Sridhar. 2009. "Global Health Funding: How Much, Where It Comes from and Where It Goes." *Health Policy and Planning* 24 (6): 407–417.

Moran, Michael. 2000. "Understanding the Welfare State: The Case of Health Care." *British Journal of Politics and International Relations* 2 (2): 135–160.

Mossig, Ivo, Michael Windzio, Fabian Besche-Truthe, and Helen Seitzer. 2021. "Networks of Global Social Policy Diffusion: The Effects of Culture, Economy, Colonial Legacies, and Geographic Proximity." In *Networks and Geographies of Global Social Policy Diffusion. Culture, Economy and Colonial Legacies*, edited by Michael Windzio, Ivo Mossig, Fabian Besche-Truthe, and Helen Seitzer, 1–26. Basingstoke: Palgrave Macmillan.

Obinger, Herbert. 2020. "Conscription, the Military, and Welfare State Development." *Historical Social Research* 45 (2): 7–26.

Obinger, Herbert, and Carina Schmitt. 2018. "The Impact of the Second World War on Postwar Social Spending." *European Journal of Political Research* 57 (2): 496–517.

Obinger, Herbert, and Carina Schmitt. 2020. "World War and Welfare Legislation in Western Countries." *Journal of European Social Policy* 30 (3): 261–274.

Obinger, Herbert, Carina Schmitt, and Peter Starke. 2013. "Policy Diffusion and Policy Transfer in Comparative Welfare State Research." *Social Policy & Administration* 47 (1): 111–129.

Obinger, Herbert, Klaus Petersen, and Peter Starke, eds. 2018. *Warfare and Welfare: Military Conflict and Welfare State Development in Western Countries*. Oxford: Oxford University Press.

OECD. 1987. *Financing and Delivering Health Care: A Comparative Analysis of OECD Countries*. Paris.

Roemer, Milton I. 1991. *National Health Systems of the World*. New York: Oxford University Press.

Rothgang, Heinz. 2021. "Health." In *The Oxford Handbook of the Welfare State*, edited by Daniel Béland, Daniel, Kimberly J. Morgan, Herbert Obinger, and Chris Pierson. Oxford: Oxford University Press, in print.

Rothgang, Heinz, and Steffen Schneider, eds. 2015. *State Transformations in OECD Countries: Dimensions, Driving Forces and Trajectories*. Basingstoke: Palgrave Macmillan.

Sarkees, Meredith Reid, and Frank Whelon Wayman. 2010. *Resort to War: A Data Guide to Inter-State, Extra-State, Intra-State, and Non-State Wars, 1816–2007*. Washington, DC: CQ Press.

Schmitt, Carina, Hanna Lierse, Herbert Obinger, and Laura Seelkopf. 2015. "The Global Emergence of Social Protection: Explaining Social Security Legislation 1820–2013*." *Politics & Society* 43 (4): 503–524.

Su, Tieting. 2002. "Myth and Mystery of Globalization: World Trade Networks in 1928, 1938, 1960, and 1999." *Review* 25: 351–392.

Tierney, Michael J., et al. 2011. "More Dollars Than Sense: Refining Our Knowledge of Development Finance Using AidData." *World Development* 39 (11): 1891–1906.

Titmuss, Richard Morris. 1958. "War and Social Policy." In *Essays on the Welfare State*, edited by Richard Morris Titmuss, 75–87. London: Unwin University Books.

Trein, Philipp. 2018. *Healthy or Sick? Coevolution of Health Care and Public Health in a Comparative Perspective*. Cambridge: Cambridge University Press.

Usui, Chikako. 1994. "Welfare State Development in a World System Context: Event History Analysis of First Social Insurance Legislation among 60 Countries, 1880–1960." In *The Comparative Political Economy of the Welfare State*, edited by Thomas Janoski and Alexander M. Hicks, 254–277. Cambridge: Cambridge University Press.

Valente, Thomas W. 1995. *Network Models of the Diffusion of Innovations*. Cresskill, NJ: Hampton Press.

Vega Yon, George, and Thomas Valente. 2021. *NetdiffuseR: Analysis of Diffusion and Contagion Processes on Networks*. https://github.com/USCCANA/netdiffuseR.

Walt, Gill, and Lucy Gilson. 1994. "Reforming the Health Sector in Developing Countries: The Central Role of Policy Analysis." *Health Policy and Planning* 9 (4): 353–370.

Wilensky, Harold L. 1974. *The Welfare State and Equality: Structural and Ideological Roots of Public Expenditures*. Berkeley: University of California Press.

World Bank. 2019. "New Country Classifications by Income Level: 2019–2020." Last accessed March 24, 2021. http://blogs.worldbank.org/opendata/new-country-classifications-income-level-2019-2020.

Yeates, Nicola. 2008. "The Idea of Global Social Policy." In *Understanding Global Social Policy*, edited by Nicola Yeates, 1–18. Bristol: The Policy Press.

Zeileis, Achim, Susanne Köll, and Nathaniel Graham. 2020. "Various Versatile Variances: An Object-Oriented Implementation of Clustered Covariances in R." *Journal of Statistical Software* 95 (1): 1–36.

6

Introduction of Long-Term Care Systems: The Nascent Diffusion of an Emergent Field of Social Policy

Johanna Fischer, Alexander Polte, and Meika Sternkopf

Introduction[1]

Old age is a life stage associated with a wide variety of experiences, depending, for instance, on residential location, socioeconomic characteristics, individual life trajectory, health and economic status (Lloyd-Sherlock 2010, 231–235). From a welfare policy perspective, it is also

[1]This chapter is a product of the research conducted in the Collaborative Research Center "Global Dynamics of Social Policy" at the University of Bremen. The center is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)—project number 374666841—SFB 1342.

J. Fischer (✉) · A. Polte · M. Sternkopf
University of Bremen, Bremen, Germany
e-mail: johanna.fischer@uni-bremen.de

A. Polte
e-mail: alexander.polte@uni-bremen.de

M. Sternkopf
e-mail: meika.sternkopf@uni-bremen.de

M. Windzio et al. (eds.), *Networks and Geographies of Global Social Policy Diffusion*, Global Dynamics of Social Policy,
https://doi.org/10.1007/978-3-030-83403-6_6

a period in which particular social risks are likely to occur that calls for mitigation through state intervention. One such risk is *long-term care (LTC) dependency*, that is, enduring physical and/or mental impairments necessitating assistance with daily living activities.[2] Unlike acute illness or loss of income in old age, LTC is a so-called "latecomer" of welfare policy which was historically—and in many parts of the world still is—not addressed as a (separate) social policy field (Österle and Rothgang 2010; Ranci and Pavolini 2015; Scheil-Adlung 2015). Nevertheless, we can see that over the past three decades in particular, debates, policy proposals, and reforms dealing with social protection for LTC dependency have picked up in many states as well as in international and transnational exchange. For instance, specific social LTC insurance schemes have been established in countries such as Israel, Germany, Luxembourg, Japan, and South Korea (Schmidt 2005; Companje 2014, 102; Maags 2020). In Latin America, Uruguay recently introduced a National System of Care, and similar proposals are being discussed elsewhere in the region (Matus-Lopez and Cid Pedraza 2016; Esquivel 2017). Meanwhile, LTC is also increasingly addressed on the international level, for example in different forums and entities of the United Nations (UN) (Second World Assembly on Ageing 2002; WHO 2015, 2017).

In the present chapter, we aim to investigate what factors—international as well as domestic—have so far contributed to the introduction of *LTC systems under public responsibility for the elderly* worldwide. That is, our explanandum is the point in time at which states first adopted statutory entitlements concerning social protection for LTC for (at least) the old-age population. To this end, we employ data on introduction points taken from the novel *Historical Long-Term Care Systems Dataset* (Fischer and Sternkopf 2021). In the next section, based on theoretical considerations borrowed from welfare state research and literature focusing on LTC policy, we specify several hypotheses on the role of horizontal and vertical diffusion channels and countries' national constellations in the

[2] In general, care dependency can occur at any age, e.g. due to a disability causing loss of functional capacity. However, there is a strong (statistical) association between age and LTC dependency, making old age the period of life with the highest risk of needing LTC (WHO 2015; Colombo et al. 2011).

introduction of LTC systems. Subsequently, we outline the operationalization of our dependent and independent variables. We then move on to conduct the empirical analysis using a *discrete-time logistic hazard model*, presenting the method, results, and limitations. In the final part, we discuss the findings and conclude.

Theory and Hypotheses

Generally, there is a lack of (cross-country) explanatory analysis on the introduction of social protection schemes for LTC which makes it difficult to build on previous theoretical specifications and results for formulating hypotheses. However, some insights for explaining the introduction of LTC systems can be drawn from assumptions and observations in publications on LTC in general and in particular from the body of (case) studies exploring LTC policy reform and design (e.g., Campbell et al. 2009; Theobald and Kern 2011; Esquivel 2017). Furthermore, the theory strands used to analyze welfare policies in general (see e.g., Schmitt et al. 2015) seem to be a fruitful starting point for theorizing about the policy field of LTC (cf. Leitner 2013, 51–52). Consequently, we use these existing bodies of literature to structure and underpin our subsequent theoretical discussion. In line with the focus of this edited volume, we start with interdependencies and then move on to identify relevant domestic factors.

International Interdependencies

Moving beyond "methodological nationalism," the study of policy diffusion and policy transfer (see e.g., Marsh and Sharman 2009; Obinger et al. 2013) has highlighted the relevance of *transnational and international interdependencies* for countries' (social) policy decisions. The concept of *diffusion* assumes "contagion" between different entities. Consequently, in comparative policy research, diffusion describes a process "in which policies in one unit are influenced by concepts, proposals, policies or ideas from another unit" and can occur in different

constellations: horizontally from country to country, vertically from international organization (IO)[3] to country or vice versa, or in the form of imperial diffusion (Kuhlmann et al. 2020, 82, 85). As regards the diffusion of LTC system introduction, diffusion both between countries and from IOs to countries seems plausible. In the following, we outline both.

As described in the introductory chapter (Mossig et al., in this volume), multiple types of ties may drive diffusion of social policies between countries: geographical, cultural, and economic proximity and colonial ties (cf. Elkins and Simmons 2005; Schmitt and Obinger 2013). So which "contagion channels" do we expect to play a role for the horizontal diffusion of LTC systems in particular? While "macro" diffusion patterns of LTC schemes have not been analyzed so far, there are studies on the role of LTC policy transfer in a small number of European and East Asian countries that provide clues on relevant ties. This body of literature points to the role of relationships established through similar welfare state institutions (Maags 2020, 13; Campbell et al. 2009) as well as "geographical and cultural proximity" (Theobald and Kern 2011, 334). In general, it seems plausible that *spatial proximity* fosters the spread of ideas on establishing social protection for LTC dependency. From LTC research, at least two groups of geographically close countries with similar LTC models and evidence of international exchanges on the topic come to mind: the Scandinavian countries with their universal public service model (Sipilä et al. 2000), and the spread of social LTC insurance in East Asia (Maags 2020). Therefore, it may also be the case that countries learn from a geographically close "reference group" (Elkins and Simmons 2005, 45) with regard to the introduction of an LTC system, which leads us to investigate the following hypothesis: *Close geographical proximity to countries with an established LTC system increases the likelihood of introduction of LTC systems (H1a, geographic diffusion hypothesis).*

Furthermore, we assume that *cultural similarity* is especially interesting in the policy field of LTC (cf. Pfau-Effinger 2019, 222). For instance,

[3] We use the term 'international organization" in a broad sense, subsuming both global as well as regional associations of states and including supranational organizations such as the European Union.

in their analysis of LTC policy transfer in several European countries, Theobald and Kern (2011, 334) point to the shared cultural and historical heritage of Austria, the Czech Republic, and the Italian region of South Tyrol, arguing that this may be one of the reasons why the latter two have oriented themselves to the Austrian LTC system. A particular aspect of culture that seems to be relevant with regard to the field of LTC is family values, that is, "cultural values and notions with respect to the structure of the family and the gender division of labour" (Pfau-Effinger 2005, 328). For instance, shared norms about the role of informal care provision by women could foster countries' exchange on the need for and form of social protection for LTC. We test the relevance of shared cultural norms with the following hypothesis: *Close cultural similarity to countries with an established LTC system increases the likelihood of diffusion of LTC systems (H1b, cultural diffusion hypothesis).*

LTC is a comparably recent field of social policy which has developed mostly since the dissolution of colonial empires. Moreover, at the time of publication relatively few LTC schemes have been introduced in the Global South (see Fig. 6.2), which suggests that there is no strong theoretical correlation between the direct role of colonial ties and the establishment of LTC systems. However, shared colonial heritage has facilitated the development of similar national (welfare) institutions (Schmitt 2015), which, in turn, could encourage later exchanges on finding a fitting "policy solution" for LTC. For example, there is evidence that countries with preexisting social insurance models such as Japan or South Korea sought advice from countries with similar institutions and experiences for modeling their LTC systems (Campbell et al. 2009; Maags 2020). For this reason, we explore the relevance of colonial ties as a third channel for horizontal policy diffusion: *Colonial relations with countries with an established LTC system increases the likelihood of diffusion of LTC systems (H1c, colonial diffusion hypothesis).*

Aging and LTC are not only discussed in and among countries, but also by IOs. Organizations such as the European Union (EU), the Organization of Economic Co-operation and Development (OECD), the World Bank or the World Health Organization (WHO) address these issues through recommendations, comparative studies, or monitoring systems. While the topic has recently also gained importance among

globally active IOs as well (see e.g., WHO 2015; UN DESA 2016), organizations of the Global North have been especially active in the field since the 1990s. For instance, the OECD published its first report on the situation of the elderly in the mid-1990s (Hennessy 1994) and has since established a comprehensive LTC database. In the EU, which, as a supranational organization, can exercise a strong influence on its member states, calls for national policies on LTC in the face of an aging society came on the agenda as early as 1993 (Pacolet et al. 1999). At the end of the "European Year of Older People and Solidarity between Generations" in 1993, the Council of Ministers published a declaration calling on Member States to initiate regulations in the field of LTC (Council of the European Union 1993). In the same year, the Commission published a report comparing health care and social protection schemes in European countries (Commission of the European Communities 1993; Hervey and Vanhercke 2010). Thus, EU membership since 1993 may have been a channel for vertical LTC policy diffusion. Not only the current members, moreover, but also applicants may have been influenced by the EU's agenda-setting, particularly in the 1990s, at a time when some of the Central and Eastern European countries aspired to membership in the EU and were therefore perhaps more eager to reform their welfare systems (Mattli and Plümper 2002; Theobald and Kern 2011). Thus, our hypothesis on vertical diffusion is the following: *(Prospective) Membership in the European Union after 1993 increases the likelihood of introducing an LTC system (H2, EU diffusion hypothesis).*

National Constellations

As regards domestic explanatory factors, (at least) three theoretical strands are classically differentiated in welfare (state) studies to account for the emergence, change, and variation of social policies (see e.g., Huber and Stephens 2001, 15; Pierson 1996; Schmitt et al. 2015, 510). These are *functionalist or socio-economic theories* that stress the relevance of economic, technical, and societal change in driving social policy introduction, *actor and interest-based theories* that focus on the influence of political and societal groups and coalitions, and *institutionalist theories*

which postulate the influence of existing (political) rules, structures and norms on social policy development. In this section, we turn to these theoretical schools and specify four hypotheses on the role of national constellations in the introduction of LTC systems.

Many publications dealing with LTC in different parts of the world frame the need for (political) activity and research in the field in terms of growing *problem pressure* (e.g., Österle et al. 2011; Feng 2019, 291–293; Colombo et al. 2011, 62–70). Two aspects are frequently cited. On the one hand, there is a (projected) increase in care dependency prevalence[4] in conjunction with demographic aging of societies; on the other hand, a decrease in informal (familial) care provision due to higher female labor market participation and more dispersed family structures is discernible. This narrative is clearly embedded in *functionalist* theory. Accordingly, economic and technical change leads to changing demographic and societal structures which create new social issues and risks—in this case, a "care gap"—which call for mitigation from the (welfare) state (Obinger 2019; Bonoli 2007). To examine whether states act in line with this modernization logic, we formulate the following hypothesis: *The higher the prevalence of LTC dependency in a country, the higher the likelihood of LTC system introduction (H3a, problem pressure hypothesis).*

Besides problem pressure, functionalist theory also stresses the importance of economic resources for social policy adoption and expansion: With growing wealth, countries have more means available for welfare spending (Obinger 2019; Leitner 2013, 41). While up to now this assumption has yielded ambiguous results for different social policies and time periods (see e.g., Schmitt et al. 2015; Jensen 2011), it has to our knowledge never been tested with regard to LTC specifically. We therefore investigate whether the following hypothesis holds for LTC policy: *The more economically wealthy a country is, the higher is the likelihood of LTC system introduction (H3b, economic wealth hypothesis).*

With a view to the role of *actors and interests*, a classical explanation for the expansion of welfare transfer programs (e.g., old-age pensions, unemployment benefits) in the Global North stresses the importance of different classes' power resources, in particular the influence of strong

[4] LTC prevalence describes the share of care dependent persons within the population.

left-wing and social democratic parties and trade unions (Pierson 1996, 150; Orloff 2005). However, this seems to be less the case for social and health care services (e.g., Leitner 2013; Jensen 2011; Bonoli and Reber 2010). Consequently, in the policy field of LTC, it is more plausible to consider the influence of other actors and ideologies. For instance, several case studies on LTC policy reform point to the relevance of women's organizations and movements (e.g., Peng 2005; Esquivel 2017). As (informal) care provision is feminized to a large degree (WHO 2015, 130; Österle and Rothgang 2010), women in particular are likely to be interested in relief from or support with unpaid care provision—either by remuneration and recognition of informal provision or by strengthening the formal LTC sector. Therefore, the extent of women's political opportunities and participation within a society stands out as a potential factor influencing the introduction of an LTC system. In terms of actor-based theories, we therefore explore the following hypothesis: *The more that women in a country are politically empowered, the higher is the likelihood of LTC system introduction (H3c, women empowerment hypothesis).*

The configuration of *political institutions* and regimes can generally also influence welfare policy (Pierson 1996, 152). One assumption regarding the role of a country's political regime type is that democracies tend to expand social policy benefits more than autocratic states because freedom of association and elections offer the population possibilities to successfully press for social protection schemes (Haggard and Kaufman 2009, 13–14). In the case of LTC, these could be groups directly affected by (the risk of) care dependency, but also those indirectly affected, such as family caregivers and people working in the formal care sector. Although the connection between regime type and the size of the welfare state is not straightforward (Schmidt 2019; Schmitt et al. 2015, 511), we explore the following hypothesis: *The more democratic a country is, the higher is the likelihood of LTC system introduction (H3d, regime type hypothesis).*

Operationalization and Data

After the theoretical framework has been outlined above, we now turn to the empirical analysis. This section firstly outlines the dependent variable, i.e., LTC system introduction, and, secondly, specifies the operationalization and data sources used to measure our independent variables.

Dependent Variable: Measuring the Introduction of LTC Systems

Country-comparative data on the recently developed, complex policy field of LTC is scarce, in particular with a view to information on the historical development of LTC schemes.[5] Up until very recently, there was no data available on the emergence of LTC systems (or similar concepts) across countries. This paper therefore uses a novel dataset generated in the CRC project A04 *Global Developments in Health Care Systems and Long-term Care as a New Social Risk*, the *Historical Long-Term Care Systems Dataset* (HLTCS) (Fischer and Sternkopf 2021). This dataset covers all countries globally with more than 500,000 inhabitants in 2017 and contains, among others, two different measures for the existence and introduction dates of LTC systems under public responsibility. Thus, on the one hand, the introduction of an LTC system (type A) can be defined (i) as the first point in time when nationwide legislation is adopted, (ii) this legislation establishes entitlements to LTC benefits, and (iii) the elements of the LTC system are integrated to some extent (De Carvalho and Fischer 2020, 12–15).[6] On the other hand, when applying a stricter understanding, an LTC system is only defined as

[5] There are some exceptions, most notably: since 2004 yearly updated comparative tables presenting a structured description of countries' LTC schemes in the wider European area by the Mutual Information System on Social Protection (MISSOC) and the Mutual Information System on Social Protection of the Council of Europe (MISSCEO), and a collection of laws on LTC for ten European countries by the Social Policy and Law Shared Database (SPLASH).

[6] The latter point is operationalized as the existence of an institution or set of institutions explicitly responsible for LTC.

having been introduced if the former criteria are fulfilled and in addition, in acknowledgment of LTC dependency as a distinct social risk (type B), LTC is institutionally treated as a social policy field of its own. Overall, while the development of such *distinct LTC systems* is often regarded as a remarkable event in the social policy landscape of a country, type B systems are globally still extremely rare, totaling 15 in 2010 and 18 by 2020 (see Fig. 6.1, dark red dotted line). By contrast, LTC systems of the former definition may often represent rather incipient and hidden developments, but are nevertheless an important first step toward social protection for LTC. Therefore, in this chapter, we analyze the introduction of the more widespread type A LTC systems, using as our dependent variable the adoption year of the foundational law which introduces for the first time statutory benefits relating to social protection for LTC for (at least) the old-age population. In the remainder of this section, we briefly describe the distribution of this variable over time, which is also visualized in the (cumulative) adoption graph in Fig. 6.1.

As shown by the light red lines in Fig. 6.1, LTC systems started to emerge from the mid-twentieth century onwards. The first country to introduce an LTC system was the United Kingdom with the adoption of

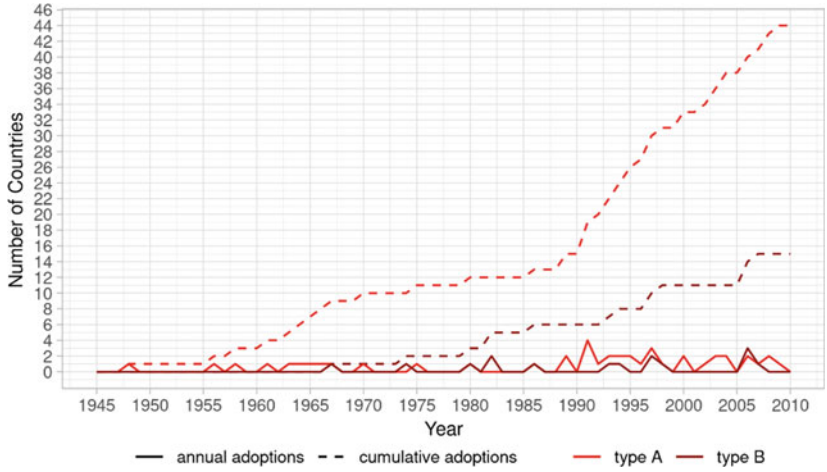


Fig. 6.1 Adoption of LTC systems (type A and B) worldwide, until 2010 (*Source* Own representation, data taken from HLTCS [version 31.01.2020])

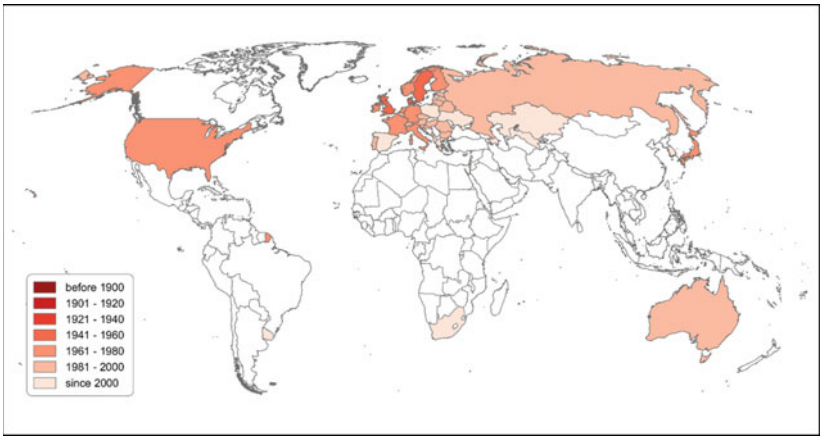


Fig. 6.2 World map of LTC system introductions (*Source* Data taken from HLTCS [version 31.01.2020]; Data missing for the following countries: Algeria, Bahrain, Bangladesh, Iraq, Jordan, Kuwait, Lebanon, Malaysia, Moldova, Morocco, Nepal, New Zealand, North Korea, Oman, Philippines, Qatar, Tanzania, Tunisia, Uganda, Zimbabwe)

the *National Assistance Act* in 1948. In the subsequent decades, the adoption process was rather slow and mostly took place in Europe. The first Asian country to introduce an LTC system was Japan in 1963, closely followed by the United States in 1965 as the first on the American continent (see Fig. 6.2). Introduction picked up in the 1990s, as indicated by the steep light red dotted curve in Fig. 6.1. As many as 16 countries, mostly Eastern European states some of which were newly (re-) established shortly beforehand, adopted a novel LTC system from 1991 until 1998. In the 2000s, the regional diversity of countries increased to some extent, with introductions in several Asian countries as well as in South Africa. Overall, less than a third of all countries worldwide had introduced an LTC system by 2018, indicating that the diffusion process of this social policy is still at an early stage. As shown on the map in Fig. 6.2, the majority of system introductions until today is clearly centered on Europe.

Independent Variables

Following our theoretical framework, the *independent variables* can be divided into two groups: international interdependencies (H1, H2) and national constellations (H3). We operationalize *horizontal international interdependencies* by calculating network exposure values (Valente 1995; 2005) for three potentially relevant horizontal networks: geographic proximity (H1a), cultural similarity (H1b), and colonial legacy (H1c). Network exposure is defined by the proportion of a country's neighbors which already adopted an LTC system. In this regard, all countries to which the focal state is linked via a certain network tie (e.g., colonial legacy) count as neighbors. It is also possible to account for the weights of network ties. An in-depth explanation and discussion of network exposure and its calculation are provided in Chapter 1 of this volume (Mossig et al. 2021, in this volume).

To operationalize *vertical policy diffusion* from the EU to the national level (H2), we created a dataset that indicates the point in time at which a country applied for EU membership and when it became an EU member state. Based on this data, we identify for each year those countries that are members of the EU or official EU applicants. In the following, we will refer to this country set as the *extended EU group*. Starting with 1993, which marks the beginning of EU engagement in LTC (see theory section), the variable is set to "1" if a country is part of the extended EU group. For the years prior to 1993 and for non-group members it is coded "0."

We now turn to the operationalization of our hypotheses on national constellations. Measuring LTC dependency as specified in the *problem pressure hypothesis* (H3a) is challenging, as there is no data source providing information about the prevalence of LTC dependency that covers countries worldwide or historically. As research clearly indicates that LTC dependency is strongly associated with (very) old age (see e.g., WHO 2015, 65–69; Colombo et al. 2011, 40–43), we use the share of old-age population as a proxy measure. While statistics on the Global North indicate that LTC prevalence increases significantly at the age

of 80 years and above (Colombo et al. 2011, 40–43), data for countries in the Global South, where the average life expectancy is lower, indicates limitations in activities of daily living even for the "younger elderly" (WHO 2015, 68). As a compromise, we use the *share of population aged 75 years and older* to operationalize LTC dependency. To do so, we employ data provided by UN DESA (2019). It includes information about the share of population aged 75+ years in percent at five-year intervals and covers the period from 1950 until 2020. To cope with missing values, we use linear interpolation to impute data for unobserved country years.

For the *wealth hypothesis* (H3b), we use the *gross domestic product (GDP) per capita* in units of 10,000 US$ to operationalize countries' economic power. Since this variable is extensively described in Chapter 1 (Mossig et al., in this volume), we forego redescribing the data here.

To operationalize the *women empowerment hypothesis* (H3c) the *women's political empowerment index* (Sundström et al. 2015) is used, which is obtained from the Varieties of Democracy (V-Dem) dataset (Coppedge et al. 2020). The index is an aggregate of three subindices—women's civil liberties index, women's civil society participation index, and the women's political participation index—and ranges from "0," indicating a low level of political empowerment of women, to "1," indicating high political empowerment. Missing values have been filled with linearly interpolated values.

Finally, for the *regime type hypothesis* (H3d), we use the level of democratization taken from V-Dem (Lührmann et al. 2018; Coppedge et al. 2020) and described in Chapter 1. Values range from "0"—closed autocracy—to "9"—liberal democracy—and missing data has been interpolated linearly (see Mossig et al., in this volume). Now that our measurements have been specified, we move to the presentation of the employed method, results, and limitations of our analysis.

Explaining the Introduction of LTC Systems

Method

In line with the methodological approach followed in this volume, we use *discrete-time logistic hazard models* to estimate the influence of the independent variables on the hazard ratio of LTC system introduction (cf. Windzio 2013; Valente 1995; 2005). Due to missing data in at least one of the independent variables, our models do not include the following countries from the original country sample of this volume: Bhutan, East Timor, Fiji, Guyana, Papua New Guinea, Solomon Islands, Somalia, South Sudan, and Suriname. Thus, the models cover observations from $N = 154$ countries during the time period 1945–2010. We selected 1945 as the starting point for several reasons. Firstly, it does not exclude any LTC system introductions (the first is in 1948), and, secondly, data for some of our independent variables are only available from the 1940s/50s onwards. Under these circumstances, we deem it reasonable to pick a historic turning point—the end of World War II—as the starting point for our analysis.

We defined two time intervals for the piece-wise constant rate function of logistic hazard models—one period from 1945 to 1977, and one from 1978 to 2010. The choice is motivated by the aim of creating intervals of similar length on the one hand, and by reducing the amount of control variables on the other. We consider this to be a reasonable approach, since the total number of LTC systems introduced by the end of the observation period in 2010 is still very small ($n = 43$) compared to the sample size ($N = 154$). Countries which did not introduce an LTC system until 2010 were treated as right-censored cases.

To facilitate a straightforward interpretation of the model results we also conducted certain data transformations. Firstly, the women's political empowerment index has been converted to a percentage scale. Secondly, the variable values of "share of population 75+" and "GDP per capita" have been centered, by subtracting the grand mean from each. Since centering only shifts the values proportionally, the procedure does not affect the model results, while it may improve the models'

readability (Aiken and West 1991). As proposed in the introductory chapter, we addressed the issue with non-independent observations by using cluster-robust standard errors (Zeileis et al. 2020).

Results

Table 6.1 shows the predicted hazard ratios of LTC system introduction. While Model 1 contains the full set of independent variables introduced above, Model 2 additionally includes an interaction term for the centered variables "share of population 75+" and "GDP per capita."

Of the three network diffusion variables, only network exposure by geographical proximity shows a significant and positive effect in both models. This supports the *geographic diffusion hypothesis (H1a)*, showing that geographic proximity promotes the diffusion of ideas and policy innovations. On a substantial level this result reflects the large cluster of LTC systems in Europe, where the first LTC systems were developed.

Table 6.1 Discrete-time logistic hazard model of LTC system introduction (N = 154)

	Dependend variable: Introduction Year of Long-Term Care Systems	
	Model 1	Model 2
1945–1977	**0.0000*** (1.20)**	**0.0000*** (1.36)**
1978–2010	**0.0000*** (1.29)**	**0.0000*** (1.45)**
Network exposure: proximity	**203.80*** (1.28)**	**117.12*** (1.27)**
Network exposure: culture	0.05 (2.21)	0.10 (2.20)
Network exposure: colonies	1.00 (0.46)	0.98 (0.43)
Extended EU group	1.23 (0.59)	1.11 (0.59)
Share of population 75+	1.30 (0.18)	**1.52* (0.17)**
GDP per capita	1.19 (0.22)	1.15 (0.12)
Women pol. empowerment index	**1.06** (0.02)**	**1.06** (0.02)**
Democratization	**1.21* (0.09)**	**1.24* (0.08)**
Interaction: GDP*Pop 75+		**0.86* (0.06)**
Observations	9080	9080
Log Likelihood	−195.104	−192.451
Akaike Inf. Crit	410.208	406.903
McFadden R^2	0.285	0.295

Note: $^{+}p < 0.1$; $^{*}p < \mathbf{0.05}$; $^{**}p < 0.01$; $^{***}p < 0.001$

The *culture diffusion hypothesis (H1b)* is not supported by our models and must be rejected under the conditions of Model 1 and Model 2, because the coefficients are not significant. Similarly, the lack of statistical significance of network exposure by colonial relationships is not in line with the *colonial diffusion hypothesis (H1c)*. While the rejection of the colonial diffusion hypothesis is understandable as the theory section has already highlighted the weak connection between LTC policy and colonial empires, it is indeed surprising that we find no evidence for diffusion by cultural similarity in our analysis.

Regarding the *EU diffusion hypothesis,* both models yield unexpected results. The effects are not statistically significant, indicating that the EU agenda-setting on LTC policy since 1993 did not influence the risk of LTC system introduction among EU members and applicants. This is a puzzling result, as it implies that the role of the EU in the field of LTC is less influential than in other social policy fields described in the literature, such as pensions or gender equality (Cerami 2008; Guillén and Palier 2004; O'Connor 2005).

Model 1 shows a positive but not statistically significant effect for the *problem pressure (H3a)* variable "share of population 75+." This result indicates that countries do not generally tend to introduce LTC systems earlier as the prevalence of LTC dependency increases, and therefore *H3a* is rejected by Model 1. Similarly, "GDP per capita" shows no significant correlation to the adoption risk in Model 1. This finding contradicts the *economic wealth hypothesis (H3b),* which assumes that economic affluence increases the likelihood of introducing an LTC system. To investigate this result further, we discuss the effects of the interaction term included in Model 2 at the end of this section.

The coefficients of the women's political empowerment index are significantly positive in both models. Since the variables represent the original index on a percentage scale, the hazard of introducing an LTC system increases by 6% for each additional percent of the index. Recapturing the 10% interval of the original index, an increase by one level statistically results in a 60% higher risk of LTC system introduction. Thus, the model results support the *women empowerment hypothesis (H3c)*. Similarly, both models predict a significant positive effect of the level of democratization. Since the effects in both models point in the

same direction, we can draw from them at least weak empirical support for the *regime type hypothesis (H3d).*

In Model 2, we have added an interaction term for economic wealth and problem pressure, because we expected that the influence of problem pressure could be of greater relevance if a country is comparably rich and can better afford to introduce LTC benefits. Furthermore, we were surprised by the absent statistical significance of problem pressure and economic wealth in Model 1. Consequently, the additional interaction hypothesis reads: *The higher the economic wealth, the stronger the effect of high prevalence of LTC dependency on the risk of LTC system adoption (IH).*

In Model 2 the effect of "share of population 75+" increases compared to Model 1 and becomes significant ($p < 0.05$). Thus, in countries of average economic wealth an increase of the "share of population 75+" by one percent increases the odds for LTC system introduction by 52%. The GDP per capita coefficient, however, remains insignificant and thus indicates that economic wealth has no influence on the risk of adoption for countries with average problem pressure.

Finally, the interaction term itself shows a significant negative coefficient. Figure 6.3 shows the predicted probabilities of LTC system adoption related to the share of population aged 75 and older, while the lines represent the effect difference among countries of average (blue), low (red), and high (green) economic wealth. The latter two indicate values which are one standard deviation below and above the mean, respectively. As shown in Fig. 6.3, the overall positive effect of problem pressure on the adoption risk is dampened as economic wealth increases. However, Fig. 6.3 also shows that this dampening effect almost only applies to countries with relatively high problem pressure (1.02% above average and higher).

Our interaction hypothesis therefore has to be rejected. The positive effect of high problem pressure on the introduction of LTC systems does not increase with economic wealth. One possible explanation for this surprising finding could be that elderly people in richer countries may have better opportunities to make provisions for future LTC dependency during their working life. They also might receive higher old-age

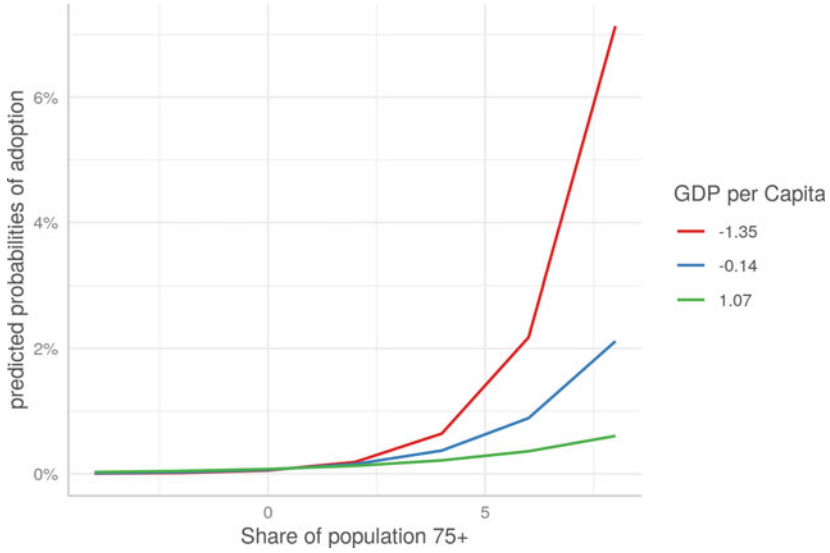


Fig. 6.3 Interaction effects

pensions allowing them to pay for LTC services more easily. Consequently, with high problem pressure, the necessity for social protection for LTC (especially for the poorest population strata) could be even more pressing in less wealthy countries.

Limitations

The analysis faces several limitations. As already mentioned, LTC is a relatively nascent social policy field, and LTC dependency as a new social risk only recently became more salient in many societies. The data on the introduction of LTC systems presented in this study underlines this fact and shows that the global diffusion of LTC systems is still at an early stage. Only 43 of the 154 countries incorporated in our model have been classified as adopters of LTC systems by 2010. Five further countries[7] introduced an LTC system after the end of our observation period

[7] Azerbaijan (2014), Uruguay (2015), Uzbekistan (2015), Albania (2016), Greece (2016).

and were treated as right-censored in our model. Furthermore, the introduction data was missing for 20 countries,[8] which we also treated as cases without an LTC system, because initial country screenings suggest that they did not introduce an LTC system until 2010. Both the early stage of diffusion and data uncertainty restrict the present analysis. As mentioned above, these concerns also led us to use only two steps for the piece-wise constant rate function. We also refrained from including trade network exposure and the additional trade existence control variable used throughout the edited volume, because there are neither substantial theoretical arguments for the relevance of economic interdependencies in LTC, nor did it show any significant empirical result when included in the model. However, for the sake of completeness, Tables 6.2 and 6.3 in the appendix show model results which include trade exposure effects as well.

Besides the measurement problems associated with a lack of appropriate data discussed for some explanatory variables—especially problem pressure—above, there are also limitations concerning the operationalization of the dependent variable. As discussed in the section on operationalization and data, type-A LTC systems constitute rather incipient forms of social protection for LTC which are sometimes not recognized as such (at the time) and often establish only rudimentary entitlements which may in fact be irrelevant to large parts of the population. However, political activism, the role of economic means for funding, and the diffusion of ideas may be stronger with regard to "big bang" events like the introduction of distinct LTC systems (type B). For instance, the insights on LTC policy transfer provided by existing case studies (see theory section) all refer to the adoption of distinct LTC systems since the 1990s. Therefore, it might be fruitful to also further investigate the establishment of distinct LTC systems, even if their small number makes a (statistical) analysis currently difficult.

[8] Algeria, Bahrain, Bangladesh, Iraq, Jordan, Kuwait, Lebanon, Malaysia, Moldova, Morocco, Nepal, New Zealand, North Korea, Oman, Philippines, Qatar, Tanzania, Tunisia, Uganda, Zimbabwe.

Conclusion

Our analysis has identified several factors which advance the introduction of LTC systems. These are, most notably, diffusion by means of geographical proximity, high political empowerment of women and, to some extent, a high level of democratization. In general, it is surprising that both of our strongest LTC-specific hypotheses on *international interdependencies*, that is horizontal diffusion through cultural similarity and vertical diffusion within the extended EU group, have to be rejected. One explanation for the absent influence of the EU on the introduction of LTC systems may be that LTC policy in particular is regarded as a national matter by the member states, which is justified by the low legitimacy of the EU in social policy issues. Moreover, many member states had already introduced LTC policies before 1993, which in turn allows the reverse assumption that member states influence the social policy agenda of the EU institutions. Moreover, as agenda setting only started in the 1990s, it is possible that the EU influences the further development toward distinct LTC systems rather than the first legal provisions in the field.

On a more general note, when analyzing the results on the different "contagion channels," it is important to bear in mind that LTC system diffusion is still an ongoing, accelerating process. Consequently, our current model provides a description of the *early phase of diffusion*, and not a generalizable explanation of the global diffusion process as a whole. The same methodological approach may identify other factors or assign different relevance to them as more countries introduce LTC systems subsequent to 2010. Recapturing the self-referential/endogenous dynamic of network diffusion processes, this might even lead to the identification of further diffusion channels, which become more relevant as exposure thresholds mediated by their increase.

With regard to *national constellations*, our findings provide very limited support for the functionalist explanations on economic wealth and problem pressure. The lack of statistical evidence of the problem pressure hypothesis is an unexpected result in view of the fact that the body of international literature on LTC continuously stresses the relevance of aging while urging governments to introduce social protection

schemes for LTC. Nevertheless, as the result of the interaction model shows, a high share of elderly people seems to matter in countries with low to average wealth. Although not explicitly hypothesized in this chapter, one can regard this finding as partly supporting the functionalist explanation relying on problem pressure. Unfortunately, due to a lack of data, we were unable to test the flip side of the problem pressure hypothesis relating to the availability of informal care as a functional equivalent to public LTC systems. Wealth itself does not seem to be a major driving force behind the introduction of LTC systems introduction. However, it still appears to be of importance as the influence of other factors, especially problem pressure, depends on economic affluence.

Our actor-centered assumption about the political role of women is confirmed. This result shows that women's political participation is not only important for the establishment of childcare policies (e.g., Bonoli and Reber 2010) but also with regard to elder care, which has until now been less examined. However, it is not completely clear what the underlying mechanism of this positive effect is. On the one hand, as specified in the theory section, it could be directly related to women's political participation and activism. On the other hand, a general culture of gender equality associated with high political empowerment of women could also be behind this result. Furthermore, as regards one other common hypothesis of welfare theory, namely, the role of the political regime type, our findings also provide statistical evidence for the positive influence of democratization. In fact, there have been very few introductions in (strongly) autocratic regimes—only eight countries with an LTC system, mostly former members of the Soviet Union and Yugoslavia, display a regime type score below five at the time of introduction.

Overall, the present chapter provides—to our knowledge—the first cross-country statistical analysis that explores why countries introduce social protection for LTC dependency. By including variables which measure both horizontal as well as vertical diffusion processes, we also go beyond the explanatory factors rooted in "methodological nationalism" which has often accompanied analyses of social policy development (cf. Obinger et al. 2013). Due to the fact that LTC is only recently evolving as a (distinct) policy, the field can provide fruitful ground for studying both international interdependencies as well as sectoral path

dependencies, as we can currently observe the spread of the policies. Moreover, information and data are more readily available for this recent historical period than for the beginning of the twentieth century. We therefore conclude that the global diffusion of LTC systems will remain a worthwhile field for future study.

Appendix

See Tables 6.2 and 6.3.

Table 6.2 Results—additive diffusion models

	(1)	(2)	(3)	(4)
1945–1977	0.0001***	0.0000***	0.00***	0.00***
1978–2010	0.0000***	0.0000***	0.00***	0.00***
Women pol. empowerment index	1.05**	1.06**	1.05**	1.05**
Share of population 75+	1.31+	1.30+	1.26	1.26
Extended EU group	0.97	1.23	1.20	1.21
GDP per capita	1.12	1.19	1.14	1.14
Democratization	1.17+	1.21*	1.20*	1.20*
Trade existence			684,293.90***	685,783.60***
Network exposure: proximity	111.19***	203.81***	373.76***	374.59***
Network exposure: culture		0.05	0.09	0.08
Network exposure: trade			0.29	0.28
Network exposure: colonies				1.02
Observations	9080	9080	9080	9080
Log Likelihood	−195.847	−195.104	−194.559	−194.557
Akaike Inf. Crit	407.695	408.208	411.117	413.115

Note: $^{+}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Table 6.3 Results—additive diffusion models with non-normalized colonial exposure

	(1)	(2)	(3)	(4)
1945–1977	0.0001***	0.0000***	0.00***	0.00***
1978–2010	0.0000***	0.0000***	0.00***	0.00***
Women pol. empowerment index	1.05**	1.06**	1.05**	1.06**
Share of population 75+	1.31+	1.30+	1.26	1.34
Extended EU group	0.97	1.23	1.20	1.16
GDP per capita	1.12	1.19	1.14	1.13
Democratization	1.17+	1.21*	1.20*	1.20*
Trade existence			684,293.90***	789,606.40***
Network exposure: proximity	111.19***	203.81***	373.76***	239.64**
Network exposure: culture		0.05	0.09	0.07
Network exposure: trade			0.29	0.29
Network exposure: colonies				2.02
Observations	9080	9080	9080	9080
Log Likelihood	−195.847	−195.104	−194.559	−194.026
Akaike Inf. Crit	407.695	408.208	411.117	412.052

Note: $^{+}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Literature

Aiken, Leona S., and Stephen G. West. 1991. *Multiple Regression: Testing and Interpreting Interactions.* Thousand Oaks: Sage.

Bonoli, Giuliano. 2007. "Time Matters." *Comparative Political Studies* 40 (5): 495–520.

Bonoli, Giuliano, and Frank Reber. 2010. "The Political Economy of Childcare in OECD Countries: Explaining Cross-National Variation in Spending and Coverage Rates." *European Journal of Political Research* 49 (1): 97–118.

Campbell, John C., Naoki Ikegami, and Soonman Kwon. 2009. "Policy Learning and Cross-National Diffusion in Social Long-Term Care Insurance: Germany, Japan, and the Republic of Korea." *International Social Security Review* 62 (4): 63–80.

Cerami, Alfio. 2008. "Europeanization and Social Policy in Central and Eastern Europe." In *Européanisation. D'ouest En Est. Coll. Logiques Politiques*, edited by François Bafoil and Timm Beichelt, 137–168. Paris: L'Harmattan.

Colombo, Francesca, Ana Llena-Nozal, Jérôme Mercier, and Frits Tjadens. 2011. *Help Wanted? Providing and Paying for Long-Term Care.* Paris: OECD Publishing.

Commission of the European Communities. 1993. *Social Protection in Europe.* Report from the Commission C0M(93) 531 final. Last accessed January 15, 2021. http://aei.pitt.edu/42125/1/com1993_0531en01.pdf.

Companje, Karel-Peter. 2014. "Financing High Medical Risks in the Netherlands: Healthcare, Social Insurance and Political Compromises." In *Financing High Medical Risks: Discussions, Developments, Problems and Solutions on the Coverage of the Risk of Long-Term Care in Norway, Germany and the Netherlands Since 1945 in European Perspective*, edited by Karel-Peter Companje, 101–175. History of healthcare insurance 5. Amsterdam: Amsterdam University Press.

Coppedge, Michael, John Gerring, Carl H. Knutsen, Staffan I. Lindberg, Jan Teorell, David Altman, Michael Bernhard et al. 2020. "V-Dem Codebook V10." *SSRN Electronic Journal.*

Council of the European Union. 1993. "Declaration of Principle of the Council of the European Union and the Ministers for Social Afffairs." Meeting with the Council. 93/C 343/01.

De Carvalho, Gabriela, and Johanna Fischer. 2020. "Healthcare and Long-Term Care Systems and Reforms—Concepts and Operationalisations for Global and Historical Comparative Research." *SFB 1342 Technical Paper Series* 3. Bremen.

Elkins, Zachary, and Beth Simmons. 2005. "On Waves, Clusters, and Diffusion: A Conceptual Framework." *The ANNALS of the American Academy of Political and Social Science* 598 (1): 33–51.

Esquivel, Valeria. 2017. "The Rights-Based Approach to Care Policies: Latin American Experience." *International Social Security Review* 70 (4): 87–103.

Feng, Zhanlian. 2019. "Global Convergence: Aging and Long-Term Care Policy Challenges in the Developing World." *Journal of Aging & Social Policy* 31 (4): 291–297.

Fischer, Johanna, and Meika Sternkopf. 2021. "The Historical Long-Term Care Systems Dataset (HLTCS): Data Collection and Codebook." *CRC 1342 Technical Paper Series* (forthcoming).

Guillén, Ana M., and Bruno Palier. 2004. "Introduction: Does Europe Matter? Accession to EU and Social Policy Developments in Recent and New Member States." *Journal of European Social Policy* 14 (3): 203–209.

Haggard, Stephan, and Robert R. Kaufman. 2009. *Development, Democracy, and Welfare States.* Princeton: Princeton University Press.

Hennessy, Patrick. 1994. "Who Looks After the Elderly?" *OECD Observer* 188 (3): 15–19. https://doi.org/10.1787/observer-v1994-3-en.

Hervey, Tamara, and Bart Vanhercke. 2010. "Health Care and the EU: The Law and Policy Patchwork." In *Health Systems Governance in Europe*, edited by Elias Mossialos, Govin Permanand, Rita Baeten, and Tamara K. Hervey, 84–133. Cambridge: Cambridge University Press.

Huber, Evelyne, and John D. Stephens. 2001. *Development and Crisis of the Welfare State: Parties and Policies in Global Markets.* Chicago, IL. University of Chicago Press.

Jensen, Carsten. 2011. "Determinants of Welfare Service Provision After the Golden Age." *International Journal of Social Welfare* 20 (2): 125–134.

Kuhlmann, Johanna, Delia González de Reufels, Klaus Schlichte, and Frank Nullmeier. 2020. "How Social Policy Travels: A Refined Model of Diffusion." *Global Social Policy* 20 (1): 80–96.

Leitner, Sigrid. 2013. *Varianten von Familialismus: Eine historisch vergleichende Analyse der Kinderbetreuungs- und Altenpflegepolitiken in kontinentaleuropäischen Wohlfahrtsstaaten.* 1. Aufl. Sozialpolitische Schriften 91. Berlin: Duncker & Humblot.

Lloyd-Sherlock, Peter. 2010. *Population Ageing and International Development: From Generalisation to Evidence.* Bristol: Policy Press.

Lührmann, Anna, Marcus Tannenberg, and Staffan I. Lindberg. 2018. "Regimes of the World (RoW): Opening New Avenues for the Comparative Study of Political Regimes." *Politics and Governance* 6 (1): 60–77.

Maags, Christina. 2020. "Long-Term Care Insurance Adoption in East Asia: Politics, Ideas, and Institutions." *Politics & Policy* 28 (2): 1–38.

Marsh, David, and J. C. Sharman. 2009. "Policy Diffusion and Policy Transfer." *Policy Studies* 30 (3): 269–288.

Mattli, Walter, and Thomas Plümper. 2002. "The Demand-Side Politics of EU Enlargement: Democracy and the Application for EU Membership." *Journal of European Public Policy* 9 (4): 550–574.

Matus-Lopez, Mauricio, and Camilo Cid Pedraza. 2016. "New Long-Term Care Policies in Latin America: The National System of Care in Uruguay." *Journal of the American Medical Directors Association* 17 (7): 663–665.

Mossig, Ivo, Michael Windzio, Fabian Besche-Truthe, and Helen Seitzer. 2021. "Networks of Global Social Policy Diffusion: The Effects of Culture, Economy, Colonial Legacies and Geographic Proximity." In *Networks and Geographies of Global Social Policy Diffusion: Culture, Economy and Colonial Legacies*, edited by Michael Windzio, Ivo Mossig, Fabian Besche-Truthe, and Helen Seitzer, 1–26. Basinstoke: Palgrave Macmillan.

O'Connor, Julia S. 2005. "Policy Coordination, Social Indicators and the Social-Policy Agenda in the European Union." *Journal of European Social Policy* 15 (4): 345–361.

Obinger, Herbert. 2019. "Sozio-ökonomische Theorie des Wohlfahrtsstaates." In *Handbuch Sozialpolitik*, edited by Herbert Obinger and Manfred G. Schmidt, 97–116. Wiesbaden: Springer.

Obinger, Herbert, Carina Schmitt, and Peter Starke. 2013. "Policy Diffusion and Policy Transfer in Comparative Welfare State Research." *Social Policy & Administration* 47 (1): 111–129.

Orloff, Ann S. 2005. "Social Provisions and Regulations: Theories of the State, Social Policies and Modernity." In *Remaking Modernity: Politics, History, and Sociology*, edited by Julia Adams, Elisabeth S. Clemens, and Ann S. Orloff, 190–224. Politics, history, and culture. Durham: Duke University Press.

Österle, August, Lisa Mittendrein, and Katarina Meichenitsch. 2011. "Providing Care for Growing Needs: The Context for Long-Term Care in Central and South Eastern Europe." In *Long-Term Care in Central and South Eastern Europe*, edited by August Österle. 1st, New ed., 17–40. Frankfurt a.M: Peter Lang GmbH Internationaler Verlag der Wissenschaften.

Österle, August, and Heinz Rothgang. 2010. "Long-Term Care." In *the Oxford Handbook of the Welfare State*, edited by Francis G. Castles, Stephan Leibfried, Jane Lewis, Herbert Obinger, and Christopher Pierson, 378-390. Oxford: Oxford University Press.

Pacolet, Jozef, Ria Bouten, Hilde Hilde Lanoye, and Katia Versieck. 1999. *Social Protection for Dependency in Old Age in the 15 EU Member States and Norway: Synthesis Report Commissioned by the European Commission and the Belgian Minister of Social Affairs.* Social security and social integration. Luxembourg: Office for Official Publications of the European Communities.

Peng, Ito. 2005. "The New Politics of the Welfare State in a Developmental Context: Explaining the 1990s Social Care Expansion in Japan." In *Transforming the Developmental Welfare State in East Asia*, edited by Huck-ju Kwŏn, 73–97. Social policy in a development context. Basingstoke, Hampshire [u.a.]: Palgrave Macmillan.

Pfau-Effinger, Birgit. 2005. "Welfare State Policies and the Development of Care Arrangements." *European Societies* 7 (2): 321–347.

Pfau-Effinger, Birgit. 2019. "Kulturelle Ideen als Grundlage der Wohlfahrtsstaatsforschung." In Obinger and Schmidt 2019, 217–234.

Pierson, Paul. 1996. "The New Politics of Th Welfare State." *World Politics* 48 (2): 143–173.

Ranci, Costanzo, and Emmanuele Pavolini. 2015. "Not All That Glitters Is Gold: Long-Term Care Reforms in the Last Two Decades in Europe." *Journal of European Social Policy* 25 (3): 270–285.

Scheil-Adlung, Xenia. 2015. "Long-Term Care Protection for Older Persons: A Review of Coverage Deficits in 46 Countries." Extension of Social Security series 50. Unpublished manuscript. Last accessed August 1, 2018. www.ilo.org/wcmsp5/groups/public/---ed_protect/---soc_sec/documents/publication/wcms_407620.pdf.

Schmidt, Hillel. 2005. "The Israeli Long-term Care Insurance Law: Selected Issues in Providing Home Care Services to the Frail Elderly." *Health & Social Care in the Community* 13 (3): 191–200.

Schmidt, Manfred G. 2019. "Sozialpolitik in Demokratien und Autokratien." In *Handbuch Sozialpolitik*, edited by Herbert Obinger and Manfred G. Schmidt, 235–254. Wiesbaden: Springer Fachmedien Wiesbaden.

Schmitt, Carina. 2015. "Social Security Development and the Colonial Legacy." *World Development* 70: 332–342.

Schmitt, Carina, Hanna Lierse, Herbert Obinger, and Laura Seelkopf. 2015. "The Global Emergence of Social Protection." *Politics & Society* 43 (4): 503–524.

Schmitt, Carina, and Herbert Obinger. 2013. "Spatial Interdependencies and Welfare State Generosity in Western Democracies, 1960–2000." *Journal of European Social Policy* 23 (2): 119–133.

Second World Assembly on Ageing. 2002. "Political Declaration and Madrid International Plan of Action on Ageing: Second World Assembly on Ageing, Madrid, Spain, 8–12 April 2002." Unpublished manuscript. Last accessed August 15, 2018. http://www.un.org/en/events/pastevents/pdfs/Madrid_plan.pdf.

Sipilä, Jorma, Margit Andersson, Sten-Erik Hammarqvist, lars Nordlander, Pirkko-Liisa rauhala, Kare Thomsen, and Hanne Warming Nielsen. 2000. "A Multiture of Universal Public Services—How and Why Did Four Scandinavian Countries Get Their Social Care Service Model?" In *Social Care Services: The Key to the Scandinavian Welfare Model*, edited by Jorma Sipilä. Repr, 27–50. Aldershot: Ashgate.

Sundström, Aksel, Pamela Paxton, Yi-ting Wang, and Staffan I. Lindberg. 2015. "Women's Political Empowerment: A New Global Index, 1900–2012." *SSRN Electronic Journal.*

Theobald, Hildegard, and Kristine Kern. 2011. "The Introduction of Long-Term Care Policy Schemes: Policy Development, Policy Transfer and Policy Change." *Policy & Politics* 39 (3): 325–342.

United Nations Department of Economic and Social Affairs. 2016. "Briefing Paper: Growing Need for Long-Term Care: Assumptions and Realities." Last accessed October 6, 2018. https://www.un.org/esa/socdev/ageing/documents/un-ageing_briefing-paper_Long-term-care.pdf.

United Nations Department of Economics and Social Affairs Population Division. 2019. "World Population Prospects 2019: File POP/9–1: Percentage Total Population (Both Sexes Combined) By Broad Age Group, Region, Subregion and Country, 1950–2100." POP/DB/WPP/Rev.2019/POP/F09–1. Last accessed August 27, 2019. https://population.un.org/wpp/Download/Files/1_Indicators%20(Standard)/EXCEL_FILES/1_Population/WPP2019_POP_F09_1_PERCENTAGE_OF_TOTAL_POPULATION_BY_BROAD_AGE_GROUP_BOTH_SEXES.xlsx.

Valente, Thomas Q. 1995. "Network Models of the Diffusion of Innovations." New Jersey: Hampton.

Valente, Thomas W. 2005. "Network Models and Methods for Studying the Diffusion of Innovations." In *Models and Methods in Social Network Analysis*, edited by Peter J. Carrington, John Scott, and Stanley Wasserman. 1st ed., 98–116. Cambridge University Press.

Windzio, Michael. 2013. *Regressionsmodelle für Zustände und Ereignisse: Eine Einführung*. Wiesbaden: Springer.

World Health Organization. 2015. *World Report on Ageing and Health.* Geneva: World Health Organization. Last accessed August 10, 2018. http://apps.who.int/iris/bitstream/10665/186463/1/9789240694811_eng.pdf.

World Health Organization. 2017. *Towards Long-Term Care Systems in Sub-Saharan Africa.* WHO series on long-term care. Geneva: World Health Organization. Last accessed August 8, 2018. http://www.who.int/ageing/publications/ltc-series-subsaharan-africa/en/.

Zeileis, Achim, Susanne Köll, and Nathaniel Graham. 2020. "Various Versatile Variances: An Object-Oriented Implementation of Clustered Covariances in R." *Journal of Statistical Software* 95 (1): 1–36.

7

Origins of Family Policy: Prerequisites or Diffusion

Tobias Böger, Keonhi Son, and Simone Tonelli

Introduction[1]

Compared to other areas of social policy, the historical origins of family policy, i.e., the public provision of cash, time, and services to assist

[1]This chapter is a product of the research conducted in the Collaborative Research Center "Global Dynamics of Social Policy" at the University of Bremen. The center is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)—project number 374666841—SFB 1342.

T. Böger (✉) · K. Son · S. Tonelli
University of Bremen, Bremen, Germany
e-mail: boeger@uni-bremen.de

K. Son
e-mail: son@uni-bremen.de

S. Tonelli
e-mail: si_to@uni-bremen.de

M. Windzio et al. (eds.), *Networks and Geographies of Global Social Policy Diffusion*, Global Dynamics of Social Policy,
https://doi.org/10.1007/978-3-030-83403-6_7

child-rearing and reconcile care and work, have received only scant attention. Gauthier's book (1996) remains the definitive comparative in-depth study of the diverse origins and trajectories of family policy in the countries that now belong to the group of rich, democratic welfare states. Comparative studies with a Latin-American (Blofield and Martinez Franzoni 2015; Blofield and Touchton 2020), East-Asian (Fleckenstein and Lee 2017; Saraceno 2016), and even a global focus (Filgueira and Rossel 2020) have started to appear, but for the most part, ignore the historical roots of the policies they study. We provide the first global analysis of the origins of family policy, systematically testing established theories and propositions. This facilitates an assessment of the influence of international linkages on the development of family policy, which is widely acknowledged but proves difficult to pin down (White 2020).

While contemporary family policies are often analyzed as a more or less coherent "whole", which can be characterized along dimensions such as "defamilization" or typologized according to how these policies structure gender relations within the family, state interest in and support for families historically first appeared as "piecemeal interventions" rather than "comprehensive packages" (Gauthier 1996). It took more than half a century before family policies (plural) coalesced into a distinct and explicit family policy (singular), and even then, state intervention often remained far from coherent. Since we are interested in the historical origins of family policy, we look at the adoption of paid maternity leave, child benefits, and workplace childcare regulations in isolation, i.e., analyzing the first adoption of each of these family policies. This also poses a relatively "easy" test for the effect of international linkages, which may wither away or work differently following these first adoptions.

To give an overview of the historical origins, to assess the types of domestic drivers put forward, and to gauge possible channels of diffusion, we first review the literature dealing with the three types of family policy. Then, we present data and models and appraise the generalizability of earlier findings across time and space. A brief discussion of methodological and substantive limitations concludes.

Family Policies: Historical Origins and Drivers[2]

(a) *Paid Maternity Leave*

Paid maternity leave policy was the earliest social protection policy explicitly aimed at women workers. While other protective legislation, such as unpaid maternity leave and the prohibition of night work, often had adverse effects on women's economic empowerment by limiting the job opportunities of women workers, paid maternity leave policy minimizes the difficulties of working mothers that go along with giving birth without jeopardizing their economic independence (Htun et al. 2019). Because paid maternity leave policies provide income compensation and often prohibit employers from dismissing women workers during and after confinement, they secure their independence vis-à-vis their employers and spouses. Whereas the different factions within the women's movement disagreed on whether women-specific labor laws were needed to achieve gender equality in the labor market, they agreed on the necessity of paid maternity leave (Berkovitch 1999; Boris 2019).

Despite this fundamental role in providing social protection for women workers, little is known about the historical development of paid maternity leave policies. Historical accounts of social protection programs focus on the risks of old age, unemployment, and sickness (Esping-Andersen 1990; Flora and Heidenheimer 1981), often treating paid maternity leave only as a corollary to the general development of social insurance principles. This research gap reflects the fact that the unit of analysis in early comparative welfare state research has always been the average production worker in the manufacturing industry with a dependent spouse and two children, assuming, if not reflecting, the gendered division of labor (Orloff 1993; Sainsbury 2001). While feminist studies criticized this male breadwinner-centric conceptualization and measurement of social rights, their own studies focused on the more recently introduced childcare and parental leave policies. While pivotal

[2] The history and analysis of paid maternity leave was authored by Keonhi Son, of child benefits by Simone Tonelli and of workplace childcare by Tobias Böger.

to the question of how contemporary welfare states shape gender relations (Leitner 2003; Saraceno 2011), these studies shed little light on the forces that have "gendered" the welfare state since its beginnings.

The few studies that focus on the historical development of paid maternity leave emphasize the significant role of domestic actors and institutional developments. Gauthier argues that the fear of "family decline" following industrialization and urbanization in early twentieth-century Europe triggered government responses, including paid maternity leave (Gauthier 1996). Case studies of European countries and the U.S. have also emphasized the role of female agency (Hobson and Lindholm 1997; Koven and Michel 1990; Sainsbury 2001). A recent publication from Son and Böger expands the research scope to the global scale and finds that women's political empowerment and the general expansion of social protection policies have contributed to the extension of access to maternity benefits from the 1880s to 2018 (Son and Böger 2021).

Among the scant studies of national maternity leave introduction, processes of observation of legislative activity in other countries rarely figure in and neither do references to norms set by global bodies. This is surprising because maternity protection was an agenda that arose with the founding of the International Labour Organization (ILO) and has continued to be a salient issue ever since. In the early twentieth century, women's movements struggled to introduce and extend the right to maternity benefits by lobbying the ILO to adopt the Maternity Protection Convention, which functioned as an important organizational platform spreading maternity protection policies at the nation-state level (Berkovitch 1999). The ILO adopted the first Maternity Protection Convention (C003) when it was founded in 1919 during its first conference and has since updated the standards for maternity protection every three decades in two consecutive Maternity Protection Conventions (C103, C183), in 1952 and 2000. The ILO had been the only standard-setter until the European Union implemented its own standards in 1992 (Pregnant Worker Directive 92/85/EEC) (Linos 2013, 130–131). Son and Böger (2021) find that nation-states tend to extend the coverage and lower the eligibility criteria of maternity benefits shortly after they

join the ILO. Their findings also signal the significant effect of long-standing membership, implying that the ILO consistently contributes to the extension of paid maternity leave policies by utilizing technical expertise and continuous dialogue with national governments.

Another strand of studies emphasizes the impact of colonial domination and legacies on welfare systems in the Global South. Schmitt (2015, 2020) finds that nation-states that share the same colonial experience are likely to introduce social protection programs at a similar time, as colonizers often institutionalized social policies in response to a rise of labor strikes in the 1940s. Importantly, France introduced a unified labor code that mirrored the French labor code in all French colonies to stabilize the labor issue, namely the French *Code du Travail* (1952) which provided family allowances and maternity insurance for wage earners (Cooper 1996). Despite the limited coverage of the French *Code du Travail*, its adoption brought about the introduction of paid maternity leave in 14 of 39 Sub-Saharan African countries with a generous amount of benefit (half of the previous wage) and a substantial duration of benefit (14 weeks) in the early phase of economic development (1952) in comparison to other middle- and low-income countries.

Overall, the literature points toward the influence of the ILO (ILO hypothesis) and the reaction of colonial administrations to labor unrest (colonial hypothesis) as the main drivers of paid maternity leave introduction.

(b) *Child Benefits*

Early forms of child benefits, then mostly referred to as "family allowances," were introduced during World War I as a way to compensate for the separation of men in the armed forces and their families, largely because it was found difficult to recruit them otherwise (Land 1985). These benefits were quickly withdrawn after the end of the conflict, but the economic hardship, mounting unemployment, and political turmoil of the interwar period brought home the importance of having an income stabilizer for large families (Hoffner 1935). The acknowledgment that having children was associated with a higher risk of poverty

helped establish the principle that workers' salaries should also be a function of the size of their families. Such a principle pushed some advocates of eugenics to argue against the introduction of family allowances, as it would have only increased "the rate of multiplication" of individuals at the bottom of the social scale (Darwin 1925). However, fear of depopulation prevailed over arguments of eugenics, and family allowances were introduced as a form of population policy to counter falling birth rates (Gille 1954; Watson 1954a, b).

All in all, it is hard to find a single driver for the adoption of family allowances. An overview of early writings on the topic highlights three major arguments that were put forward in support of their adoption. First, family allowances were considered a way to compensate a family for the consequences of war, be it the absence of the breadwinner or the economic hardship that followed the two world wars (compensation hypothesis) (Breul 1953; Doublet 1948; Kitchen 1981; Land 1985). Second, family allowances were intended as a living wage, i.e., adjusted for family size (redistribution hypothesis) (Campbell 1927; Cousins 1999; Hoffner 1935, 1940; Land 1985; Rathbone 1940), and finally, family allowances were intended as a means to counter falling birth rates (population hypothesis) (Biagi 1937; Campbell 1927; Cousins 1999; Gille 1954; Hoffner 1935, 1940; Land 1985; Watson 1954b).

Although these three hypotheses advance our understanding of the mechanisms that might drive the adoption of family allowances, there have been few systematic attempts to test them. Partial support for the compensation hypothesis can be found in recent contributions that include some form of family benefits in the analysis. The authors find evidence that the two world wars were a catalyst in the development of European welfare legislation (Obinger and Schmitt 2020). Furthermore, Schmitt (2020) argued that mass conscription during WW2 in French African colonies advanced the cause of extending social rights to groups previously excluded. In support of Schmitt's argument, previous research has shown a positive statistical association between the timing of the introduction of family benefits and a colonial link to France (Kangas 2012; Schmitt et al. 2015). Misra (1998, 2003) provides support of the redistribution hypothesis, showing that the working class and women's

movement were important factors leading to family allowance adoption in 18 industrialized countries. An empirical test of the population hypothesis in the literature is missing, however, an association between fertility levels and the development of certain family benefits has been suggested (Ferrarini 2006).

Finally, recent scholarship in social policy diffusion has started to investigate the effect of state interdependencies on the introduction of early programs. Studying countries' colonial relationships, Schmitt et al. (2015) present evidence that French and British colonial links impacted the timing of adoption of family benefits. French colonial ties accelerated the timing of the introduction of family benefits, while British colonial ties slowed it down, even in the postcolonial era.

(c) *Workplace Childcare Regulation*

The public provision of care for children, especially those under three years old, was only weakly institutionalized in many countries until recently (O'Connor 1990). However, governments in the early twentieth century, as well as today, also utilized labor regulation to promote the availability of childcare for young children without having to step in as a provider themselves. Factory (or workplace) crèches or nurseries were an early institution catering to working mothers. While these have become less widespread in European countries after the second world war, factory crèches and nurseries remain a viable avenue for work-family reconciliation across the globe even today (Hein and Cassirer 2010).

There are multiple historical antecedents of factory crèche legislation. In Europe, there was the charitable provision of childcare, promoted by F. Marbeau in France, as well as early philanthropic endeavors by businessmen, such as R. Owen's experiments in workplace education in the factories of New Lanark, Scotland (Caroli 2019). These were driven, among other motives, by a shared concern for the health of newborn children, notably, the fear of rising infant mortality. At the time, they were the first institutions that did not provide care to the illegitimate children of the poorest of the poor, but responded to the needs of working mothers. State intervention was pioneered in France: While the

legislation passed in 1867 and 1897 only regulated crèches run as charitable institutions, government interest began to shift as young women entered the labor market. When female labor was needed in the production of ammunition during World War I, the French Act of the 5th of August 1917, prescribed the provision of nurseries to any establishment employing more than 100 women over 15 years old. It marked the first introduction of regulatory measures, obliging private employers to provide relatively extensive childcare arrangements in Europe (Burger 2012; Reynolds 1990). Even though—or perhaps because—it was only perceived as a "second-best" option by the left-wing socialists as well as the right-wing pronatalists, after the War, the factory crèche had become a highly visible and highly legitimate institution (Reynolds 1990).

This convergence of various political forces on the issue of infant mortality and female employment is also apparent in a wide array of countries, which adopted similar policies in the early twentieth century. Among these were the fascist regime in Italy (1925/1926) and the Soviet Union (1932) (Caroli 2019), but also the late-late-developing countries of the southern cone of Latin America: Chile (1917) and Argentina (1924) (Aguilar 2018; Casas and Herrera 2012).

However, the parallel adoption of workplace childcare regulations may also have been triggered by processes of diffusion. Caroli (2019) notes that the observation of French practices and models of childhood development helped foster the introduction of crèches in Italy and Russia, but also contends that national peculiarities shaped each country's unique institutionalization of the crèche. While the ILO was involved in devising standards for the employment of pregnant women and mothers from its foundation onwards, it was not until after the Second World War that it took on the issue of care in one of its recommendations (Maternity Protection Recommendation 95 in 1952; Workers with Family Responsibilities Convention 156 in 1981). However, the ILO never committed itself to the private provision of facilities, emphasizing the need for public financing, regulation, and clearly expressing preference for provisions outside of the workplace.

Since no systematic comparative study of workplace childcare regulation has been undertaken so far, and the available historical literature

refrains from generalizing, our analysis of legislation remains mostly explorative.

Data and Methods

The models in this chapter closely follow the framework laid out in the introduction, which is based on the work by Valente (1995). The dates of adoption were generated using newly collected data of legislative activity in three main areas of family policy: paid leave, child benefits, and public care (Son et al. 2020; Tonelli et al. 2021). Figures 7.1, 7.2, and 7.3 show the spatial distribution of adoptions over time. To accommodate the field of family policy, two key independent variables are added. The *total fertility rate* (Gapminder 2020) reflects demographic pressures, which have often been hypothesized to trigger state intervention in families. Given that we are concerned only with the first adoptions of policies, higher fertility rates should decrease the hazard of adopting a family policy, especially family allowances. The *membership in the ILO* captures an additional type of international linkage, which may facilitate (vertical) diffusion. Since the ILO's advocacy for family allowances and workplace

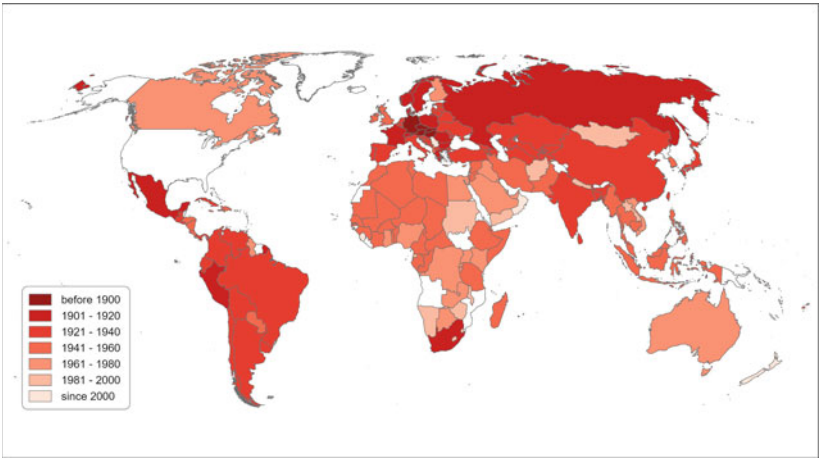


Fig. 7.1 The introduction of paid maternity leave

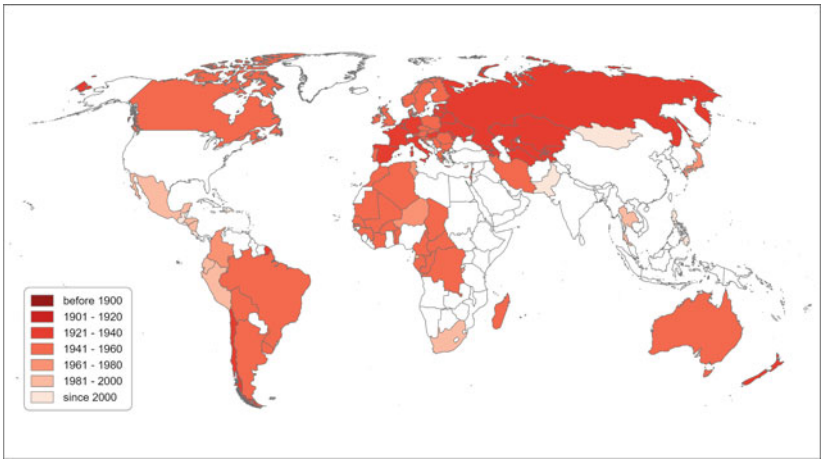


Fig. 7.2 The introduction of child benefits

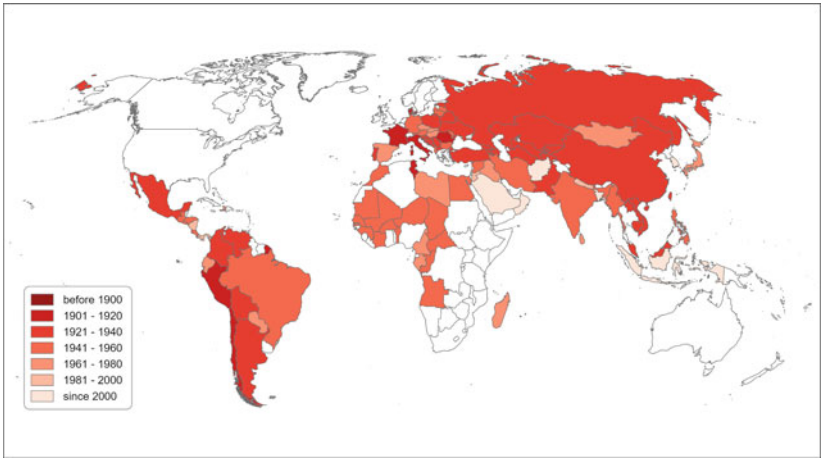


Fig. 7.3 The introduction of workplace childcare regulation

childcare regulations has been limited in scope and its commitment to paid maternity leave has been renewed three times over the past hundred years, we expect ILO membership to exert the strongest influence on the adoption of paid maternity leave.

Regarding the other control variables, we do not hypothesize specific effects for two reasons. First, family policy does not possess any elective affinity to *democracy*. Pronatalist family policy developed in fascist regimes in the context of "authoritarian, largely anti-modern but also nationalist familism" and as a project of the democratic left as a part of social reform (Therborn 2004). Second, we expect policy diffusion prompted less developed countries to adopt family policies at an early stage of economic development, therefore nullifying the effect of the degree of *economic development* (Collier and Messick 1975).

(a) ***Maternity Leave***

Table 7.1 shows the results of five discrete-time logistic hazard models, first displaying each type of network exposure separately then combined, thus capturing different potential avenues of diffusion. While we find little surprise in our results, three observations warrant elaboration. First, the stepwise-time-function is highly significant across models. While we refrain from its substantive interpretation in terms of hazard ratios, this indicates that unobserved heterogeneity matters. Substantively, this is taken to imply that global trends, which affect all countries, influence the likelihood of the adoption of maternity leave. While these may in part consist of concurrent changes in domestic conditions, it may also reflect truly global developments, such as the intensification of global trade or the promulgation of global norms by the ILO and other standard-setting bodies, i.e., the activities of global "rationalized others" as hypothesized by world society theory (Meyer et al. 1997). Second, and in line with expectations, we find that membership in the ILO increases the hazard of introducing paid maternity leave by 65–82%. The strength of this effect is especially noteworthy when compared to the weak effects exerted by networks. The high legitimacy of the standards and expertise by the ILO in the field of maternity protection easily crowds out possible other channels of diffusion. The colonial network stands out as an exception but can easily be attributed to the outsize influence of the French Overseas Labor Code (1952) and the impact of the USSR on its republics. Finally, the effect of democracy defies expectations of standard welfare state theory but squares easily with the fact that the socialist countries in Eastern

Table 7.1 Global network diffusion of paid maternity leave

	Dependent variable: introduction of paid maternity leave				
	(1)	(2)	(3)	(4)	(5)
1880–1904	0.002***	0.002***	0.002***	0.002***	0.002***
1905–1929	0.009***	0.011***	0.012***	0.009***	0.010***
1930–1954	0.009***	0.009***	0.014***	0.009***	0.008***
1955–1979	0.007***	0.008***	0.014***	0.007***	0.006***
1980–2010	0.003***	0.004***	0.007***	0.003***	0.003***
Trade existed (=1, else = 0)	3.817***	4.795***	3.683***	3.798***	4.484***
GDP per capita (log)	1.521***	1.543***	1.514***	1.508***	1.531***
Democratization	0.909+	0.868**	0.910+	0.916	0.872**
ILO Membership	1.807*	1.756*	1.819**	1.778*	1.652*
Total fertility rate	1.058	0.973	1.038	1.059	0.978
Cultural spheres netw.: w. exposure (lag 1 year)	2.796				0.384
Colonies netw.: exposure		3.098***			3.189***
Trade net: w. exposure (lag 1 year)			1.266		1.221
Spatial proximity netw.: w. exposure (lag 1 year)				2.756	3.321
Observations	10,663	10,817	10,663	10,663	10,663
Log Likelihood	−665.988	−653.125	−666.374	−665.744	−651.903
Akaike Inf. Crit	1353.977	1328.25	1354.748	1353.489	1331.806

Note $^{+}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Europe combined political disenfranchisement with the establishment of generous social rights, especially for women workers.

(b) *Child Benefits*

Child benefits diffused rapidly between the end of the First World War (WW1) and the 1960s. Most countries that introduced a child benefit scheme did so within this time frame. After the 1960s, new introductions

followed slowly, with only a marginal acceleration in the 1990s, occurring due to the diffusion of conditional cash transfers in middle-income countries.

The models in Table 7.2 are again noteworthy in that the stepwise-time-function indicates strong time dependence across all specifications. Given that the larger coefficients can be found during the interwar and postwar periods, these can carefully be interpreted as giving some indirect support to the compensation hypothesis.

Most of the other covariates included in the models are not statistically significant, but given that the sample includes a large share of the population of reference, it seems relevant to discuss at least the estimated

Table 7.2 Global network diffusion of child benefits

	Dependent variable: introduction of child benefits			
	(1)	(2)	(3)	(4)
1880–1904	0.000	0.000	0.000	0.000
1905–1929	0.001***	0.002***	0.001***	0.001***
1930–1954	0.043**	0.040**	0.030**	0.027**
1955–1979	0.062+	0.027**	0.022**	0.019**
1980–2010	0.017**	0.006***	0.006***	0.005***
Trade existed (=1, else = 0)	1.522	1.844	1.314	1.511
GDP per capita (log)	1.154	1.124	1.161	1.145
Democratization	1.008	0.985	1.001	0.996
Total fertility rate	0.666***	0.617***	0.683***	0.690***
ILO Membership	0.718	0.638	0.728	0.749
Cultural spheres netw.: w. exposure (lag 1 year)	0.165			
Colonies netw.: exposure		2.378**		
Trade net: w. exposure (lag 1 year)			1.576	
Spatial proximity netw.: w. exposure				2.287
Observations	15,124	15,278	15,124	15,124
Log Likelihood	−464.908	−461.165	−465.858	−465.743
Akaike Inf. Crit	951.816	944.33	953.717	953.486

Note $^{+}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

effects. Existing states are 52–84% more likely to adopt child benefits, however, the estimates are not significant across specifications. GDP per capita is positively associated with child benefit introduction. In line with our expectations, the level of democracy does not seem to affect the hazard of introducing child benefits. The only statistically significant association is the number of births per woman. A one-unit increase in the total fertility rate reduces the hazard of introducing a child benefit by 31–38%. This strongly supports the population hypothesis. Finally, even though the ILO called for the introduction of family benefits in its 1952 Social Security Convention (C102), being a member of the ILO is associated with a lower probability of introducing child benefits, but the association is again not significant.

Network exposures are similar to other policy fields displaying stable effects for the colonial and trade networks and highly unstable effects for the cultural spheres, which are highly sensitive to the inclusion of spatial proximity. Interestingly, the higher the number of countries in a country cultural network introducing child benefits (model 1), the lower the hazard of introducing child benefits. The association is, however, not significant. The colonial network exerts a high degree of influence on the adoption of child benefits, increasing the hazard by 138% on its own. Again, this is likely driven by the impact of the French Overseas Labour Code and the adoption of child benefits in the USSR. Similarly, the hazard of introducing child benefits is more than doubled when neighboring countries do so. We refrain from reporting the results of the model including all networks, because VIFs of the cultural and spatial network in this model are 13.8 and 9.7, respectively, suggesting that the coefficients are inflated due to multicollinearity.

(c) *Workplace Childcare Regulation*

We finally turn to the set of models dealing with the adoption of workplace childcare legislation (Table 7.3). These follow the already familiar pattern of exhibiting significant time dependency, limited national effects, and the identification of a single powerful diffusion channel. We again discuss each in turn.

Table 7.3 Global network diffusion of workplace childcare

	Dependent variable: introduction of workplace childcare legislation				
	(1)	(2)	(3)	(4)	(5)
1880–1904	0.0002***	0.0002***	0.0003***	0.0003***	0.0002***
1905–1929	0.003***	0.002***	0.005***	0.005***	0.002***
1930–1954	0.004***	0.002***	0.007***	0.009***	0.003***
1955–1979	0.002***	0.001***	0.004***	0.006***	0.002***
1980–2010	0.001***	0.0005***	0.001***	0.002***	0.001***
Trade existed (=1, else = 0)	1.703	2.021+	1.709	1.865+	1.932+
GDP per capita (log)	1.059	1.103	1.045	1.048	1.134
Democratization	0.835**	0.850**	0.823***	0.819***	0.853**
Total fertilty rate	0.938	0.941	0.920	0.903	0.915
ILO membership	3.377**	3.524**	3.390**	3.643**	3.807**
Cultural spheres netw.: w. exposure (lag 1 year)	8.418				6.672
Colonies netw.: w. exposure		3.204***			3.303***
Trade net: w. exposure (lag 1 year)			1.549		1.475
Spatial proximity netw.: w. exposure (lag 1 year)				0.576	0.057*
Observations	14,219	14,373	14,219	14,219	14,219
Log Likelihood	−519.634	−508.983	−520.417	−520.548	−507.071
Akaike Inf. Crit	1061.268	1039.965	1062.834	1063.095	1042.142

Note $^{+}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Just as in the models of other types of family policy, we observe a peak of global legislative activity in the interwar and immediate post-World War II period, which is reflected by the coefficients of the stepwise-time-function. Again, this may be due to common trends, but common shocks originating in global culture and politics must also be considered.

As is the case with the other family policies, the presence of trade (data), which de facto acts as a proxy of political independence, exerts some influence. Independent countries with their own national trade accounts are between 70 and 93% more likely to adopt legislation mandating the private provision of factory nurseries than dependent territories. Regarding GDP per capita, our expectation of an unclear effect is substantiated by the coefficient as well as its lack of significance. We also find, contrary to expectations, a small but significant effect of regime type with more democratic regimes exhibiting a decreased hazard—by around 15–20%—of adopting workplace childcare. While the fertility rate remains insignificant across models, it points in the expected direction decreasing the hazard of adoption by around 10% for each child per woman. Given that the ILO has only made limited strides into the field of factory childcare until recently, the strong effect of the ILO on workplace childcare legislation—more than tripling the hazard of adoption—is surprising.

Turning to network exposition, we again find a strong effect of colonial ties on adoption, increasing hazards threefold. Similarly to the other policies, we suspect that this is largely driven by the influence of the USSR and the activity of the French colonial administration, which enacted three pieces of legislation that included nursery clauses across the French possessions: French Indochina in 1927, French Equatorial, and West Africa, both in 1954. The cultural spheres network proves to be the most unstable as well as the hardest to attach substantive meaning to, yet again. While its effects point in the expected direction in models 1 and 5, its inclusion substantially alters the effect of spatial proximity. We suspect that cultural similarity does not function as a channel of diffusion wholesale, but only for a much more restricted set of countries or cultures.

Discussion and Conclusion

Overall, the results of the discrete-time-hazard models are in some ways sobering: they did little to identify channels of diffusion, whose presence was not established by earlier research. However, as a test of existing

hypotheses, they broaden our understanding by expanding the historical, spatial, and policy-specific reach of previous analysis.

Paid maternity leave, as the earliest form of decommodification as well as defamilization for women, is confirmed as a showcase for the agenda-setting power of the ILO. Regardless of the ratification of specific conventions, continuous advocacy and technical assistance have urged more and more countries to fulfill the standards laid out in its conventions.

Family allowances or child benefits, while also being advocated for by the ILO, seem, except for the 'imperial diffusion' (Kuhlmann et al. 2020) through the *Code du Travail*, to be driven more by domestic concerns in comparison. Our models provide the first test of the hypothesis that low fertility levels spur the adoption of benefits toward families with children, i.e., the emergence of family policy as population policy. However, this should not be interpreted as a purely domestic mechanism, since fears of population decline were often understood in terms of comparative military strength (Barrett and Frank 1999). The relational and transnational dimension of the "population hypothesis" is captured through the inclusion of the stepwise-time-function in our models: Coefficients reflect effects relative to a period's baseline hazard, which in turn implies that cross-country trends in fertility are captured by the stepwise-time-function. Hence, what is modeled is the effect of fertility relative to the general level during each time period, which provides a very rough proxy for processes of mutual observation.

Finally, we analyzed the adoption of workplace childcare regulations, which have not been analyzed within comparative social policy literature so far. Due to data limitations, we could not test the most prominent hypothesis found in the historical literature which connects the adoption of factory nurseries to infant mortality. We do, however, find that colonial networks, with the French again standing out, exert an outsized influence on adoption.

Across models, we find instructive patterns of time-dependency. We have refrained from giving much substantive weight to these since in itself "time is not a theoretical variable" (Beck 2010). Yet, mentions of

trends, phases, and periods that cut across cases and signify deep structural shifts in the global environment of policymaking permeate the family policy (Daly and Ferragina 2018) and the broader welfare state literature (Nullmeier and Kaufmann 2010). Scholars in the tradition of world-society theory go so far as to assign explanatory primacy to the global level, treating national legislative activity as mere emanations of a "transnational event" (Abbott and DeViney 1992). The baseline hazards of all three policies indicate that the early twentieth century (paid maternity leave) and the interwar years (child benefits and workplace childcare) are decisive periods with heightened legislative activity across varied national contexts. This suggests linking the emergence of family policy to industrialization, but also to the ideational and political shifts of the early twentieth century.

While the inclusion of networks is clearly a step forward in modeling linkages between countries, their construction raises challenges and needs to be informed by theory and historical case knowledge. The colonial network, in particular, suffers from treating linkages alike, whose effects differ systematically not only between colonizing/imperial powers but also within colonial empires according to previous research (Lange 2004; Schmitt 2015). Results of auxiliary regressions with non-normalized exposure (see appendix) display more pronounced effects of colonial/imperial ties, indicating that family policies spread via direct imperial linkages rather than colonial legacies.

Despite these caveats, our analysis has highlighted that some of the main hypotheses identified by earlier research, which looked at a much smaller set of cases and a much shorter time frame, do in fact "travel" across time and space. It has also shown that colonial and other imperial relations play an important role in the origin of family policies outside of Western Europe. While these analyzes do not say anything explicitly about the trajectories that followed introduction, earlier research demonstrated that family policy in Europe developed through a process of "layering" (Daly and Ferragina 2018), suggesting that the identified drivers have lasting effects which will shape family policy across the world for decades to come.

Appendix

See Tables 7.4, 7.5, and 7.6.

Table 7.4 Global network diffusion of paid maternity leave (alternative)

	Dependent variable: introduction of paid maternity leave	
	(1)	(2)
1880–1904	0.002***	0.002***
1905–1929	0.010***	0.009***
1930–1954	0.009***	0.006***
1955–1979	0.007***	0.004***
1980–2010	0.005***	0.002***
Trade existed (=1, else = 0)	6.280***	5.444***
GDP per capita (log)	1.523***	1.530***
Democratization	0.902*	0.899*
ILO membership	1.929**	1.699*
Total fertility rate	0.948	0.968
Cultural spheres netw.: w. exposure (lag 1 year)		2.394
Non normalized colonies netw.: exposure	3.247***	3.333***
Trade net: w. exposure (lag 1 year)		1.502
Spatial proximity netw.: w. exposure (lag 1 year)		0.938
Observations	10,817	10,663
Log Likelihood	−649.41	−648.054
Akaike Inf. Crit	1320.82	1324.109

Note $^{+}p < 0.1$; $*p < 0.05$; $**p < 0.01$; $***p < 0.001$

Table 7.5 Global network diffusion of child benefits (alternative)

	Dependent variable: introduction of child benefits
	(1)
1880–1904	0.000
1905–1929	0.001***
1930–1954	0.020***
1955–1979	0.012***
1980–2010	0.003***
Trade existed (=1, else = 0)	3.373*

(continued)

Table 7.5 (continued)

	Dependent variable: introduction of child benefits (1)
GDP per capita (log)	1.156^{+}
Democratization	0.974
Total fertility rate	0.598***
ILO Membership	0.754
Cultural spheres netw.: w. exposure (lag 1 year)	
Non normalized colonies netw.: exposure	4.300***
Trade net: w. exposure (lag 1 year)	
Spatial proximity netw.: w. exposure	
Observations	15,278
Log Likelihood	−453.297
Akaike Inf. Crit	928.594

Note $^{+}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Table 7.6 Global network diffusion of workplace childcare (alternative)

	Dependent variable: Introduction of Workplace Childcare Legislation	
	(1)	(2)
1880–1904	0.0004***	0.0003***
1905–1929	0.004***	0.004***
1930–1954	0.005***	0.004***
1955–1979	0.003***	0.002***
1980–2010	0.001***	0.001***
Trade existed (=1, else = 0)	2.412*	2.163^{+}
GDP per capita (log)	1.027	1.060
Democratization	0.845**	0.855*
Total fertility rate	0.870*	0.867^{+}
ILO membership	3.700**	3.835**
Cultural spheres netw.: w. exposure (lag 1 year)		14.448
Non normalized colonies netw.: exposure	4.517***	4.491***
Trade net: w. exposure (lag 1 year)		1.749
Spatial proximity netw.: w. exposure (lag 1 year)		0.077^{+}
Observations	14,373	14,219
Log Likelihood	−503.793	−501.746
Akaike Inf. Crit	1029.587	1031.491

Note $^{+}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Literature

Abbott, Andrew, and Stanley DeViney. 1992. "The Welfare State as Transnational Event: Evidence from Sequences of Policy Adoption." *Social Science History* 16 (2): 245–274.

Aguilar, Paula Lucía. 2018. "Motherhood at the Heart of Labour Regulation: Argentina, 1907–1941." In *Women's ILO: Transnational Networks, Global Labour Standards and Gender Equity, 1919 to Present*, edited by E. Boris, D. Hoehtker, and S. Zimmermann, 255–275. Leiden, Boston: Brill.

Barrett, Deborah, and David John Frank. 1999. "Population Control for National Development: From World Discourse to National Policies." In *International Nongovernmental Organizations Since 1875*, J. Boli and G. M. Thomas, 198–221. Stanford, CA: Stanford University Press.

Beck, Nathaniel. 2010. "Time Is Not a Theoretical Variable." *Political Analysis* 18 (3): 293–294.

Berkovitch, Nitza. 1999. *From Motherhood to Citizenship*. Baltimore: Johns Hopkins University Press.

Biagi, Bruno. 1937. "Family Allowances in Italy." *International Labor Review* 35: 457.

Blofield, M., and J. Martinez Franzoni. 2015. "Maternalism, Co-responsibility, and Social Equity: A Typology of Work-Family Policies." *Social Politics* 22 (1): 38–59.

Blofield, Merike, and Michael Touchton. 2020. "Moving Away from Maternalism? The Politics of Parental Leave Reforms in Latin America." *Comparative Politics* 53 (1): 1–27.

Boris, Eileen. 2019. *Making the Woman Worker: Precarious Labor and the Fight for Global Standards, 1919–2019.* Oxford: Oxford University Press.

Breul, Frank R. 1953. "The Genesis of Family Allowances in Canada." *Social Service Review* 27 (3): 269–280.

Burger, Kaspar. 2012. "A Social History of Ideas Pertaining to Childcare in France and in the United States." *Journal of Social History* 45 (4): 1005–1025.

Campbell, R. M. 1927. "Family Allowances in New Zealand." *The Economic Journal* 37 (147): 369–383.

Caroli, Dorena. 2019. "Day Nurseries in Europe in the Nineteenth and Twentieth Centuries: The Challenge of the Transnational Approach." In *the Transnational in the History of Education: Concepts and Perspectives*, E.

Fuchs and E. Roldán Vera. 1st ed., 69–100. Cham: Springer International Publishing.
Casas, Lidia, and Tania Herrera. 2012. "Maternity Protection vs. Maternity Rights for Working Women in Chile: A Historical Review." *Reproductive Health Matters* 20 (40): 139–147.
Collier, David, and Richard E. Messick. 1975. "Prerequisites Versus Diffusion: Testing Alternative Explanations of Social Security Adoption." *American Political Science Review* 69 (4): 1299–1315.
Cooper, Frederick. 1996. *Decolonization and African Society.* Cambridge: Cambridge University Press.
Cousins, Mel. 1999. "The Introduction of Children's Allowances in Ireland 1939–1944." *Irish Economic and Social History* 26 (1): 35–53.
Daly, Mary, and Emanuele Ferragina. 2018. "Family Policy in High-Income Countries: Five Decades of Development." *Journal of European Social Policy* 28 (3): 255–270.
Darwin, Leonard. 1925. "Family Allowances." *The Eugenics Review* 16 (4): 276.
Doublet, Jacques. 1948. "Family Allowances in France." *Population Studies* 2 (2): 219–239.
Esping-Andersen, Gøsta. 1990. *The Three Worlds of Welfare Capitalism.* Princeton: Princeton University Press.
Ferrarini, Tommy. 2006. *Families, States and Labour Markets: Institutions, Causes and Consequences of Family Policy in Post-War Welfare States.* Celtenham, UK: Edward Elgar Publishing.
Filgueira, Fernando, and Cecilia Rossel. 2020. "Family Policies Across the Globe." In *The Palgrave Handbook of Family Policy*, R. Nieuwenhuis and W. van Lancker, 219–247. Cham: Springer International Publishing.
Fleckenstein, Timo, and Soohyun Christine Lee. 2017. "The Politics of Investing in Families: Comparing Family Policy Expansion in Japan and South Korea." *Social Politics* 24 (1): 1–28.
Flora, Peter, and Arnold J. Heidenheimer. 1981. *The Development of Welfare States in Europe and America.* London: Transaction Books.
Gapminder. 2020. "Babies Per Woman (Total Fertility Rate) & GDP Per Capita in Constant PPP Dollars: Data." https://www.gapminder.org/data/.
Gauthier, Anne Hélène. 1996. *The State and the Family: A Comparative Analysis of Family Policies in Industrialized Countries.* Oxford: Oxford University Press.
Gille, Halvor. 1954. "Scandinavian Family Allowances Demographic Aspects." *Eugenics Quarterly* 1 (3): 182–190.

Hein, Catherine, and Naomi Cassirer. 2010. *Workplace Solutions for Childcare.* Geneva: International Labour Office.

Hobson, Barbara, and Marika Lindholm. 1997. "Collective Identities, Women's Power Resources, and the Making of Welfare States." *Theory and Society* 26 (4): 475–508.

Hoffner, Claire. 1935. "Compulsory Payment of Family Allowances in Belgium, France, and Italy." *International Labour Review* 32: 463.

Hoffner, Claire. 1940. "Recent Developments in Compulsory Systems of Family Allowances." *International Labour Review* 41: 337.

Htun, Mala, Francesca R. Jensenius, and Jami Nelson-Nuñez. 2019. "Gender-Discriminatory Laws and Women's Economic Agency." *Social Politics* 26 (2): 193–222.

Kangas, Olli E. 2012. "Testing Old Theories in New Surroundings: The Timing of First Social Security Laws in Africa." *International Social Security Review* 65 (1): 73–97.

Kitchen, Brigitte. 1981. "Wartime Social Reform: The Introduction of Family Allowances." *Canadian Journal of Social Work Education/Revue Canadienne d'Éducation en Service Social*: 29–54.

Koven, Seth, and Sonya Michel. 1990. "Womanly Duties: Maternalist Politics and the Origins of Welfare States in France, Germany, Great Britain, and the United States, 1880–1920." *The American Historical Review* 95 (4): 1076.

Kuhlmann, Johanna, Delia González de Reufels, Klaus Schlichte, and Frank Nullmeier. 2020. "How Social Policy Travels: A Refined Model of Diffusion." *Global Social Policy* 20 (1): 80–96.

Land, Hilary. 1985. "The Introduction of Family Allowances: An Act of Historic Justice?" In *Women and Social Policy*, Clare Ungerson, 9–29. London: Palgrave.

Lange, Matthew K. 2004. "British Colonial Legacies and Political Development." *World Development* 32 (6): 905–922.

Leitner, Sigrid. 2003. "Varieties of Familialism: The Caring Function of the Family in Comparative Perspective." *European Societies* 5 (4): 353–375.

Linos, Katerina. 2013. *The Democratic Foundations of Policy Diffusion.* Oxford: Oxford University Press.

Meyer, John W., John Boli, George M. Thomas, and Francisco O. Ramirez. 1997. "World Society and the Nation-State." *American Journal of Sociology* 103 (1): 144–181.

Misra, Joya. 1998. "Mothers or Workers? The Value of Women's Labor: Women and the Emergence of Family Allowance Policy." *Gender and Society* 12 (4): 376–399.

Misra, Joya. 2003. "Women as Agents in Welfare State Development: A Cross-National Analysis of Family Allowance Adoption." *Socio-Economic Review* 1 (2): 185–214.

Nullmeier, Frank, and Franz-Xaver Kaufmann. 2010. "Post-War Welfare State Development." In *the Oxford Handbook of the Welfare State*, F. G. Castles, S. Leibfried, J. Lewis, H. Obinger, and C. Pierson. Oxford: Oxford University Press.

Obinger, Herbert, and Carina Schmitt. 2020. "World War and Welfare Legislation in Western Countries." *Journal of European Social Policy* 30 (3): 261–274.

O'Connor, Sorca M. 1990. "Rationales for the Institutionalization of Programs for Young Children." *American Journal of Education* 98 (2): 114–146.

Orloff, Ann Shola. 1993. "Gender and the Social Rights of Citizenship: The Comparative Analysis of Gender Relations and Welfare States." *American Sociological Review* 58 (3): 303–328.

Rathbone, Eleanor Florence. 1940. *The Case for Family Allowances.* London: Penguin Books, Inc.

Reynolds, Siân. 1990. "Who Wanted the Crèches? Working Mothers and the Birth-Rate in France 1900–1950." *Continuity and Change* 5 (2): 173–197.

Sainsbury, Diane. 2001. "Gender and the Making of Welfare States: Norway and Sweden." *Social Politics* 8 (1): 111–142.

Saraceno, Chiara. 2011. "Childcare Needs and Childcare Policies: A Multidimensional Issue." *Current Sociology* 59 (1): 78–96.

Saraceno, Chiara. 2016. "Varieties of Familialism: Comparing Four Southern European and East Asian Welfare Regimes." *Journal of European Social Policy* 26 (4): 314–326.

Schmitt, Carina. 2015. "Social Security Development and the Colonial Legacy." *World Development* 70: 332–342.

Schmitt, Carina. 2020. "The Warfare–Welfare Nexus in French African Colonies in the Course of the First and Second World War." *Historical Social Research/Historische Sozialforschung* 45 (2) (172): 217–238.

Schmitt, Carina, Hanna Lierse, Herbert Obinger, and Laura Seelkopf. 2015. "The Global Emergence of Social Protection." *Politics & Society* 43 (4): 503–524.

Son, Keonhi, and Tobias Böger. 2021. "The Inclusiveness of Maternity Leave Rights Over 120 Years and Across 5 Continents." *Social Inclusion* 9 (2): 275–287.

Son, Keonhi, Tobias Böger, Simone Tonelli, Petra Buhr, Sonja Drobnič, and Johannes Huinink. 2020. "Codebook of Historical Database on Maternity

Leave (HDML)." SFB 1342 Technical Paper Series. https://www.socialpolicydynamics.de/crc-publications/crc-1342-technical-paper-series.
Therborn, Göran. 2004. *Between Sex and Power: Family in the World 1900–2000*. London: Routledge.
Tonelli, Simone, Tobias Böger, Keonhi Son, Petra Buhr, Sonja Drobnič, and Johannes Huinink. 2021. "Codebook of Historical Dataset of Child Benefit (HDCB)." SFB 1342 Technical Paper Series. https://www.socialpolicydynamics.de/crc-publications/crc-1342-technical-paper-series.
Valente, Thomas Q. 1995. "Network Models of the Diffusion of Innovations". New Jersey: Hampton.
Watson, Cicely. 1954a. "Population Policy in France: Family Allowances and Other Benefits II." Population Studies 8 (1): 46–73.
Watson, Cicely. 1954b. "Population Policy in France: Family Allowances and Other Benefits. I." *Population Studies* 7 (3): 263–286.
White, Linda A. 2020. "Do International Organizations Influence Domestic Policy Outcomes in OECD Countries?" In *the Palgrave Handbook of Family Policy*, R. Nieuwenhuis and W. van Lancker. 1st ed. 2020, 69–86. Basingstoke: Palgrave Macmillan.

8

From Geneva to the World? Global Network Diffusion of Antidiscrimination Legislation in Employment and Occupation: The ILO's C111

Jenny Hahs

Introduction[1]

Labor law, especially in its origins as an initially domestic domain, developed in the context of, and in exchange and reaction to, developments in economic markets that required labor to produce their respective goods. These disputes did not always include the discernment that related negotiation processes should be or had to be embedded in a social–political framework. Labor law initially developed as individual

[1]This chapter is a product of the research conducted in the Collaborative Research Center 1342 "Global Dynamics of Social Policy" at the University of Bremen. The center is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)—project number 374666841—SFB 1342.

J. Hahs (✉)
Collaborative Research Centre 1342 "Global Dynamics of Social Policy", University of Bremen, Bremen, Germany
e-mail: jenny.hahs@uni-bremen.de

M. Windzio et al. (eds.), *Networks and Geographies of Global Social Policy Diffusion*, Global Dynamics of Social Policy,
https://doi.org/10.1007/978-3-030-83403-6_8

law, which provided a contractual definition of rights and obligations within the framework of subordination between employee and employer. A collectivized understanding of the common interests and problems was a much later phenomenon and culminated in the emergence of collective labor law. It is no coincidence that the advent and heyday of collective labor law coincided with the nation-state-centered welfare state of the Golden Age of the 1960s and 1970s. It formed one of the dimensions of democratic self-determination based on national citizenship, which became a pillar in the interplay with the expansion of social welfare, of normative legitimacy, and of factual acceptance of democratic processes (Hurrelmann et al. 2007). Until today, the normative foundation and justification of either expansion and democratic legitimacy are the subject of constant renegotiation and renewal. However, these processes became increasingly decentralized and so power shifted to the international sphere—with a mixed summary to date in terms of advocacy, implementation, and effectiveness.

While the original idea of labor law was primarily the protection against economic disadvantages, impairments, and health hazards, it developed into a regulation of working life as a whole, mainly through the increasing involvement of collective actors and interest groups. In this process, the mutual integration with the prevailing social-political ideas began. In its historical development, labor law has thus not only experienced a horizontal differentiation but also a vertical one (Arthurs 2011, 21–22; Davidov 2011). Moreover, areas of regulation were now no longer only negotiated between national legislators (horizontal), but increasingly relocated to transnational and global contexts between states and under the organizational umbrella of international organizations (vertical).

Even if upheavals are on the horizon, the International Labour Organization (ILO) is still considered the central international organization for internationally agreed labor standards (Ebert 2015, 135; Helfer 2019) which must be implemented nationally. Its 102-year regulatory history has produced international labor standards that provide a comprehensive basis and framework for social policies. Their normative nature is not without controversy and has raised the question of the cultural foundations, assumptions, and (regional) ideas on which they are based, for

whom they are easier or more difficult to implement and comply with, and what function they thus have in international concertation. On the contrary, it has been argued that over the last decades the ILO were not in a monopolistic position anymore (Chen 2021) on labor standard-setting, since a growing body of these standards has been nested into transnational labor standards such as free trade agreements, investment arrangements, policy documents of international financial institutions, and social missions of multinational corporations.

These remarks are based on the assumption that prior to these recent developments, the ILO was the sovereign body in the field of international labor standards. And while territoriality as a fundamental principle of labor law is widely uncontested (Mundlak 2009), developments in the context of globalization have raised new regulatory needs and demands, resulting in concepts such as ex- or deterritorialized forms of labor law. One of the consequences has been the increased international concertation and the massive expansion of labor regulation at the international and global levels.[2]

The Discrimination (Employment and Occupation) Convention, 1958 (No. 111) (from now on referred to as C111) is particularly interesting in this context. The adoption of C111 marked the ILO's first legally binding endorsement of nondiscrimination and an early equal opportunity approach at work. Although considered to be premised upon "a traditional, formal-equality and formal-workplace vision of antidiscrimination law" (Sheppard 2015, 249), the convention marked a genuine new strand in international standard-setting in the post-World War II and Philadelphia Declaration time. As a classic regulatory instrument, it was elevated to the status of a core labor standard in 1998 in the course of the Declaration on Fundamental Principles and Rights at Work. These standards are not only subject to the usual ratification and national implementation procedures. Core labor standards apply universally to all members by virtue of their ILO membership. As a classic regulatory instrument at the international level, C111 thus

[2] For a concise overview of the expansion of ILO international labour standards after World War II, see Hahs (2021b).

retains the principle of territoriality (since the content of the regulations must be implemented nationally), while as a universal standard within the framework of the Declaration it becomes normatively valid in a deterritorializing manner.

The aim of this article is to first examine in principle *if network specificities have influenced the ratification of C111*. Like the other authors, I draw on the global network data that is used throughout this edited volume. These networks depict cultural similarity, colonial legacies, trade, and geographic proximity. Furthermore, the diffusion of international labor standards can have a homogenizing effect on national forms of labor regulation. However, there is also the question of the influence of already existing similarities between ratifying states. I will refer to this in a broader sense as, second, *the influence of the national legal homogeneity in light of the territoriality of labor law*. To map these national characteristics, I utilize a new national equality index that measures the de jure implementation status of national equality legislation. Further, the legal origin of a member, and the duration of membership in the ILO are considered.

While the general portfolio and history of ILO standards are now well studied, theory-based statistical analysis of their ratification history and diffusion along national characteristics are rare. To the author's knowledge, studying the ratifications of an ILO convention as interaction processes in a network is both a novelty and the methodological aim of this chapter. I thereby contribute to the existing body of literature on the diffusion and ratification of ILO labor standards by adding a large-scale quantitative assessment through network analysis.

The chapter is structured as follows: In section "State of the Art: Transnational Antidiscrimination Law as a Tool to Provide Spaces and Vehicles to Challenge Domestic Labor Law's Exclusion?", I situate C111 in the field of transnational antidiscrimination law and in its interaction with national law. In section "Theorizing Transnational Diffusion Processes of International Labor Standards", I discuss the state of the art in diffusion research of international labor rights, while in section "Data and Methods", I present the underlying data construction and analysis methodology. Section "Results" presents the results of the network analysis and section "Conclusion" concludes the chapter.

State of the Art: Transnational Antidiscrimination Law as a Tool to Provide Spaces and Vehicles to Challenge Domestic Labor Law's Exclusion?

The ILO's standard-setting function has produced a vast number of international labor standards. In essence, transnational labor law (TLL), according to Blackett and Trebilcock (2015, 4):

> has emerged to problematize and resist the direction of social regulation under globalization. Recognizing globalization's asymmetries, and identifying spaces for action, TLL operates within, between and beyond states to construct counter-hegemonic alternatives. The field critically encompasses actions beyond the state, to take into account the actions of transnational enterprises, labour federations, civil society and other actors. Moreover, TLL does not stop where national labour law begins: the two are deeply intertwined and challenge each other. TLL is a form of multilevel governance, including the international, the regional, the national, and the shop floor: its ability to address challenges of economic interdependency is similarly enmeshed with its ability to acknowledge and deal with complexity, diversity and asymmetries across time and space—amongst states, across uneven regional development, amongst vastly differently empowered institutions and actors. TLL holds no monopoly on either the rise of legal centrism through the prevalence of "rule of law" doctrines, or the expansion of pluralist, reflexive new governance methods. Its distinctiveness lies in its capacity to be counter-hegemonic and promote social justice.

Blackett and Trebilcock emphasize further that "law's normative character is indeterminate and must be the basis of continuous struggle for social justice, that is at the core of TLL's emergence" (Blackett and Trebilcock 2015, 4). Indetermination and its inherent struggle are thus the basis and the result of the world society's negotiation and agreement to develop the desired legal regulations, to endow them with binding force, and to implement them. As commonplace as it may sound at first, TLLs themselves are not a product of chance, nor is their dissemination (Chau et al. 2001; Baccini and Koenig-Archibugi 2014).

Universalization and the idea of equality were already conceived and named as fundamental and desirable in both the ILO Constitution of 1919 and in its Declaration of Philadelphia of 1944. However, they were only given concrete legal expression in two instruments in the post-war period: C100, with a clear reference to gender equality ("equal pay for work of equal value") and C111 (Hepple 2009, 129).

C111's core message is a universal idea of equal treatment and equal opportunities in employment and education, free from discriminatory practices based on race, color, sex, religion, political opinion, national extraction, or social origin. Although the convention directly referred to the globally universalizing aims of the Declaration of Philadelphia in its preamble, it retained, however, a Global North and formal employment-prone loophole in allowing that "other special measures designed to meet the particular requirements of persons who, for reasons such as sex, age, disablement, family responsibilities or social or cultural status, are generally recognized to require special protection or assistance, shall not be deemed to be discrimination" (Art. 5. Para. 2). Even though the introduction of C100 and C111 made great steps toward the de jure acceptance and regularization of women's work in particular (which had not been a matter of course until then), there was still no regulatory idea for the diverse forms that women's work brought with it. This was and still is especially true for informal and nonstandard forms of employment (NSFE), even though they represented the dominant labor practice in the Global South. There was also a lack of framing regulatory ideas for the equitable distribution of care work between the genders and accompanying public support structures. Although C111 created the basis for a future holistic social policy concept, major questions of adequate, concrete implementation and embedding remained unanswered. It should also be noted that Afro-Asian countries used the process around the adoption of C111 to make the hitherto still existent differences in regulatory practices of the colonial labor regime between regular, mainly European workers and indigenous laborers more visible and to also condemn the colonial powers (Maul et al. 2019, 239). This was another result of the segmented regulatory world of work along the lines of unequal working conditions for women and men, as well as

between colonial and noncolonial labor law regimes, which were also a corollary of ILO norm-setting at the time of C111's creation.

In 1998, C111 entered the canon of the core labor standards. The elimination of discrimination with respect to employment and occupation (and within that C111) became one of the four constitutional principles as outlined in the Declaration on Fundamental Principles and Rights at Work of 1998. This altered its status. It is a core principle of the ILO Constitution that members may adopt and ratify conventions freely and without coercion. In turn, the core labor standards were chosen because they embody rights that are considered fundamental in the ILO Constitution. Consequently, regardless of ratification and level of development, ILO members are constitutionally obliged to respect and promote them.[3]

As opposed to traditional labor law, which tries to focus on countering vertical inequality, C111 tackles horizontal inequality as part of antidiscrimination law (Sheppard 2015, 257):

> Anti-discrimination law was historically limited to remedying horizontal inequality linked to group-based exclusions and disadvantages based on discrete grounds, such as race, national or ethnic origin, sex, disability, sexual orientation or religion. In contrast, labor laws primarily concerned with remedying social inequality and poverty based on the vertical inequalities between workers and employers. Labor law, with its focus on collective bargaining and employment standards in the formal labor market, too often excluded the concerns of marginalized workers who also tend to be members of the social groups traditionally protected by anti-discrimination law.

By virtue of its conception, C111 had the potential to be a tool "to provide spaces and vehicles" to counter domestic labor law's exclusions.

Figure 8.1 shows the development of ratifications of C111 over time. Compared to the other diffusion processes in this volume, the ratifications of C111 are a more recent phenomenon. The Convention was

[3] The status of the Core Labour Standards also means a higher annual reporting cycle for each country that has not ratified one or more core conventions. For a comprehensive discussion of the systemic effect of the core labour standards on the ILO's international labour rights regime, see Alston (2004) and the reply of Langille (2005).

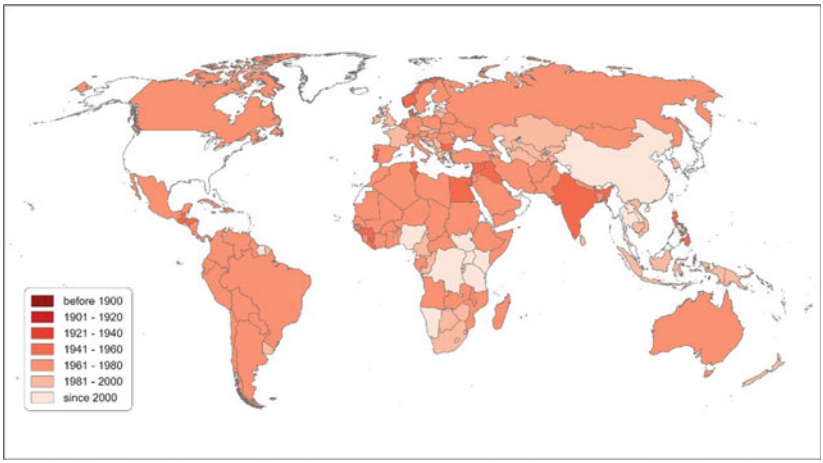


Fig. 8.1 Ratifications of discrimination (employment and occupation) convention, 1958 (No. 111)

adopted in 1958 and finally entered into force in 1960. The largest wave of ratifications took place between 1960 and 1980. This coincided with decolonization and the new or re-entry of numerous former, mainly African, colonies into the ILO, which also explains the large proportion of ratifications by countries in the Global South. Between 1981 and 2000, more sovereign members of the former Soviet Union and new members, especially from Asia, ratified. The third wave included mainly Central African and South Pacific countries, but also China. To date, 12 ILO members have not ratified the Convention.[4] Nevertheless, C111 is one of the best-ratified conventions in the ILO's regulatory portfolio.

With its regulatory scope, C111 paved the way for the UN's third generation of human rights: the International Convention on the Elimination of All Forms of Racial Discrimination (ICERD) and the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) were adopted in 1965 and 1979, respectively. It is often discussed to what extent the UN human rights conventions—to the

[4] These are: Brunei Darussalam, Cook Islands, Japan, Malaysia, Marshall Islands, Myanmar, Oman, Palau, Singapore, Tonga, Tuvalu, United States of America (International Labour Organization 2021).

detriment of the ILO's C111—became necessary as "true" universal antidiscrimination instruments for strongly overlapping areas of regulation, since this convention, despite its universalist claim, primarily addressed workers in formal employment.

Theorizing Transnational Diffusion Processes of International Labor Standards

The transnational diffusion of international labor standards has so far been surprisingly undertheorized. This is probably due to the predominantly qualitative-comparative empirical share of mostly country studies on the interplay of ILO standards and national legal developments. To the author's knowledge, no theorizing meta-studies have been done so far—probably because the academic debate on international labor standards is a complex interdisciplinary undertaking. It operates on the verge of organizational theory at the edge of international relations, organizational sociology, and political science as well as legal (history) approaches.

The interlinkage of the ILO's internal governance structures with its resulting standard-setting processes has so far been studied quantitative-comparatively and predominantly in the framework of power dependence theory (Landelius 1965), neofunctionalism (Haas 1962, 2008 [1964]), and rational choice (Boockmann 2001).

Extended borrowings can be made from approaches in the field of norm diffusion within international organizations (Park 2006) and transnational idea and policy diffusion (Gilardi 2013). Although a specialized field, theoretical approaches of the legal scholarship related to the interaction of the different levels of labor law (Davidov 2011) and the interaction of the different implementation systems of international labor standards (Leary 1982) have been elaborated for much longer and in greater depth, making them relevant as well.

The International Relations scholarship has contributed largely through constructivist insights (Finnemore and Sikkink 1998). Park (2006) builds on their previous work and links an organizational identity that goes beyond former rationalist nation-state interests and the

influence of intraorganizational norms that define appropriate behavior of actors within the international system and can thus explain norm diffusion success or failure. Her argument is hence that "the norms IOs espouse are the result not only of state power but of their socialization by non-state actors, and more specifically, by transnational advocacy networks" (Park 2006, 353). A more recent strand of post-functionalist research explains the structure of the policy portfolio of international organizations as a contingent functional and social outcome of the ongoing social negotiation processes of actors bargaining about the organizations' internal governance in light of a common social structural framework (Hooghe et al. 2019). The strength of both approaches resides in explaining the approval of seemingly counterintuitive policy decisions by members. This is the case, for example, when members ratify conventions that initially appear to be disadvantageous for them in terms of their status quo.

According to Gilardi (2013, 454), there exists a scholarly consensus that diffusion can be defined as a consequence of interdependence. He refers more specifically to the work of Simmons, Dobbin, and Garrett who declared that "[i]nternational policy diffusion occurs when government policy decisions in a given country are systematically conditioned by prior policy choices made in other countries" (Gilardi 2013, 454). In line with Elkins and Simmons' work, he adds that "the definition emphasizes diffusion as a process, as opposed to an outcome" and concludes that because of this, "diffusion is *not* equivalent to convergence. A significant increase in policy similarity across countries – a common definition of convergence […] – can, but need not, follow from diffusion. Even if it does, convergence characterizes the outcome of the process, but not the nature of the process itself" (Gilardi 2013, 454).

In drawing on his earlier work with Braun, he states that the underlying diffusion mechanisms are "systematic sets of statements that provide a plausible account of how policy choices in one country are systematically conditioned by prior policy choices made in other countries" (Gilardi 2013, 460). Furthermore, Gilardi subsumes that the scholarly consensus is that most mechanisms can be grouped into four broad categories, which the other authors of this book have also referred to: coercion, competition, learning, and emulation.

> Coercion is the imposition of a policy by powerful international organizations or countries; competition means that countries influence one another because they try to attract economic resources; learning means that the experience of other countries can supply useful information on the likely consequences of a policy; and emulation means that the normative and socially constructed characteristics of policies matter more than their objective consequences. (Gilardi 2013, 461)

The diffusion processes examined below are understood and analyzed in terms of emulation. Finnemore and Sikkink (1998) have argued that norm diffusion processes involve the mechanism of emulation. This occurs in a three-step process: norm emergence, norm cascade, and norm internalization. In the first phase of *norm emergence*, new rules of appropriate behavior are brought to the tableau by norm entrepreneurs and with the help of internal support of the organization. It takes a critical mass of states, about one-third of the potential adopters according to Finnemore and Sikkink (1998, 901), who have been successfully convinced to recognize the new norm and to advance the dynamic toward the stage of *norm cascade*. In this second phase, norms are promoted in a socialization process by rewarding conformity and punishing noncompliance. In this phase, the reaction of the international community to their behavior is increasingly important to the member states. This can have a sensitive influence on their domestic legitimation and power. With the establishment and consolidation of this influence from the second phase, the process of norm integration has entered its final phase: the *internalization stage*. The norms are then so profoundly accepted that they are now taken for granted as the only possible type of accepted behavior. Gilardi has added another interesting outcome of this process which Finnemore and Sikkink themselves only indirectly address, which is that the burden of proof shifts over time:

> In the early stages, it is the actors who wish to introduce women's suffrage, smoking bans, or any other policy who need to demonstrate that these policies are needed, appropriate, and politically feasible. As the norm dynamic unfolds, the burden shifts to actors who do not want the policy to be introduced, who need to work harder to make their case than those who support it. Because norm dynamics lead to a change in dominant

> norms, once the new norm has taken over or is about to do so (around the tipping point in the "norm cascade"), the new rules become orthodox and the old heterodox, which shifts the balance of power between proponents and opponents. In other words, late in the process it is opponents, and no longer proponents, who need to engage in 'norm contestation'. (Gilardi 2013, 467–468)

As was shown in the previous section, the evolution of C111 itself as well as the importance it was ascribed over time in the norm portfolio of the ILO is a perfect example of the three-stage emulation process of norm diffusion as presented by Finnemore and Sikkink.

Data and Methods

I attempt to explain the development of the ratifications of the ILO's C111 by using a discrete time logistic regression with network effects of networks of geographical distances, global trade, cultural spheres, and colonial legacies as well as by the mediating influences of covariates. The latter reflects national specifics such as the legal origin and degree of integration into the intraorganizational context through the duration of membership in the ILO. The specificity of the dependent variable ratification of the C111 requires methodological adjustments to the original diffusion model as outlined in Chapter 1. These adaptations are succinctly sketched out below. Nevertheless, the analysis follows in essence the methodology detailed in Chapter 1 and thus contributes comparable findings to those of my colleagues from the other social policy fields in this volume on the global diffusion of international labor rights.

The assumed diffusion mechanism of contagion, according to which the probability of encountering to meet an "infected" and thus of "infecting" oneself increases over time as a result of increasing contact between subjects, also makes sense in principle for the study of ratification diffusion within international organizations. However, in comparison to the study of intergovernmental diffusion processes, this means an *additional level of interaction* (see Fig. 8.2), with its own intervening possibilities of contagion which must be methodologically considered and taken into

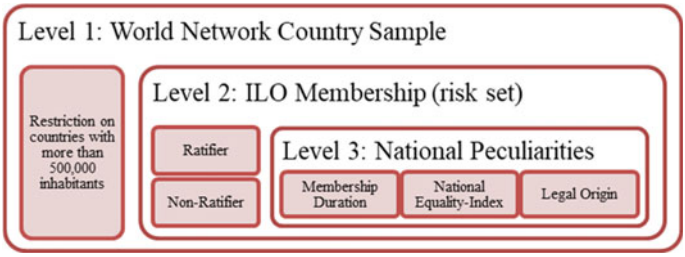


Fig. 8.2 Level of analysis and risk set identification in network analysis of intraorganizational ratification behavior

account. On the one hand, a merely limited subgroup of all states that are together members of the organization (here the ILO) meet and can only infect each other within this framework. This is because ratifications of ILO conventions are only possible for and therefore restricted to ILO members. On the other hand, members of an organization are also members of the "world sample" of all existing and interacting states, thus in the original sense of the conceptualization of the networks used here according to Chapter 1. *Organization members are not decoupled from world events outside the organization, but at the same time additionally determined by intra-organizational contagion processes.* This means, for example, that colonialist influences can be given additional weight, as they can exert an effect both outside and inside the organization. Trade relations can also amplify existing extraorganizational imbalances within the organization. This is particularly the case when hegemonic extra-organizational inequality structures find a renewed reflection in the intraorganizational ones. However, these organizational structures also have the potential, at least in principle, to counter external hegemonic structures with alternatives through intraorganizational organization.

Conceptualizing this is not without risk of getting lost in the complexity of the processes that affect decision-making and opinion formation within organizations. For this reason, the covariates proposed here cover the three possible intervening levels with reference to individual member states only. They are not intended to control for individual country involvement in intraorganizational decision-making processes, which could also boost or mitigate ratification aspirations.

In order to test for the influence of national characteristics, the legal origin and a newly created national de jure equality index were taken into account. To check on a generalized level for mediating influences of organizational membership, the duration of membership in the ILO was considered. Aspirations toward a respective regulation norm, which could motivate states to ratify conventions faster, are only taken into account insofar as the duration of membership can be understood as a proxy for a basic acceptance of the general organizational idea behind the ILO itself.

The original country sample of the networks presented by Mossig et al. (2021, in this volume) also has consequences for the sample of ILO members examined here. Of the 164 countries in the original risk set, three have never been members of the ILO: Bhutan, South Sudan, and Taiwan. They are therefore excluded in principle from the risk set, resulting in a total of 161 countries. The period covered spans from 1880 to 2010, meaning ratifications that took place after 2010 are not taken into account. This does not affect a lot of ratifications, thus the data is right censored. Another *restriction* of the networks weighs more heavily: the exclusion of states with less than 500,000 inhabitants from the networks. Especially in the last decades of ILO membership development, it is precisely and predominantly these states that have become new members. These members are therefore also not part of the risk set in the study presented here. Since this mainly concerns island states, the findings here are not relevant for them and there remains a residual risk that their influence is systematically underestimated. Further studies are needed on this. A total of 112 ILO members are thus included in the analysis.

C111 comes with a twofold determined temporality of its own compared to the other diffusion processes in this volume. The convention was adopted by the International Labour Conference in 1958 and entered into force in 1960, after the first two mandatory ratifications were registered. The analysis presented here therefore essentially refers to the period from 1958 to 2010. Furthermore, the time intervals with which time dependency as a result of unobserved heterogeneity in the piecewise constant step function is to be controlled were therefore adapted. Although they are oriented toward intraorganizationally important epochs, these are often connected with extra-organizational events.

Table 8.1 gives an overview of the main ILO milestones and (UN) historical turning points relevant for the chosen periods which were taken into account for the analysis. The selection is based on the assumption that both key ILO declarations on the core issues of the Convention and relevant UN global political developments had an influence on the ratifications in the designated periods.

The data on the *national ratification dates* of C111 was taken from the new History of ILO Instruments Database (HILODB, Hahs 2021a), which will be published soon. A convention creates legal obligations qua ratification for the ratifying member. According to Article 19, 5(d) of the ILO Constitution, these are to "take such action as may be necessary to make effective the provisions" of a ratified Convention.

Table 8.1 Periodization alongside ILO milestones and (UN) historical turning points

Periodization	ILO milestones	(UN) historical turning points
1958–1968	Post-period of Declaration of Philadelphia (Re-)admission of Soviet Union	Independence of African states (1960) Birth of Non-Aligned Movement (1961)
1969–1979	Declaration of Equality of Opportunity and Treatment for Women Workers (1975)	International Convention on the Elimination of All Forms of Racial Discrimination (ICERD) (in force 1969) First World Conference on Women (Mexico City, 1975)
1980–1998	Declaration on Fundamental Principles and Rights at Work (1998)	Second, Third and Fourth World Conference on Women (Copenhagen 1980, Nairobi 1985, Beijing 1995) Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) (in force 1981) "Washington Consensus" Dissolution of Soviet Union
1999–2010	Declaration on Social Justice for a Fair Globalization (2008)	CEDAW Optional Protocol (1999) Global financial crisis (2008)

Source International Labour Organization (2009, 03.02.2021); own representation

This applies to both de jure and de facto implementation and transfer into national practice—such as court decisions, arbitration awards, or collective agreements alongside national laws.

The *membership duration* of the countries considered was calculated on the basis of data provided by the International Labour Organization (2020). It measures the duration of a country's membership in the ILO at time t and is consequently a relative measure of the maturity of membership. I follow the results of Boockmann (2001) and assume that older, more "experienced" members are more susceptible to rapid self-induced ratification, while "younger" members become infected later after several contacts with those already infected.

I also control for the *legal origin* of a member country. La Porta et al. (2008, 287) classified countries' legal systems based on the assumption that law and legal systems became transmitted as "bits of information" through channels such as trade, conquest, colonization, missionary work, migration, etc., from one country to another. Typically, legal transplantation took place between a few mother countries and the rest of the world. Drawing on the ongoing discussion in the legal scholarship, they distinguish between two main legal traditions (common law and civil law) and fine-tune their analysis to also cover subtraditions within civil law (French, German, socialist, and Scandinavian). According to Ahlering and Deakin (2005, 881–882), the influence of legal origin on the labor market is indirect:

> […] it is mediated through the practice of regulation, or 'regulatory style.' If a system has adopted a particular regulatory approach in one area, it is more likely to do so in another. In addition, the marginal cost of adopting the laws of the parent system are lower than attempting to begin anew with new methods and procedures. Thus 'path dependence in the legal and regulatory styles emerges as an efficient adaptation to the previously transplanted legal infrastructure' (Botero et al. 2004: 1346). Although no reference is made here to the concept of institutional complementarities, the same basic idea seems to be at work.

Chau et al. (2001, 129–130) subsume that the legal origin of a country can have an influence on the natural labor standard "(i) directly via the

ideological bias it imposes on the relative importance of the state vis-à-vis the individual, and (ii) indirectly via its influence on the performance of government to protect the rights of individuals and government efficiency." Therefore, institutional factors, which in turn are determined by the legal tradition of a country, could delay ratifications, even though one could have expected it based on the economic constitution of a country. It is not possible to address the full range of criticisms of the transferability of legal origin to labor rights within the scope of this chapter. As a representative example, Ahlering and Deakin's (2005, 900–901) critique weighs particularly heavily, pointing to the sometimes large historical overlaps of regulatory logics in labor law and criticizing allegedly clear ideational path dependencies. It is largely on the basis of this critique that I have chosen to examine the relevance of legal origins for equality regulation.

Finally, the *national equality index* maps the annually averaged de jure strength value of national antidiscrimination law equivalent to the different dimensions of the ILO's international antidiscrimination convention C111. It is calculated from six indicators of the WoL dataset[5] (Dingeldey et al. 2021), which quantify the dimensions of antidiscrimination considered in the C111. The values vary between 1 ("legally guaranteed") and 0 ("no such guarantee exist"), with downward gradations indicating limited guarantees, weaker recommendations, or the non-inclusion and non-regulation of subareas of the antidiscrimination idea according to C111.

To sum up, the lack of available global diffusion data so far has severely limited the empirical and theoretical development of diffusion network effects as well as the development of a more profound understanding of contagion mechanisms in the field of transnational norm

[5] The indicators used are: e01 ("The law provides for equal opportunities for men and women in terms of access to employment"), e02 ("The law provides for regulation of positive discrimination [affirmative action/special measures] in order to overcome labour discrimination of women"), e03 ("The law provides for equal opportunities concerning ethnicity/race in terms of access to employment"), e04 ("The law provides for regulation of positive discrimination [affirmative action/special measures] in order to overcome labour discrimination of groups disadvantaged in terms of ethnic/racial backgrounds"), e06 ("The law provides for equal opportunities for men and women in terms of working conditions"), and e07 ("The law provides for equal opportunities in terms of working conditions concerning ethnicity/race").

diffusion. Despite all its limitations, the analysis presented here is the most comprehensive to date with regard to the influence of networks on the ratification of an ILO convention (here: C111).

Results

Figure 8.3 shows the development of the share of ratifiers per year and the cumulative ratifiers. Overall, a continuous and balanced increase can be seen. It is also clear that half of the ratifiers had already ratified by 1973. Visible increases occur once again in the early 1990s and from 1998 onwards. The critical mass of one-third of all ratifiers, i.e., the critical tipping point for the start of the norm cascade phase according to Finnemore and Sikkink (see section "Theorizing Transnational Diffusion Processes of International Labor Standards"), was reached within the first six years after the adoption of the convention. Since the number of ratifiers subsequently increases at an almost constant rate, no special effect can be observed here—at least descriptively—of the norm cascade

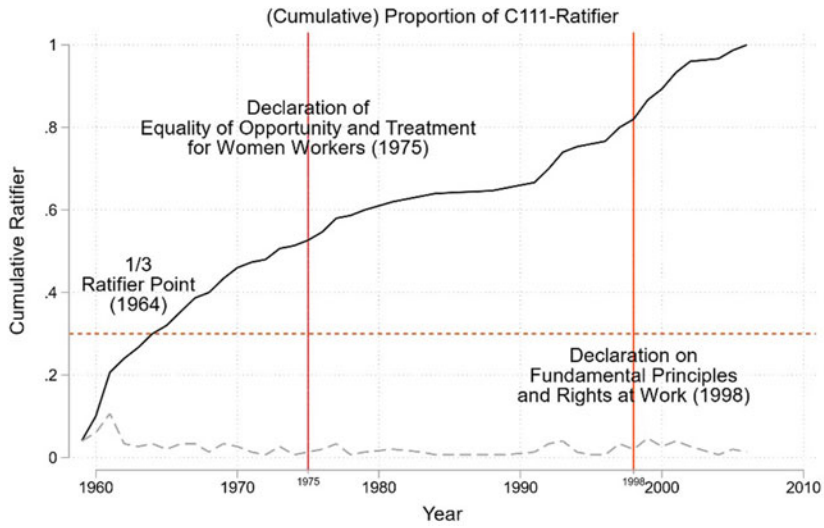


Fig. 8.3 Ratifier and cumulative ratifier proportion of C111, 1959–2010 (N = 150)

phase which then theoretically follows and which rewards compliance and sanctions deviation. Attention should be drawn to the huge increase around 1960, lifting the share of ratifiers to 0.2. Since there was a large increase in membership in 1960, especially from former African colonies, this can be interpreted as an indicator that the underlying regulatory agenda of the convention was in the interest of both the new and the old members. I have pointed out before that through blaming, shaming, and condemnation, the process of drafting and adopting C111 was also used by hitherto still existing colonies to draw attention to the fact that, to their detriment, there existed a "colonial labor code" in parallel to the regular canon of ILO standards, the latter of which applied to other workers but excluded them.

The leaps around 1990 and 1998 then point to the two remaining phases. The second phase, the norm cascade phase, got a push in the early 1990s after a long period of continuous growth. As Table 8.1 shows several key elements such as declarations, world conferences on women, and the establishment of UN human rights conventions communicated the contents and ideas of the C111 to the world as a global social consensus and thus strengthened and promoted them.

Ratification was no longer only possible in principle nor solely the idea of a norm entrepreneur elite; instead, it became socially desirable in the structure of the international organization and increasingly binding by means of soft law. The internalization stage was reached at the latest by 1998, when the C111 was elevated to the status of a core labor convention and thus considered fundamentally binding in its regulatory idea for all ILO members, even without individual ratification. Antidiscrimination can now be regarded as something that is "taken for granted." Moreover, what Gilardi called the reversal of the burden of justification has occurred: states must now officially justify why they do not adequately implement antidiscrimination rights.

A look at the share of ratifications of members classified according to the World Bank income categories in Table 8.2 also provides interesting insights. Boockmann's (2001) econometric analysis of the duration between non-ratification and ratification of conventions hinged primarily on the implied costs of implementation for nonindustrialized countries. In industrialized countries, on the other hand, the preferences

Table 8.2 Ratifier categories (according to adopter categorization of Rogers 2003) by World Bank Income Group

World BankIncome Group	Adopter categorization according to Rogers (2003 [1962])					
	Early adopters	Early majority	Laggards	Late majority	Non-adopters	Total
High income	9	16	8	10	4	47
	19.15	34.04	17.02	21.28	8.51	100.00
	25.00	30.77	21.62	40.00	28.57	28.66
Upper middle income	10	14	12	5	3	44
	22.73	31.82	27.27	11.36	6.82	100.00
	27.78	26.92	32.43	20.00	21.43	26.83
Lower middle income	10	10	14	6	5	45
	22.22	22.22	31.11	13.33	11.11	100.00
	27.78	19.23	37.84	24.00	35.71	27.44
Low income	7	12	3	4	2	28
	25.00	42.86	10.71	14.29	7.14	100.00
	19.44	23.08	8.11	16.00	14.29	17.07
Total	36	52	37	25	14	164
	21.95	31.71	22.56	15.24	8.54	100.00
	100.00	100.00	100.00	100.00	100.00	100.00

Note First row has *frequencies*, second row has *row percentages*, and third row has *column percentages*
Source Own calculations

of central governmental actors were more decisive for the duration of ratification. But the cost argument cannot be easily accepted for C111.

The majority of low-income countries belong to the early ratifiers or the early majority. Surprisingly, almost half of the ILO's high-income members (46.81%) are Laggards, Late Majority, or Non-Adopters. Vosko (2010) has comprehensively reviewed the long road that has been taken in the departure from the standard Western-oriented male-breadwinner employment relationship. It can only be assumed at this point that these effects are also reflected in the ratification behavior of the mainly Western-dominated high-income countries. Further research on this is needed elsewhere.

Table 8.3 shows the result of the discrete-time logistic hazard estimations in hazard ratios. Ratios larger than 1 can be interpreted as a positive relationship, while estimations between 0 and 1 indicate a

Table 8.3 Global network diffusion of antidiscrimination legislation in employment and occupation. Discrete-time logistic hazard model of ratifications of ILO C111 ($N = 161/112$)

	Ratification of C111			
	(1)	(2)	(3)	(4)
Rate t(0–10)	0.076^{+}	0.079^{+}	0.062^{+}	0.088
Rate t(11–20)	0.050*	0.053*	0.035*	0.061^{+}
Rate t(21–40)	0.038*	0.041*	0.025*	0.052^{+}
Rate t(41–52)	0.134	0.159	0.066	0.259
Trade existed (=1, else = 0)	0.954	1.097	1.061	0.669
GDP per capita/10,000 USD	0.997	1.008	1.011	1.007
Democratization	1.029	1.044	1.028	1.029
Cultural spheres netw.: w. exposure (lag 1 year)	0.160	0.179	0.165	0.187
Colonies netw.: exposure	1.770*	1.744*	1.929*	1.172
Trade netw: w. exposure (lag 1 year)	0.207	0.240	0.149	0.444
Spatial proximity netw.: w. exposure	21.037*	18.987**	45.682	22.585^{+}
Duration membership in ILO		0.989^{+}		0.983^{+}
National equality index (WOL)				1.838
Legal origin (Socialist)				0.00000***
Legal origin (Scandinavian)				6.076*
Legal origin (FR)				2.073*
Legal origin (UK)				0.653
Legal origin (GER)				Ref
Observations	2506	2506	1795	1795
Log Likelihood	−530.235	−527.417	−361.698	−345.784
Akaike Inf. Crit	1082.471	1078.834	745.397	725.568

Note $^{+}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

negative relationship. The hazard ratios for the networks represent the odds of a member country ratifying C111 given the exposure through the network in question to countries that had already ratified C111. All models were calculated twice: Model 1 and Model 2 cover all 161 countries in the network sample for which data on legal origin and the national equality index were available. Models 3 and 4 refer to the smaller

risk set of ILO members for which the same data were available. Thus, pure network effects could be examined (Models 1 and 2) and their significance compared with the results of the pure ILO sample (Models 3 and 4).

The assumptions from the descriptive observation with regard to the temporal development of ratifications are basically confirmed. Considering all baseline hazard rates together, there is an overall indication of a decreasing rate over time because these rates become smaller across time periods. But as interpreting time effects in these models is unusual, we will not go further into this. It is interesting, however, that a look at the other control variables shows that neither GDP per capita nor the democratization index is significant in any of the models. They do not play a relevant role in the diffusion process of the ratifications of C111. The fact that the cultural spheres network is not significant either fits the assumption that the convention was universally ratified by the most diverse member states. Overall, none of the networks examined have a significant influence across all models. Even the positively significant influence by the colonial legacies network on exposure becomes insignificant as soon as national covariates such as legal origin or the national equality index are included.[6] Only the spatial proximity network has a very high positive effect, which unexpectedly becomes insignificant when we restrict the network to only include ILO members for which data on national implementation of equality rights were also available. This is another strong piece of evidence that mainly national characteristics of the member countries explain the ratification behavior. Further, Mossig et al. (2021, in this volume) have already pointed out that geography should not be considered directly as a stand-alone effect but always in combination with other linked indicators. Only when either duration membership in the ILO, legal origin, the national equality index, or all national covariates together are taken into account (Models 2 and 4) does the exposure through the proximity network acquire its significant positive and strong influence. At the same time, the analysis of the

[6] In addition, all calculations were also checked with a non-normalized colony network. Here, the value for the proximity network becomes slightly larger, but overall no significant differences can be found based on the different modeling of the colony network. The non-normalized regression results are in the Appendix.

national covariates is very insightful. For example, the country-specific national equality index is not significantly positive in the models when accounting for legal origin. The surprising result is that the national de jure status of national equality laws is not relevant for the exposure for ratification of C111. In principle, this speaks for the universal character of the convention, which should motivate countries to support the ideas of C111 through ratification, regardless of the level of development and implementation of equivalent standards at the national level. However, it contradicts the common narrative that countries ratify conventions primarily when the implementation costs for them are particularly low because they would not have to make major changes or adaptations to national laws, for example.

The strong effect of legal origins is unexpected. The reference category for the values shown were countries with German legal origins. Only a few countries in total belong to the Socialist legal origin and all of them in the sample have not ratified the convention, which explains the massive significant negative value for them. It is thus a methodological effect. The significant negative value for countries with UK/Common Law legal origin stands out in particular but is not significant. In contrast, the positively significant values for French and Scandinavian legal origin, both renowned homelands of early equality efforts and institutionalization, are unsurprising. It should also be remembered at this point that de jure data formed the basis of the analysis. These are and were not always congruent with the de facto situation. The probability of C111 compared to the probability of members with German legal origin is thus particularly high in countries with French legal origin and Scandinavian legal origin.

The duration membership in ILO shows a relatively small negative effect (close to 1). This indicates that if members do not adopt shortly after entry into ILO the chances of ratifying the convention later are reduced. Another explanation could be that older members are slower in ratifying—which was shown already in Table 8.2. This could therefore be a consequence of the norm cascade phase or even the internalization stage according to Finnemore and Sikkink: newer members need to prove themselves and since it has become part of the global norm to ratify C111, newer members never have a chance to NOT ratify.

The results update and confirm previous research. Chau et al. (2001) did not find any significant peer effects on the probability of ratification for C111. Nevertheless, they also identified the legal system as a relevant factor in the likelihood of ratification. While they considered this to be the only factor, the present analysis now shows that regional proximity and the duration of ILO membership are also relevant for the probability of ratification. Schmitt et al. (2015) reported strong empirical support for the existence of regional diffusion processes in relation to social protection and the introduction of social security programs. The probability that a country introduced a social security program increased if another country in the same geographical region had already adopted such a scheme. At the same time, they found a clear influence of ILO membership on adoption. Third, colonial dummies indicated clear effects that colonial heritage was important for consolidation. These last two effects cannot be confirmed for the probability of adopting the C111 antidiscrimination convention. Membership even has delaying effects on the ratification. And effects of colonial legacy network are not robust and significant across models to exert consolidating effects.

While for Chau the probability of ratification increases with time, this observation cannot be confirmed by the different networks. On the contrary, the controlled time periods showed a negative effect. The low impact of network effects further confirms Sheppard's (2015) legal analysis and assessment that C111 was open enough for countries at different stages of their membership to ratify national levels of antidiscrimination standards.

Conclusion

This paper tested the influence of four networks on the diffusion of ratifications of C111 of the ILO. It was found that, with the exception of the geographical proximity network, the networks examined here do not play a significant role as a pipeline for diffusion. At the same time, the significance of the geographical proximity network can only be meaningfully interpreted in conjunction with other, in this case national, factors. The already weak influence of the colonial network also vanishes as soon as the national legal origin of the countries is included in the model.

Despite legal origin, however, there is a proximity effect of the networks for which diffusion processes could be demonstrated, though the mechanism of this cannot be shown here. Further in-depth research is needed at this point.

The influence of ILO membership slows down the effect of ratification more than it supports it. Surprisingly, the influence of the national de jure status of antidiscrimination rights is completely irrelevant. This supports a decoupling of transnational and national regulation in the field of antidiscrimination rights and should be further investigated in terms of the de-territorialization of labor law. Referring to the question posed in the title of my contribution, this could indicate an initial but cautious "Yes, possibly from Geneva to the world." To this end, it will also be relevant to quantitatively analyze the interaction of C111 and the UN human rights conventions ICERD and CEDAW—although the descriptive analysis for the two relevant periods after adoption indicates little remarkable increase in ILO C111 ratifications. Further analysis should also take into account spillover effects of the EU key directives in gender equality and nondiscrimination. This concerns questions of learning processes, for example between institutions with overlapping membership.

Overall, it must also be noted that domestic factors are mainly relevant for the likelihood of ratifying C111. However, diffusion mechanisms other than these are also conceivable, which could be revealed by, for example, further inclusion of states with populations below 500,000 inhabitants and expansion through historically deep data across all different networks.

Further work on the topic should for example consider the interaction effects of colonial legacy and legal origin in transnational antidiscrimination law. The strong negative effect of common law legal origin on the likelihood of ratification needs to be addressed in more depth. Similarly, it would be worthwhile to theorize the additional pipeline of IO membership alluded to in the article and then methodologically incorporate it into the model, for example, in the form of the UN, the ILO and the EU as networks in their own right. This would also come closest to the claim of examining diffusion not only in the form of convergence but also as a process of interaction.

Appendix

See Tables 8.4 and 8.5.

Table 8.4 Ratifier categories (according to adopter categorization of Rogers 2003) by legal origin

Legal origin	Adopter categorization according to Rogers (2003 [1962])					
	Early adopters	Early majority	Laggards	Late majority	Non-adopters	Total
Socialist	0	0	0	0	1	1
	0.00	0.00	0.00	0.00	100.00	100.00
	0.00	0.00	0.00	0.00	7.14	0.61
Scandinavian	3	1	0	0	0	4
	75.00	25.00	0.00	0.00	0.00	100.00
	8.33	1.92	0.00	0.00	0.00	2.44
French	13	28	9	10	0	60
	21.67	46.67	15.00	16.67	0.00	100.00
	36.11	53.85	24.32	40.00	0.00	36.59
UK/Common law	4	6	13	2	4	29
	13.79	20.69	44.83	6.90	13.79	100.00
	11.11	11.54	35.14	8.00	28.57	17.68
German	6	2	3	6	1	18
	33.33	11.11	16.67	33.33	5.56	100.00
	16.67	3.85	8.11	24.00	7.14	10.98
	10	15	12	7	8	52
	19.23	28.85	23.08	13.46	15.38	100.00
	27.78	28.85	32.43	28.00	57.14	31.71
Total	36	52	37	25	14	164
	21.95	31.71	22.56	15.24	8.54	100.00
	100.00	100.00	100.00	100.00	100.00	100.00

Note First row has *frequencies*; second row has *row percentages*, and third row has *column percentages*
Source Own calculations

Table 8.5 Global network diffusion of antidiscrimination legislation in employment and occupation. Discrete-time logistic hazard model of ratifications of ILO C111 ($N = 161/112$), non-normalized colonial network

	Ratification of C111			
	(1)	(2)	(3)	(4)
Rate *t*(0–10)	0.073^{+}	0.076^{+}	0.061^{+}	0.094
Rate *t*(11–20)	0.046*	0.050*	0.032*	0.072
Rate *t*(21–40)	0.035*	0.039*	0.022*	0.066
Rate *t*(41–52)	0.132	0.163	0.067	0.354
Trade existed (=1, else = 0)	0.953	1.091	1.036	0.683
GDP per capita/10000 USD	0.986	0.996	1.010	0.995
Democratization	1.033	1.042	1.030	1.023
Cultural spheres netw.: w. exposure (lag 1 year)	0.210	0.197	0.237	0.126
Non-normalized, colonies netw.: exposure	1.921*	1.680^{+}	1.944	0.691
Trade net: w. exposure (lag 1 year)	0.253	0.290	0.187	0.553
Spatial proximity netw.: w. exposure	18.061*	18.571**	37.189	31.808^{+}
Duration membership in ILO		0.991		0.980*
Natlonal equality index (WOL)				1.997
Legal origin (Socialist)				0.00000***
Legal origin (Scandinavic)				7.412**
Legal origin (FR)				2.089*
Legal origin (UK)				0.597
Legal origin (GER)				Ref
Observations	2506	2506	1795	1795
Log Likelihood	−530.947	−528.913	−362.996	−345.617
Akaike Inf. Crit	1083.894	1081.826	747.992	725.235

Note $^{+}p < 0.1$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Literature

Ahlering, Beth A., and Simon Deakin. 2005. *Labour Regulation, Corporate Governance and Legal Origin: A Case of Institutional Complementarity?* University of Cambridge Centre for Business Research Working Paper No. 312, ECGI—Law Working Paper No. 72/2006. Brussels: ECGI.

Alston, Philip. 2004. "'Core Labour Standards' and the Transformation of the International Labour Rights Regime." *European Journal of International Law* 15 (3): 457–521.

Arthurs, Harry. 2011. "Labour Law After Labour." In *The Idea of Labour Law*, edited by Brian Langille and Guy Davidov, 13–29. Oxford, New York: Oxford University Press.

Baccini, Leonardo, and Mathias Koenig-Archibugi. 2014. "Why Do States Commit to International Labor Standards? Interdependent Ratification of Core ILO Conventions, 1948–2009." *World Politics* 66 (3): 446–490.

Blackett, Adelle, and Anne Trebilcock. 2015. "Conceptualizing Transnational Labour Law." In *Research Handbook on Transnational Labour Law*, edited by Adelle Blackett and Anne Trebilcock, 3–31. Cheltenham: Elgar.

Boockmann, Bernhard. 2001. "The Ratification of ILO Conventions: A Hazard Rate Analysis." *Economics and Politics* 13 (3): 281–309.

Chau, Nancy H., Ravi Kanbur, Ann Harrison, and Peter Morici. 2001. "The Adoption of International Labor Standards Conventions: Who, When, and Why?" *Brookings Trade Forum*, 113–156.

Chen, Yifeng. 2021. "Proliferation of Transnational Labour Standards: The Role of the ILO." In *International Labour Organization and Global Social Governance*, edited by Tarja Halonen and Ulla Liukkunen, 97–121. Cham: Springer International Publishing.

Davidov, Guy. 2011. "Re-matching Labour Laws with Their Purpose." In *The Idea of Labour Law*, edited by Brian Langille and Guy Davidov, 79–189. Oxford: Oxford University Press.

Dingeldey, Irene, Heiner Fechner, Jean-Yves Gerlitz, Jenny Hahs, and Ulrich Mückenberger. 2021. "Worlds of Labour: Introducing the Standard-Setting, Privileging and Equalising Typology as a Measure of Legal Segmentation in Labour Law." *Industrial Law Journal*, dwab016. https://doi.org/10.1093/indlaw/dwab016.

Ebert, Franz Christian. 2015. "International Financial Institutions' Approaches to Labour Law: The Case of the International Monetary Fund." In *Research Handbook on Transnational Labour Law*, edited by Adelle Blackett and Anne Trebilcock, 124–137. Cheltenham: Elgar.

Finnemore, Martha, and Kathryn Sikkink. 1998. "International Norm Dynamics and Political Change." *International Organization* 52 (4): 887–917.

Gilardi, Fabrizio. 2013. "Transnational Diffusion: Norms, Ideas, and Policies." In *Handbook of International Relations*, edited by Walter Carlsnaes, Thomas Risse, and Beth Simmons, 453–477. London: Sage.

Haas, Ernst B. 1962. "System and Process in the International Labor Organization: A Statistical Afterthought." *World Politics* 14 (2): 322–352.

Haas, Ernst B. 2008 [1964]. *Beyond the Nation-State: Functionalism and International Organization*. Colchester: ECPR Press.

Hahs, Jenny. 2021a. Codebook of History of ILO Instruments Database (HILODB). SFB 1342 Technical Paper Series. Bremen: SFB1342.

Hahs, Jenny. 2021b. "The ILO beyond Philadelphia." In *International Impacts of Social Policy: Short Histories in a Global Perspective*, edited by Frank Nullmeier, Delia González de Reufels, and Herbert Obinger. London: Palgrave Macmillan.

Helfer, Laurence R. 2019. "The ILO at 100: Institutional Innovation in an Era of Populism." *AJIL Unbound* 113: 396–401.

Hepple, Bob. 2009. "Equality at Work." In *The Transformation of Labour Law in Europe: A Comparative Study of 15 Countries, 1945–2004*, edited by Bob A. Hepple and Bruno Veneziani, 129–164. Oxford: Hart.

Hooghe, Liesbet, Tobias Lenz, and Gary Marks. 2019. *A Theory of International Organization*. Oxford: Oxford University Press.

Hurrelmann, Achim, Stephan Leibfried, Kerstin Martens, and Peter Mayer. 2007. "The Golden-Age Nation State and Its Transformation: A Framework for Analysis." In *Transforming the Golden-Age Nation State*, edited by Achim Hurrelmann Hurrelmann, Stephan Leibfried, Kerstin Martens, and Peter Mayer, 1–23. Basingstoke: Palgrave Macmillan.

International Labour Organization. 2009. *Women's Empowerment: 90 Years of ILO Action!* Last accessed March 8, 2021. https://www.ilo.org/gender/Events/Campaign2008-2009/WCMS_104905/lang--en/index.htm.

International Labour Organization. 2020. *NORMLEX. Information System on International Labour Standards. Country Profiles.* Last accessed May 6, 2020. https://www.ilo.org/dyn/normlex/en/f?p=1000:11003:0.

International Labour Organization. 2021. *NORMLEX. Ratifications of ILO conventions: Ratifications by Convention.* Last accessed February 14, 2021. http://www.ilo.org/dyn/normlex/de/f?p=NORMLEXPUB:11300:::NO:11300:P11300_INSTRUMENT_ID:312256.

International Labour Organization. 03.02.2021. *Timeline (Century Project—ILO's History Project).* Last accessed March 8, 2021. https://www.ilo.org/century/history/timelines/lang--en/index.htm.

La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2008. "The Economic Consequences of Legal Origins." *Journal of Economic Literature* 46 (2): 285–332.

Landelius, Torsten. 1965. *Workers, Employers and Governments: A Comparative Study of Delegations and Groups at the International Labour Conference 1919–1964.* Stockholm.

Langille, Brian A. 2005. "Core Labour Rights—The True Story (Reply to Alston)." *European Journal of International Law* 16 (3): 409–437.

Leary, Virginia A. 1982. *International Labour Conventions and National Law: the Effectiveness of the Automatic Incorporation of Treaties in National Legal Systems*. The Hague: Nijhoff.

Maul, Daniel Roger, Luca Puddu, and Hakeem Ibikunle Tijani. 2019. "The International Labour Organization." In *General Labour History of Africa. Workers, Employers and Governments, 20th–21st Centuries*, edited by Stefano Bellucci and Andreas Eckert, 223–264. Suffolk: Boydell & Brewer.

Mossig, Ivo, Michael Windzio, Fabian Besche-Truthe, and Helen Seitzer. 2021. "Networks of Global Social Policy Diffusion: The Effects of Culture, Economy, Colonial Legacies, and Geographic Proximity." In *Networks and Geographies of Global Social Policy Diffusion: Culture, Economy and Colonial Legacies*, edited by Michael Windzio, Ivo Mossig, Fabian Besche-Truthe, and Helen Seitzer, introductory chapter of this volume. Cham: Palgrave Macmillan.

Mundlak, Guy. 2009. "De-territorializing Labor Law." *Law & Ethics of Human Rights* 3 (2): 189–222.

Park, Susan. 2006. "Theorizing Norm Diffusion Within International Organizations." *International Politics* 43 (3): 342–361.

Rogers, Everett M. 2003 [1962]. *Diffusion of Innovations*. New York: Free Press.

Schmitt, Carina, Hanna Lierse, Herbert Obinger, and Laura Seelkopf. 2015. "The Global Emergence of Social Protection: Explaining Social Security Legislation 1820–2013." *Politics and Society* 43 (4): 503–524.

Sheppard, Colleen. 2015. "Inclusive Equality and New Approaches to Discrimination in Transnational Labour Law." In *Research Handbook on Transnational Labour Law*, edited by Adelle Blackett and Anne Trebilcock, 247–259. Cheltenham: Elgar.

Vosko, Leah F. 2010. *Managing the Margins: Gender, Citizenship, and the International Regulation of Precarious Employment*. Oxford: Oxford University Press.

9

The Diffusion of Workplace Antidiscrimination Regulations for the LGBTQ+ Community

Helen Seitzer

Introduction[1]

Today's media are flooded with news: Millennials (born 1980–1990) are the "gayest generation" in human history (Allen 2017). In 2020, it was estimated that 4.5% of the US population identifies as LGBTQ+ (Lesbian, Gay, Bi-, Transsexual, Queer, and other) (The Williams Institute 2020). The public confusion over acronyms and pronouns goes so far that people ironically label the LGBTQ+ community "alphabet mafia" on social media platforms (Alphabet Mafia 2020). Gender-neutral

[1]This chapter is a product of the research conducted in the Collaborative Research Center "Global Dynamics of Social Policy" at the University of Bremen. The center is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)—project number 374666841—SFB 1342.

H. Seitzer (✉)
SOCIUM, University of Bremen, Bremen, Germany
e-mail: seitzer@uni-bremen.de

M. Windzio et al. (eds.), *Networks and Geographies of Global Social Policy Diffusion*, Global Dynamics of Social Policy,
https://doi.org/10.1007/978-3-030-83403-6_9

language was implemented by the US government (Aldridge 2021), while at the same time, 54 countries were still criminalizing same-sex relationships in 2019.[2] Despite the rising global visibility and acceptance of people breaking with binary gender stereotypes, sexual preferences, and the traditional 'nuclear family' constellations, there is still a large gap when it comes to integration of people from the LGBTQ+ community into everyday society.[3] The community is not only facing difficulties in their private lives, but also unfair treatment and discrimination in the workplace. In 2017, over 20% of Americans who identify as part of the LGBTQ+ community, reported to have been discriminated against in the workplace during the job application process. Other common issues include missing out on promotions, not receiving equal pay, verbal abuse, and mistreatment through the courts. These discriminatory practices nearly double if multiple disadvantages intersect, such as ethnicity or socioeconomic background (Casey et al. 2019). To ensure that all people, regardless of their sexual preferences, can participate equally and discrimination-free in the labor market, some states have resorted to including the LGBTQ+ community in workplace antidiscrimination policies. However, this movement is a newer topic on states' agendas and is progressing rather slowly, in addition, it is rarely discussed on the international stage. While some states such as France, have introduced antidiscrimination policies on the basis of gender already in 1985, others are still hesitant. This chapter asks if transnational networks are contributing to the diffusion of antidiscrimination policies for the LGBTQ+ community by adding transnational pressure to inspire policy adoption, or if this policy type is more dependent on local conditions.

For supporters of the LGBTQ+ community the need for political action is undisputable. Adversaries, however, question, why the state should get involved in such a private matter. This question leads to the discussion of a welfare states' responsibilities. According to the Universal

[2] Own coding.

[3] In this chapter, the term "community" refers to people of the LGBTQ+ community, not only non-conforming regarding their own gender identity but also regarding their sexual orientation. Due to lack of data, the included legal regulations do not include relationships breaking with the status of a nuclear (2-parent) family or include multiple consenting adults (polyamory). In addition, these regulations do not specifically mention transgender or transsexual people, but the theoretical framing does include this group as well.

Declaration of Human Rights (UDHR) (UN General Assembly 1948), the state has the responsibility to ensure, among other things, every persons' security, safety, and freedom, regardless of origin, race, sex or religion. This includes, as many activists of the gay rights movement claim (Velasco 2018), the freedom to choose one's partner regardless of gender. The International Covenant on Economic, Social and Cultural Rights (ICESCR) (UN General Assembly 1966), signed by 171 countries, goes even further by declaring, that a state's responsibility includes ensuring the right to be recognized "without discrimination of any kind as to race, color, sex, language, religion, political or other opinion, national or social origin, property, birth or other status" (Article 2.2). Given the global acceptance of these sets of definitions and responsibilities, regulations ensuring the safety, well-being, and non-discrimination of the LGBTQ+ community should therefore be seen as a constitutive part of states' welfare responsibilities, along with ensuring equal opportunities and economic security. Ensuring a safe, discrimination-free workplace is important for the livelihood of individuals and the community. Multiple institutions such as the International Labor Organization (ILO) are concerned with fostering the implementation of such policies across the globe.

However, the reality of rights and protections for the LGBTQ+ community looks very different. While the acceptance of LGBTQ+ persons is slowly rising, the implementation of equal rights for couples of the same gender as well as other family constellations aside from the nuclear 2-parent-1-child household is still very low. The implementation of protection laws is equally low in prevalence and similarly new, just as marriage or civil union laws, as Fig. 9.1 shows. This chapter therefore explores how global and local conditions such as countries' interdependencies and national cultural values influence the diffusion of workplace antidiscrimination regulations for the LGBTQ+ community.

Setting up a Timeline

To put the adoption of antidiscrimination regulations as analyzed in this chapter into perspective, it is helpful to set up a timeline of how

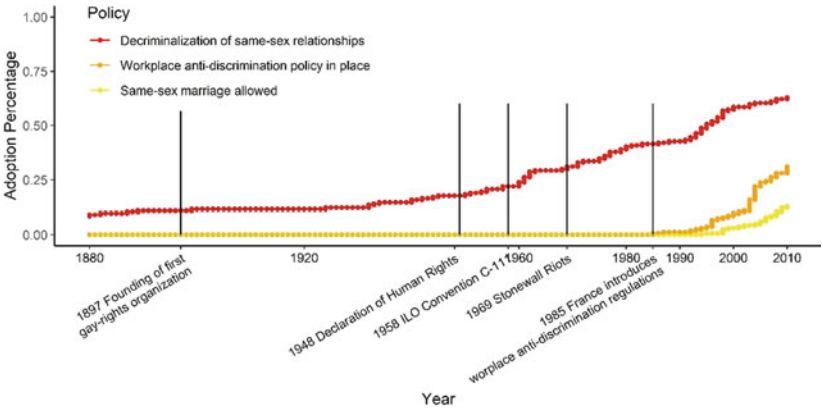


Fig. 9.1 Cumulative adoption rates for LGBTQ+ rights and important dates

LGBTQ+ issues progressed internationally over the years from local gay rights organizations to internationally celebrated pride. This exploration already contains clues about the results of this chapters' analyzes. This timeline not only includes important events leading up to the implementation of antidiscrimination policies, but also discusses the progression from criminalizing same-sex relationships to their acceptance in society as a *prerequisite* to the implementation of antidiscrimination regulations for the community. Even though most societies today are open towards the LGBTQ+ community, discrimination against the community is still an issue, as discussed previously.

Throughout early human history, having relations with the same sex or not conforming to popular gender norms was very common (LGBT History 2021). But, with the rise of Christianity these relations began to lose acceptance and were deemed "deviant" and criminal behavior. Especially with the rise of modern sciences, medical procedures, and psychology, this oppression strengthened (Edsall 2003). The struggle for the community to be allowed to openly express their personality and sexuality in public developed different forms around the globe. The Scientific Humanitarian Committee was a Berlin-based organization, founded as early as 1897, which is generally accepted as the first gay rights organization. Figure 9.1 shows that at this point in time, same-sex relationships were decriminalized in some countries, but it took

considerably longer to include regulations for protection or even the implementation of equal rights in marriage. Of course, this organization was shut down during the Nazi rule in 1933 and its members suffered greatly under the Nazi regime (Encarnación 2014). These topics then resurfaced in Europe again already in 1948 with the signing of the UDHR. This document, especially Article 2, granting the "rights of freedom … without distinction of any kind, including sex", has since then been used by activist groups to frame their arguments, declaring the choice of partners and personal expression a human right (Encarnación 2014). Interestingly, a study by Velasco (2018) showed, that increased activism for equality and human rights often coincides with increased activism for LGBTQ+ rights as well. The combining of forces for these causes can be controversial but, in some cases, also be beneficial for both parties (Velasco 2018). While the acceptance of same-sex partnerships is a prerequisite for the implementation of any policy to protect LGBTQ+ community members from discrimination, it is also important to note when antidiscrimination laws for the general population, regardless of sexual preference, became important on the international stage.

Therefore, another historical event to consider in this chapter is the ratification of the ILO Discrimination (Employment and Occupation) Convention C111 (1958). This convention, which is ratified by 175 countries worldwide, states in the Preamble, that.

> *…all human beings, irrespective of race, creed or sex, have the right to pursue both their material well-being and their spiritual development in conditions of freedom and dignity, of economic security and equal opportunity, and Considering further that discrimination constitutes a violation of rights enunciated by the Universal Declaration of Human Rights….*

Article (1a) states that "any distinction, exclusion or preference made on the basis of race, colour, sex, religion, political opinion, national extraction or social origin" is to be considered as discrimination. Unfortunately, as statistics show, discrimination, in the workplace or elsewhere, on basis of sexual orientation is still a common occurrence in many states. Even though there were many public transgressions to the general norm throughout history and a secret subculture existed in America and

Europe, it took until 1969 for the LGBTQ+ community in the US to open the fight for their rights to a public, discrimination-free life as well (Edsall 2003). The Stonewall riots, a violent clash between police and patrons of Stonewall Inn, a transvestite and gay bar in Manhattan, is now considered the beginning of the open fight for LGBTQ+ rights, as this clash was followed by the first gay pride parade in the world. The open fight for equal rights eventually led to the realization, that antidiscrimination regulations protecting the LGBTQ+ community, not only in the workplace, are a necessity to ensure the equal participation of this group in the labor market and everyday life. Today, the fight for equal rights of the community often lies in the hands of local and international organizations (IOs) and non-governmental organizations (NGOs) like the International Lesbian, Gay, Bisexual, Trans and Intersex Association (ILGA), which is considered the largest transnational IO advocating for LGBTQ+ rights today. Figure 9.1 shows the adoption rates for the decriminalization of same-sex relationships, the adoption of antidiscrimination laws in the workplace, and the adoption rates for marriage or civil union laws for same-sex couples. This timeline clearly demonstrates how the acceptance of private relationships long preceded the acceptance and support of antidiscrimination regulations and family units potentially involving children. It also establishes that in the past, local events seem to have been more prevalent in inspiring societal change, rather than international pressure influencing policies. Nevertheless, the effect of transnational influence cannot be dismissed.

Due to the combination of these events, the political definition of human rights in the UDHR, which was then followed by other public events and a global, political debate, the year 1948 will serve as a starting point for this analysis.

Until 2010, 104 countries of the 164-country sample used in this chapter had actively removed laws previously criminalizing relationships among people of the same gender, effectively making same-sex relationships legal. The societal acceptance thereof is a different story, but this discussion would exceed the scope of this chapter. Only 5 countries in the sample did not have any criminalization or decriminalization laws in place, however, several countries such as Iraq did not have a specific criminalization law in place but are known to find other ways of enforcing

norm digressions, or had laws limiting the freedom of expression of persons (Egypt) (Mendos et al. 2020). Others simply had never criminalized LGBTQ+ relationships, or there was no clear data found. In 2020, 54 Countries still had active laws criminalizing LGBTQ+ relationships or limiting their freedom of expression. 66 countries had implemented regulations preventing discrimination at the workplace on basis of sexual orientation.

The *acceptance* of relationships contrary to the common norm differs significantly from the *inclusion* of the community in all aspects of public life. The *legalization* or *decriminalization* of same-sex relationships started much earlier than the adoption of laws giving the community the same *rights* as everyone else, as Fig. 9.1 shows (Encarnación 2014). In addition, there are considerable differences in local and national regulations. For example, Wisconsin was the first US state to ban discrimination based on sexual orientation in both public and private sector employment in 1982, but the regulation was only implemented in 2020 on the national level (Johnson 2016). France, on the other hand, banned discrimination based on sexual orientation already in 1985 for the entire country. While antidiscrimination regulations are making strong progress, equal marriage rights are only slowly being introduced. Adoption rights are lagging still further behind. This shows that participation in the workplace might be considered a more important aspect to ensure than those allowing the socialization of children by same-sex couples, as this goes along with the impression of fostering non-traditional families and decay in Christian morals.

This global divergence in adoption of rights for the LGBTQ+ community begs the question of why some countries try to ensure a discrimination-free workplace and "fulfillment of citizen duties" (e.g., contributing to the economy) regardless of sexual orientation while others do not. Previous research has found various reasons, local conditions such as activism, urbanization, religiosity but also international problem pressure (e.g., Ayoub and Page 2020; Ayoub 2015; Colvin 2004). This problem pressure can be administered through IOs and other advocacy groups, but also other policymakers, which then ultimately leads to policy diffusion. While policy diffusion, local culture,

and religion have been a part of previous research on the topic, the inclusion of additional networks such as trade, has not been considered yet. This chapter therefore intends to fill this gap.

When looking at the statistics but also the declarations and regulations presented above, one immediately wonders what other global or local factors might drive the introduction of rights and policies for the LGBTQ+ community, and what players or factors are preventing it. This chapter therefore sets out to explore different networks of policy diffusion. Do transnational trade networks, spatial proximity, colonial ties and cultural similarities have an impact on the diffusion of workplace antidiscrimination regulations for the LGBTQ+ community? Or do domestic factors have a stronger impact on the implementation of these policies, indicating no norm diffusion regarding this policy? The policies include all regulations prohibiting discrimination in the workplace due to sexual preference and expression.

In the following section, I will clarify my theoretical approach and contextualize the chapter with previous research. I will then discuss the methodology and data used and then discuss the results, conclusion, and limitations of this analysis.

Theory

Policy diffusion has multiple explanatory mechanisms through which policies travel from one country to another, namely learning, competition, imitation, or coercion (Dobbin et al. 2007). All the mechanisms share the commonality that policies are traveling from one country to another through a connection between them. This could be a colonial relationship, resulting in a coercive diffusion; a trade network resulting in competition; or simply communication through either unneighborly relations or general interactions between policymakers and advocates, or IO membership, fostering policy learning. The mechanism at work here is "contagion": if a country has adopted a norm, all countries tied to this country are exposed to this fact and their risk of adoption increases if the policy is contagious. The more countries are embedded into different

networks, the more likely they are to adopt policies similar to network partners' (Boli and Thomas 1999).

A common theoretical approach to this is Meyer and colleagues' world society theory (Meyer et al. 1997). According to this theoretical approach, countries and policymakers draw from a common set of accepted norms and ideas about social policies and rights, such as the construct of democracy or human rights, for policy inspiration. Through networks of interaction, such as trade, simple spatial proximity, shared IO membership, or colonialism, the members of world society exchange information which ultimately allows for policy diffusion. The members of world society also hold each other accountable for adhering to these commonly accepted standards. Consequently, the adoption of these standards can allow countries to legitimize themselves and "put themselves on the map." To conclude, countries care about their image and reputation on the world stage and new adopters are implementing policies when under pressure to do so. In addition, if these norms are not adopted, punitive action can occur. Thus, through this framework, the international community is said to enforce the diffusion of these standards to the point where this development seems inevitable. The increase in exposure through different networks and IOs results in a deeper embedding in world society and increases the risk of adoption (Velasco 2020b; Boli and Thomas 1999).

While the networks of world society lead to the diffusion of norms, which norms are diffusing can be explained by neoinstitutionalist theory. According to this theoretical strand, international organizations as rationalized others develop and implement norms and values in world society, resulting in an increasing isomorphism of different institutions around the globe. Most of these norms are based on rational arguments based on increasing efficiency. Antidiscrimination policies increase the participation and therefore also productivity of the LGBTQ+ community, effectively improving citizens' labor market participation and a countries' economic productivity (Dobbin et al. 2007). Therefore, especially countries based on neoliberal values could be expected to implement antidiscrimination policies for the LGBTQ+ community so as not to prevent a large portion of society from contributing to economic productivity.

However, this is not always the case. In fact, with issues such as LGBTQ+ rights the increased pressure through world society might even invoke an adverse reaction (Rahman 2014). Studies have found that while there is a positive change in attitudes toward homosexuality in general due to the work of IOs and world society, the gap between liberal, more religious societies has widened (Roberts 2019; Ayoub and Page 2020; Ayoub 2015). In fact, the framing of LGBTQ+ rights as "foreign values" from the West is not uncommon. Ironically, some African countries criminalizing LGBTQ+ relationships do so in direct reference to their British colonial heritage—a Western influence (Encarnación 2014). Interestingly, shaming through world society due to non-compliance might even support the resistance to these norms, if the local societal situation does not agree with the international norm—as it is often the case in religious communities or countries. In fact, if countries do not have an internal motivation to implement these norms, resistance to shaming might even legitimize legislators in the eyes of their local population (Terman 2019). Nevertheless, it seems as if world society has some effect on the introduction of LGBTQ+ policies, as does culture, just maybe not exclusively in a positive direction. Therefore, I consider different networks of possible policy diffusion, as mentioned before, along with several local conditions as control variables to test if workplace antidiscrimination laws diffuse through the "usual" channels or if there are other mechanisms at play.

Previous Research

There is a surprisingly large body of literature on LGBTQ+ policies available—considering the novelty of the issue. But many of these studies focus on the implementation of different regulations or bans in individual countries, or societal acceptance or rejection of LGBTQ+ issues, instead of policy development and diffusion. Interestingly, a large body of these studies is focused on the United States; fewer studies provide a global perspective. Nevertheless, there are several studies relevant to this chapter. Many studies identify local cultural characteristics as defining factors.

Johnson (2016) found that the lack of national pressure, combined with an active LGBTQ+ community, results in a federal instead of national implementation of policies for the community. In addition, the presence of an active group advocating for gender and racial equality positively contributes to the introduction of LGBTQ+ policies. In a similar perspective, more women in parliament tends to increase the number of social welfare policies and therefore positively influence the introduction of LGBTQ+ policies as well (Velasco 2018). Based on these results, a gender equality index was integrated into the analysis of this chapter to control for the local culture and perspective on women.

Another study on the implementation of LGBTQ+ rights, especially in the workplace, states as well that internal activism, even though not necessarily visible to the outside world, is the driving force behind antidiscrimination regulations in Fortune 1000 companies. However, the author also states that without the cultural capacity to allow such a "transgression" against traditional norms, activism would not be possible in the first place (Raeburn 2004).

Although a lot of evidence points to the influence of local culture and conditions on the introduction of these policies, it has to be mentioned that the internal pressure to implement these policies is often higher in industrialized, urban regions due to the higher chances of a more diverse community (Colvin 2004).

According to Taylor and colleagues (2012) the risk of adoption of LGBTQ+ as well as transgender rights also depends highly on the specific subject of the policy: While regulations providing antidiscrimination protections on the basis of sexual orientation are highly dependent on internal political factors such as the capacity and use of local initiatives, education rate, and a divided government; for gender identity issues, this is not the case. The authors add that even though there are no clear diffusion pathways discernible, the isomorphism they found between countries is suspicious and does hint toward a world society model of policy diffusion. Another indicator supporting the influence of world society has been found by Fernández and Lutter (2013) as well. This study finds that political, secular-rational values as well as socioeconomic factors drive the implementation of these policies, aside from world society ties. World society ties are here defined as membership

in different IOs and ratified human rights treaties. Interesting in this study is the positive effect of domestic cultural, rational values. These results indicate that not only are local cultural conditions such as female empowerment, activism , and economic factors influencing the implementation of these policies, but also ties through shared IO membership and shared perspectives on human rights.

Despite these studies showing the increase of LGBTQ+ protection regulations, several studies have found that with growing advocacy groups and international visibility, the resistance to implement these norms is also growing. Outside the West, resistance of local LGBTQ+ groups is rising, which becomes visible through disagreements with the international norm, as well as activism groups, especially human rights organizations, not wanting their arguments to be "hijacked" ("gay rights are human rights"). This can put pressure on local lawmakers to prevent the implementation of LGBTQ+ rights (Velasco 2018). Rahman (2014) also points out, that in many countries not classified as "the West," the international pressure to implement legal regulations which were previously implemented in the West can lead to what the author calls a "homocolonialist" perspective. The resistance to these laws has less to do with the subject itself, but rather with the opposition to the West, especially if the invoked Western exceptionalism fosters a confrontational, hierarchical relationship between countries, where not adopting these norms is not only seen as "trailing behind" but even as "inferior." Thus, when the international pressure to implement LGBTQ+ laws does not respect individual societal backgrounds and instead antagonizes society and lawmakers alike, even shaming the country internationally, this pressure can lead to an oppositional action (Terman 2019).

As these studies show, there are many local but also transnational conditions fostering the implementation of LGBTQ+ policies. A new factor in this chapter is the use of exposure to countries with shared cultural characteristics as a transnational network of influence. Are lawmakers only responding to local cultural conditions or are they also reacting to actions of lawmakers in countries with a similar cultural profile? Based on these results, the following aspects are considered in this analysis: aside from a network of cultural similarity, colonial ties, spatial proximity, and trade, several societal conditions were included:

a gender equality index as well as the ratification of the ILO convention C111 against discrimination, GDP per capita and a democratization index. Furthermore, as a proxy for embeddedness in world culture, the indegree of the trade network is used. Trade openness (Busemeyer 2009) was tested for, but not included.

Data and Methods

The chapter analyzes predictors influencing the introduction and diffusion of workplace antidiscrimination laws for the LGBTQ+ community from 1949 until 2010 for $N = 164$ countries. The data was collected from the ILGA reports on State-Sponsored Homophobia (e.g., Mendos et al. 2020). These regulations include all acts or laws that prohibit discrimination based on sexual orientation, even if this stipulation is one of several mentioned in the act. For example, New Zealand included sexual orientation for the first time in 1993: Section 21(1)(m) of the Human Rights Act names sexual orientation among the prohibited grounds of discrimination. Article 22 of this act prohibits discrimination in employment, thereby covering discrimination in employment based on sexual orientation. This regulation was then revised and in 2000, Article 105(1)(m) of the Employment Relations Act specifically prohibits employment discrimination based on sexual orientation. In many cases, acts were vague at first, only covering sexual orientation and gender identity was added later on. France for example, named sexual orientation in 1985 as grounds protected against discrimination under the Labour Code and in 2008, gender identity was included. All first mentions of protection against discrimination or equal treatment in occupation, workplace, trade, or profession with regards to sexual preference or orientation were included. If sexual orientation was included as an amendment, the date of amendment was set as the introduction. Introductions were only coded if the regulation was introduced for the entire state. In cases like the United States, for example, some local states introduced antidiscrimination laws much earlier than the federal level: The District of Columbia covered sexual orientation already in

1973 (D.C. Code § 2–1402.11),[4] but it was only included in federal legislation in 2020. In this case, the federal regulation was coded.

The networks on shared cultural characteristics (or cultural spheres), which are considered of special interest in this chapter, include indicators of political liberties, rule of law, gender roles, dominant religion, language group, government ideology, classification of civilization, and colonial past (Besche-Truthe et al. 2020). In addition, a network of trade (Barbieri and Keshk 2016), colonial relationships (Becker, 2019 enriched with Head and Mayer, 2014; and our own data collection using Wikipedia), and spatial proximity (Eiser et al. 2020) is considered to potentially influence the diffusion process (see Mossig et al. 2021, in this volume, for a detailed description of the data and procedure). Aside from the network exposure, several indicators were included: The degree of trade, describing the number of trade ties a country has in any given year as indicator for a countries' embeddedness into a globalized world. More ties in trade could indicate a deeper embeddedness in world society and therefore a stronger pressure to implement antidiscrimination regulations. This indicator is not to be confused with a trade openness measure (Busemeyer 2009), which was tested but not significant. Additionally, GDP per capita (Inklaar et al. 2018) was controlled for, missing data on this indicator was interpolated with a logistic function to account for the nonlinear rise of GDP. Further, the democracy index from the V-Dem Project (Lührmann et al. 2018) was included. Missing data points were interpolated linearly. These indicators allow testing for the influence of economic situation as well as political regime. Also, a historical gender equality index was included, to account for local awareness of equality and potential activism (Dilli et al. 2019). The missing time points were interpolated linearly as well. Finally, the ratification of the ILO Discrimination (Labour and Occupation) Convention C111 regarding antidiscrimination was controlled to identify if the ratification of a general agreement regarding antidiscrimination irrespective of sexual orientation, had an influence on the adoption of this more specific

[4] https://code.dccouncil.us/dc/council/code/sections/2-1402.11.html.

antidiscrimination regulation (data collected by Hahs, Chapter 8 in this volume). This influence has not been tested in other studies before. The diffusion of the ratification of this ILO convention is analyzed in this volume as well, further information can be found in Chapter 8 by Hahs.

For the analysis the R package netdiffuseR (Vega Yon and Valente 2020) was used. Exposure is defined as the share of j adopters in the ego-centered network of node i ($i \neq j$) at time t. Exposure is set to influence the adoption rate *between* t and $t + 1$ (Valente 1995). If all countries, one specific country (ego) is connected to have implemented the policy before ego, exposure is 1. If none have adopted, exposure is 0 (see Mossig et al. 2021, in this volume, for details of these concepts). The weighted exposure term is then used in a discrete-time logistic-hazard model to predict its influence on the introduction probability of the dependent variable. Once a country has introduced the policy, it leaves the risk set. Introductions after 2010 are right-censored. The standard errors were corrected with a clustering indicator for historically dependent units, such as the former Yugoslavia, which could introduce a policy for multiple modern political entities at once. The logistic hazard model is only estimated for the years 1949 until 2010, as antidiscrimination only came onto the international agenda in 1948 with the signing of the UHDR. As mentioned previously, this is because this convention is often used to argue for the introduction of antidiscrimination regulations and is therefore seen as the starting date for the public and political debate about antidiscrimination laws. The effects are displayed in hazard ratios, coefficients greater than 1 denote a positive effect, coefficients smaller than 1 denote a negative effect.

Results

Figure 9.2 shows a world map of the diffusion of antidiscrimination policies for the LGBTQ+ community. The figure demonstrates that this policy is a new topic and has made significant changes in the last few years, especially after 2010. Most policy fields included in this volume have an "epicenter" of policy origin, in this case, it is European and other English-speaking countries.

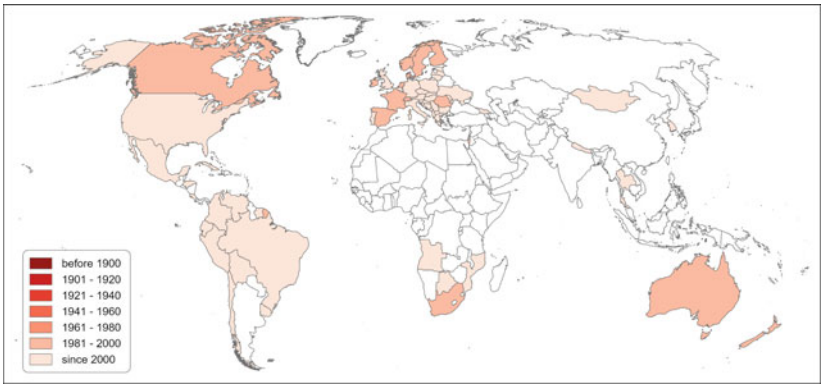


Fig. 9.2 The global diffusion of antidiscrimination regulations in the workplace for the LGBTQ+ community

Table 9.1 shows the hazard ratios of the discrete-time hazard model of introduction of antidiscrimination regulations in the workplace for the LGBTQ+ community. The logistic-hazard model includes $N = 126$ countries.[5] The original dataset in this volume includes political entities which are important for the exposure through the networks but are no longer existent, and not all datasets of the independent variables can provide information on these entities—resulting in a reduced sample.

[5] Afghanistan, Albania, Algeria, Argentina, Armenia, Australia, Austria, Bahrain, Bangladesh, Belgium, Benin, Bolivia, Botswana, Brazil, Bulgaria, Burundi, Cambodia, Cameroon, Canada, Central African Republic, Chile, China, Colombia, Congo—Brazzaville, Congo—Kinshasa, Costa Rica, Côte d'Ivoire, Croatia, Cuba, Czechia, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Eswatini, Finland, France, Gambia, Germany, Ghana, Greece, Guatemala, Haiti, Honduras, Hungary, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Kuwait, Kyrgyzstan, Latvia, Lesotho, Liberia, Libya, Lithuania, Malawi, Malaysia, Mali, Mauritania, Mauritius, Mexico, Moldova, Mongolia, Morocco, Mozambique, Myanmar (Burma), Namibia, Nepal, Netherlands, New Zealand, Nicaragua, Niger, Norway, Pakistan, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Rwanda, Saudi Arabia, Senegal, Sierra Leone, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sri Lanka, Sweden, Switzerland, Syria, Tajikistan, Tanzania, Thailand, Togo, Trinidad and Tobago, Tunisia, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States, Uruguay, Venezuela, Vietnam, Yemen, Zambia, Zimbabwe.

Table 9.1 The introduction of workplace antidiscrimination regulations, $N = 126$ countries, 1949–2010

	Introduction of workplace antidiscrimination regulations			
	(1)	(2)	(3)	(4)
> 1995	0.000***	0.000***	0.000***	0.000***
1995–2003	0.000***	0.000***	0.000***	0.000***
2004–2010	0.000***	0.00000***	0.000***	0.000***
GDP per capita/10000 USD	1.170	1.123	1.194	1.209
democratization	1.699***	1.685***	1.864***	1.849***
ratification of ILO convention C-111	3.507	2.964	2.456	2.406
gender equality index	1.139***	1.132***	1.143***	1.144***
degree trade network	1.025*	1.020+	1.028*	1.030*
cultural spheres net.: w. exposure (lag 1 year)	0.011*	0.011*	0.001**	0.001**
colonies net.: w. exposure		0.371*	0.359*	0.321*
trade net.: w. exposure (lag 1 year)			98.960	204.648
spatial proximity net.: w. exposure (lag 1 year)				0.339
Observations	7448	7448	7448	7448
Log Likelihood	−150.315	−148.107	−146.619	−146.545
Akaike Inf. Crit	318.631	316.214	315.239	317.09

Note + $p < 0.1$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

The time sections were chosen depending on the cumulative adoption function of the policies (see Fig. 9.1).

The model shows that GDP per capita has no significant positive effect on the introduction of workplace antidiscrimination regulations. In contrast, the effect of the democratization index is positive and significant in all models. Interestingly, the signing of the ILO convention C111 regarding antidiscrimination does not have a significant effect on the introduction of antidiscrimination laws for the protection of the LGBTQ+ community. The gender equality index is significant and positive as well, denoting that countries with more women in power, in the workplace, and involved in public life, are more likely to also introduce

antidiscrimination laws to protect LGBTQ+ people in the labor force This is in line with findings from Velasco (2018) and others, showing that in general, a higher prevalence of women's rights activism and public participation in a country has positive effects on LGBTQ+ rights and representations.

Another interesting result is the degree effect of the trade network, showing the effect of a larger number of trade partners on the risk of adopting policies regardless of exposure to already "infected" countries. Countries with more ties in trade have a higher risk of implementing these regulations. In terms of exposure through the networks, we can see that the exposure effect through the cultural spheres network converges toward 0—in hazard ratios, this is a large negative effect. The effect is statistically significant. The negative sign is an initially counterintuitive result. Similarly, ties based on colonial relationships have a negative, significant effect on a normalized model. The exposure through these particular networks slows the diffusion process down or even prevents it. The exposure through the trade network is insignificant and positive, but also incredibly large. To test if the trade embeddedness effect could be representative for trade openness (total trade/GDP; Busemeyer 2009), this effect was tested as well, but was not significant.[6] The pseudo-R-square measure by McKelvey and Zavoina (1975) however indicates that the trade embeddedness effect contributes significantly to the model fit, as it improves from 0.74 to 0.83 with the inclusion of the trade degree effect. Spatial proximity has no significant effect. To take different methods of calculating exposure into account, the exposure calculation for the colonial ties network was changed to represent a non-normalized coefficient (the exposure effect reduces over time instead of remaining stable after decolonization). This model can be found in the appendix. Although the colonial ties network loses its significance, the effect directions and sizes of all other coefficients remain relatively stable, supporting the findings.

[6] Model not shown.

As a result, I therefore conclude that (1) the cultural spheres network does not aid in the diffusion of antidiscrimination laws. While the influence of exposure through the cultural spheres network is significant, the effect is negative. It therefore seems to hinder diffusion instead. However, while cultural similarity seems to halt the diffusion. (2) Being embedded in a trade network has a positive effect, regardless of previous adoptions through other countries. And (3) domestic factors are the main drivers of this policy type. As gender equality and democratization index have such strong positive effects, the influence of local culture is undeniable. However, this instance seems to depend on the local problem pressure and situation and much less on transnational pressure. The international community of world society does not seem to influence the diffusion of this type of policy, rather, it seems to slow the diffusion down. This finding might hint towards a similar mechanism as discussed by Terman (2019), according to whom global pressure and a mismatch to local conditions can hinder the implementation of these policies. The frequent interaction with other countries through trade does have some effect, but it does not justify a diffusion model in the classical sense.

Conclusion & Discussion

In this chapter, I have examined the diffusion of antidiscrimination regulations in the workplace for the LGBTQ+ community. I have tested the influence of exposure through networks of cultural similarity, colonial past, trade, and spatial proximity. In addition, I tested the influence of domestic conditions, such as GDP per capita, gender equality, democracy, and the ratification of the ILO's C111 convention for antidiscrimination (ILO 1958).

The results are somewhat expected and in line with previous research, but also interesting, especially regarding the influence of culture. Domestic factors, mainly the democratization index and the gender equality index have a very strong positive impact on the introduction of antidiscrimination regulations. Countries with women in power

and active in public life are more likely to implement antidiscrimination regulations for the community. This is not surprising, as previous research has found this association as well (Johnson 2016; Velasco 2018). Interestingly, the ratification of the ILO's C111 convention did not have any significant effect, a result counterintuitive to the common line of argumentation in previous research that international organizations drive the diffusion of this policy type. On the other hand, the ratification of this policy might as well be "myth and ceremony" to appease world society, while being not implemented on a local level (Meyer and Rowan 1977). In addition, the organizations credited with success for the implementation of policies supporting the LGBTQ+ community are usually topic-specific and very active on a local level, in contrast to the transnational scope of the ILO (Velasco 2018). A country's embeddedness in the globalized world through the trade network also has a positive impact. Trade with many different countries might go along with a certain level of openness. This effect is not to be confused with the classical measures for trade openness, the proportion of trade on GDP, which was not significant in this analysis. The important aspect for this measurement is then the number of ties, rather than the percentage of trade on national GDP. This effect might be spurious, as Western, industrialized, English-speaking countries, who tend to trade more than most other countries, have already adopted the policy, as Fig. 9.2 suggests. This supports the suspicion that this policy does not diffuse via the expected pathway—if at all—and relies more on domestic factors. The most interesting result of the analysis is the negative effect of the cultural spheres network. Countries sharing cultural characteristics do not cause contagion, in contrast, it slows the diffusion down. However, this might be the case for only some countries: Fig. 9.2 indicates, in contrast to the analysis results, that language, and therefore one aspect of cultural similarity as measured in the network, seems to be an influence on the adoption of antidiscrimination policies. My suspicion therefore is that culture does matter in the implementation of this policy, however, it might only be a positive influence for some cultural spheres, while hindering diffusion in others.

Aside from the effect of trade, none of the exposure terms were positive. This leads to the conclusion that this type of policy does not diffuse through networks of shared cultural characteristics or similarity, at least not for all cultural spheres. The negative exposure term of culture can also be explained by adverse effects through shaming (Terman 2019) and a polarization to the Western "homocolonialist" agenda, as Rahman described it (2014). The results are in line with previous studies highlighting the importance of local activism and local problem pressure to implement LGBTQ+ protection policies. It seems that this specific policy does not follow the "usual" social policy diffusion pathways, but depends on local conditions, such as societal values instead of global influence.

Limitations

As with any other study, this analysis has limitations. The missing data for GDP per capita had to be interpolated. Additionally, the oil crisis in 1973 led to a very sharp increase in GDP per capita for Kuwait, Qatar, Norway, and the United Arab Emirates, resulting in outliers potentially influencing the analysis—even though this data is not a measurement error. Additionally, the gender equality index had to be interpolated as well, as this indicator ends in 2003. Second, the starting point of the logistic hazard model is chosen somewhat arbitrarily, as countries were at 'risk' of implementing these policies far before 1949. The changes to this policy in the last 10 years were drastic and an expansion of the data is planned. The use of discrete-time points is another limitation here; however, the model fit did not significantly change with the use of time as a linear predictor.[7] Furthermore, the particularities of modelling longitudinal analyses with a changing country sample for the same geographical area have to be kept in mind. It would be beneficial to include IO or NGO networks into this analysis, as they are potentially stronger drivers for this policy than the included networks, as research shows

[7] Model not shown.

(e.g., Velasco 2020a), but the interaction between the present networks and IO membership is left for future research to discover. In addition, measures for local activism and interest groups could also shed more light on the implementation of these policies. Culture as a predictor of this policy is irrefutable, but there might be conflicting aspects of culture not clearly distinguishable with the cultural spheres network. As mentioned before, certain religious orientations are a counterproductive characteristic (Rahman 2014), but have been combined into the network with other characteristics such as government ideology, resulting in the above effects. In addition, it has to be mentioned that world society models can only provide limited explanations in some cases, as they do not fully account for prolonged adverse effects of exposure. Previous studies could show that controversial issues such as LGBTQ+ rights might not be fully captured through this theoretical framing, as norms in society have to be shared, but the pressure through this model mainly rests on policymakers (Velasco 2020b). Roberts (2019) suggests the use of multiple modernities theory instead to take a closer look at culture-specific attitudes and reactions to international pressure. Despite these limitations, I feel that the model presented here still shows interesting results, as they reveal the strong influence of local conditions over the networks, and the negative effect of cultural similarity, pointing toward different mechanisms of policy diffusion in contrast to other studies in this volume, depending on the specific policy.

Appendix

See Table (9.2)

Table 9.2 The introduction of workplace antidiscrimination regulations, N = 126 countries, 1949–2010 non-normalized colonial network

	Introduction of workplace antidiscrimination laws			
	(1)	(2)	(3)	(4)
> 1995	0.000***	0.000***	0.000***	0.000***
1995–2003	0.000***	0.000***	0.000***	0.000***
2004–2010	0.000***	0.000***	0.000***	0.000***
GDP per capita/10000 USD	1.170	1.183	1.260	1.226
democratization	1.699***	1.678***	1.870***	1.898**
ratification of ILO convention C-111	3.507	3.596	3.063	3.063
gender equality index	1.139***	1.134***	1.144***	1.143***
degree trade network	1.025*	1.022+	1.030*	1.027+
cultural spheres net.: w. exposure (lag 1 year)	0.011*	0.011*	0.0004**	0.0003**
colonies net.: w. exposure non-normalized		0.233	0.166	0.199
trade net.: w. exposure (lag 1 year)			123.221	45.839
spatial proximity net.: w. exposure (lag 1 year)				4.486
Observations	7448	7448	7448	7448
Log Likelihood	−150.315	−149.912	−148.423	−148.229
Akaike Inf. Crit	318.631	319.824	318.846	320.459

Note + $p < 0.1$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

References

Aldridge, Bailey. 2021. "No More 'He' or 'She'. House Approves Gender-Neutral Terms in Its Official Language." *McClatchy*. Accessed February 23, 2021. https://www.mcclatchydc.com/news/politics-government/article248264460.html.

Allen, Samantha. 2017. "Millennials Are the Gayest Generation." *Daily Beast*. Accessed February 23, 2021. https://www.thedailybeast.com/millennials-are-the-gayest-generation.

"Alphabet Mafia." 2020. urbandictionary.com. Accessed February 23, 2021. https://www.urbandictionary.com/define.php?term=AlphabetMafia.

Ayoub, Phillip M. 2015. "Contested Norms in New-Adopter States: International Determinants of LGBT Rights Legislation." *European Journal of International Relations* 21 (3): 293–322.

Ayoub, Phillip M, and Douglas Page. 2020. "When Do Opponents of Gay Rights Mobilize? Explaining Political Participation in Times of Backlash against Liberalism." *Political Research Quarterly* 73 (3): 696–713.

Barbieri, Katherine, and Omar M. G. Keshk. 2016. Correlates of War Project Trade Data Set Codebook, Version 4.0. Accessed February 23, 2021. http://correlatesofwar.org.

Becker, Bastian. 2019. "Colonial Dates Dataset" (COLDAT). https://doi.org/10.7910/DVN/T9SDEW.

Besche-Truthe, Fabian, Helen Seitzer, and Michael Windzio. 2020. "Cultural Spheres—Creating a Dyadic Dataset of Cultural Proximity." *SFB 1342 Technical Paper Series* 5. Bremen.

Boli, John, and George M Thomas, eds. 1999. *Constructing World Culture: International Nongovernmental Organizations Since 1875.* Stanford: Stanford University Press.

Busemeyer, Marius R. 2009. "From Myth to Reality: Globalisation and Public Spending in OECD Countries Revisited: Research Note." *European Journal of Political Research* 48 (4): 455–482.

Casey, Logan S., Sari L. Reisner, Mary G. Findling, Robert J. Blendon, John M. Benson, Justin M. Sayde, and Carolyn Miller. 2019. "Discrimination in the United States: Experiences of Lesbian, Gay, Bisexual, Transgender, and Queer Americans." *Health Services Research* 54: 1454–1466.

Colvin, Roddrick A. 2004. "Agenda Setting, Innovation, and State Gay Rights Policy: An Event History Analysis." *American Review of Politics* 25: 241–263.

Dilli, Selin, Sarah G. Carmichael, and Auke Rijpma. 2019. "Introducing the Historical Gender Equality Index." *Feminist Economics* 25 (1): 31–57.

Dobbin, Frank, Beth Simmons, and Geoffrey Garrett. 2007. "The Global Diffusion of Public Policies: Social Construction, Coercion, Competition, or Learning?" *Annual Review of Sociology* 33 (1): 449–472.

Edsall, Nicholas. 2003. *Toward Stonewall: Homosexuality and Society in the Modern Western World.* Charlottesville: University of Virginia Press.

Eiser, Lara, Michael Lischka, and Tobias Tkaczick. 2020. Calculating Distances between Capital Cities in ArcGIS using the CShapes Dataset. *SFB 1342 Technical Paper Series* 1. Bremen.

Encarnación, Omar G. 2014. "Gay Rights: Why Democracy Matters." *Journal of Democracy* 25 (3): 90–104.

Fernández, Juan J., and Mark Lutter. 2013. "Supranational Cultural Norms, Domestic Value Orientations and the Diffusion of Same-Sex Union Rights in Europe, 1988–2009." *International Sociology* 28 (1): 102–120.

Head, Keith, and Thierry Mayer. 2014. "Gravity Equations: Toolkit, Cookbook, Workhorse." In *Handbook of International Economics Vol. 4*, edited by Gita Gopinath, Elhanan Helpman, and Kenneth Rogoff, 131–195. Amsterdam: Elsevier.

ILO. 1958. Discrimination (Employment and Occupation) Convention C 111. Accessed January 14, 2021. https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C111.

Inklaar, Robert, Harmen de Jong, Jutta Bolt, and Jan van Zanden. 2018. "Rebasing 'Maddison': New Income Comparisons and the Shape of Long-Run Economic Development." *GDC Research Memorandum* GD-174. Groningen Growth and Development Centre, University of Groningen.

Johnson, Olatunde C. A. 2016. "The Local Turn; Innovation and Diffusion in Civil Rights Law." *Law and Contemporary Problems* 79. Columbia Public Law Research Paper: 115–144.

"LGBT History." 2021. wikipedia.org. Accessed February 23, 2021. https://en.wikipedia.org/wiki/LGBT_history#Ancient_history.

Lührmann, Anna, Marcus Tannenberg, and Staffan I. Lindberg. 2018. "Regimes of the World (RoW): Opening New Avenues for the Comparative Study of Political Regimes." *Politics and Governance* 6 (1): 60–77.

McKelvey, Richard D., and William Zavoina. 1975. "A Statistical Model for the Analysis of Ordinal Level Dependent Variables." *The Journal of Mathematical Sociology* 4 (1): 103–120.

Mendos, Lucas Ramon, Kellyn Botha, Rafael Carran Lelis, Enrique Lopéz de la Penna, Ilia Savelev, and Daron Tan. 2020. *State-Sponsored Homophobia 2020: Global Legislation Overview Update*. Geneva.

Meyer, John W., John Boli, George M. Thomas, and Francisco O. Ramirez. 1997. "World Society and the Nation-State." *American Journal of Sociology* 103 (1): 144–181.

Meyer, John, and Brian Rowan. 1977. "Institutionalized Organizations: Formal Structure as Myth and Ceremony." *Journal of Economic Sociology* 12 (1): 43–67.

Raeburn, Nicole C. 2004. "Working It out: The Eergence and Diffusion of the Workplace Movement for Lesbian, Gay, and Bisexual Rights." *Research in Social Movements, Conflicts and Change* 25: 187–230.

Rahman, Momin. 2014. "Queer Rights and the Triangulation of Western Exceptionalism." *Journal of Human Rights* 13 (3): 274–89.

Roberts, Louisa. 2019. "Changing Worldwide Attitudes toward Homosexuality: The Influence of Global and Region-Specific Cultures, 1981–2012." *Social Science Research* 80: 114–131.

Taylor, Jami K., Daniel C. Lewis, Matthew L. Jacobsmeier, and Brian DiSarro. 2012. "Content and Complexity in Policy Reinvention and Diffusion: Gay and Transgender-Inclusive Laws Against Discrimination." *State Politics and Policy Quarterly* 12 (1): 75–98.

Terman, Rochelle. 2019. "Rewarding Resistance: Theorizing Defiance to International Shaming." Chicago: University of Chicago. Accessed January 15, 2021. http://rochelleterman.com/wp-content/uploads/2019/06/Terman_Defiance_06_11_2019.pdf.

The Williams Institute. 2020. "Adult LGBT Population in the United States.". Accessed February 23, 2021. https://williamsinstitute.law.ucla.edu/publications/adult-lgbt-pop-us/.

UN General Assembly. 1948. "Universal Declaration of Human Rights". Accessed January 15, 2021. https://www.refworld.org/docid/3ae6b3712c.html.

UN General Assembly. 1966. "International Covenant on Economic, Social and Cultural Rights, International Covenant on Civil and Political Rights and Optional Protocol to the International Covenant on Civil and Political Right". Accessed January 15, 2021. https://www.refworld.org/docid/3b00f47924.html.

Valente, Thomas Q. 1995. *Network Models of the Diffusion of Innovations.* New Jersey: Hampton.

Vega Yon, George, and Thomas W. Valente. 2020. "netdiffuseR: Analysis of Diffusion and Contagion Processes on Networks". R package version 1.22.0. https://doi.org/10.5281/zenodo.1039317.

Velasco, Kristopher. 2018. "Human Rights INGOs, LGBT INGOs, and LGBT Policy Diffusion, 1991–2015." *Social Forces* 97 (1): 377–404.

Velasco, Kristopher. 2020a. "A Growing Queer Divide: The Divergence Between Transnational Advocacy Networks and Foreign Aid in Diffusing LGBT Policies." *International Studies Quarterly* 64: 120–132.

Velasco, Kristopher. 2020b. "Queering the World Society: Global Norms, Rival Transnational Networks, and the Contested Case of LGBT Rights." Accessed January 15, 2021. https://osf.io/preprints/socarxiv/3rtje/.

10

Critical Summary and Concluding Remarks

Carina Schmitt and Herbert Obinger

Introduction[1]

This volume examines the spread of different social policies around the world. It analyzes at the macro-level the importance of cultural, colonial, and trade networks for the global diffusion of health care systems, education, work injury, antidiscrimination, and family policies as well

[1]This chapter is a product of the research conducted in the Collaborative Research Center "Global Dynamics of Social Policy" at the University of Bremen. The center is funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation)—project number 374666841—SFB 1342.

C. Schmitt (✉) · H. Obinger
University of Bremen, Bremen, Germany
e-mail: carina.schmitt@uni-bremen.de

H. Obinger
e-mail: herbert.obinger@uni-bremen.de

M. Windzio et al. (eds.), *Networks and Geographies of Global Social Policy Diffusion*, Global Dynamics of Social Policy,
https://doi.org/10.1007/978-3-030-83403-6_10

as labor regulations. All chapters have applied a uniform methodological approach that enables a comparison of social policy dynamics and an evaluation of the importance of different networks over time as well as across different social policy fields.

The Diffusion of Social Policies Around the World

Figure 10.1 illustrates the spread of the ten social policies analyzed in the previous chapters. While the x-axis shows the year of program adoption, the y-axis depicts the cumulative number of countries on a global scale that has introduced the respective social policy. For many programs, the spread of social policies follows an S-curve which is indicative of policy diffusion. It is striking, however, that the diffusion processes differ greatly

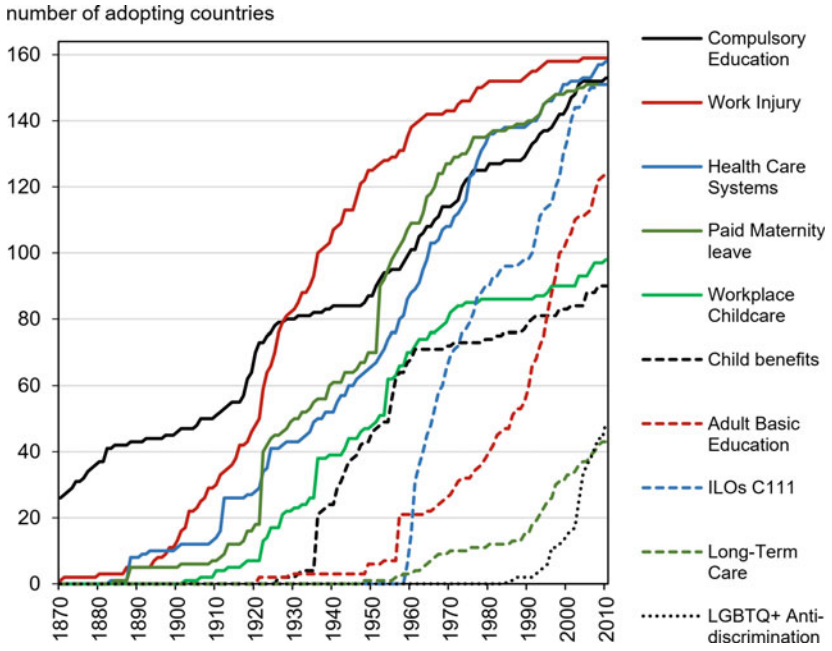


Fig. 10.1 The introduction of ten social policies around the world

between the individual programs in terms of timing, adoption rate, and speed. For example, while the introduction of compulsory education and work injury schemes started relatively early, the diffusion of family policies began at a much later stage. Moreover, there is a remarkable variation in the number of countries that have adopted the respective policy. Today, almost all countries worldwide have established health care systems, compulsory education, work injury programs as well as paid maternity leave, and antidiscrimination regulations regarding employment and occupation. By contrast, long-term care, child benefits, and workplace childcare as well as adult basic education and LGBTQ+ policies are far less common. With regard to the speed of introduction, work injury schemes, health care systems, and paid maternity leave spread much more rapidly than compulsory education. In the case of the more recent social policies, the figure suggests that labor-related programs such as the ratification of the ILO antidiscrimination convention or adult basic education spread faster than family and long-term care policies.

Table 10.1 supports this pattern. For example, the average adoption year for workers' compensation schemes is 1932, compared to 1991

Table 10.1 The spread of social policies around the globe

Social policy field	n	Adoption rate	Min	Mean	Median	Sd
Work injury	159	0.97	1854	1932	1928	26.1
ILO Convention	156	0.95	1959	1979	1975	17.0
Health care system	161	0.98	1883	1953	1958	31.9
Long-term care	48	0.29	1948	1991	1995	17.6
Compulsory education	154	0.94	1739	1927	1925	56.5
Adult basic education	130	0.79	1921	1986	1991	19.4
Antidiscrimation LGBTQ+	66	0.40	1985	2005	2005	7.6
Paid maternity leave	153	0.93	1884	1948	1952	26.7
Child benefits	90	0.55	1926	1956	1950	21.8
Workplace Childcare	98	0.60	1902	1951	1952	25.5

Notes n = Number of countries with the respective program in place; adoption rate = n/ 164; min= first year of introduction, sd = standard deviation

for long-term care. The adoption rate, i.e., the proportion of countries with the respective social policy in place in relation to all countries, also reflects significant differences across various programs. While the adoption rate for work injury, health care systems, the ratification of the ILO's antidiscrimination directive, and maternity protection is over 0.9, the values for long-term care and child benefits are significantly lower. Interestingly, the standard deviation of the year of introduction of compulsory education is high compared to all other policies, indicating that here the diffusion process lasted much longer than with all other programs.

Figure 10.2 shows the timing of the inaugural legislation of four major social security programs, namely, work injury schemes, health care systems, compulsory education, and paid maternity leave.

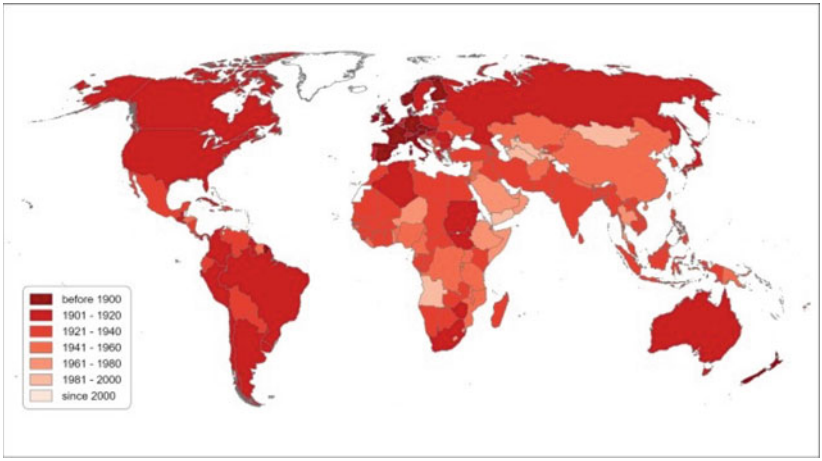
Figure 10.2 illustrates marked cross-regional and program-related differences. While European countries, Russia (Soviet Union), and Latin American countries introduced all four policies relatively early, the vast majority of African states adopted social policy programs comparably late or not at all yet. The countries in North America, notably the United States, clearly deviate from the overall pattern in the Global north.

The Influence of Networks on the Diffusion of Social Policies

All chapters in this volume have analyzed the influence of the same set of networks for explaining the diffusion of different social policies. Specifically, the importance of cultural, colonial, and trade relations is tested and contrasted with the effects of a network capturing geographical proximity. The overall findings reveal that the importance of international linkages captured by different network types is not homogeneous across the social policies examined. For example, Chapter 2 has shown that the network of spatial proximity is significant for understanding the introduction of work injury schemes. In the case of compulsory education (see Chapter 3), cultural linkages seem to have some effect on policy diffusion (at least when spatial proximity is not controlled for).

Interestingly, neither colonial ties nor trade relations have been identified in these chapters as important explanatory factors. By contrast,

(a) Work Injury Systems



(b) Health Care Systems

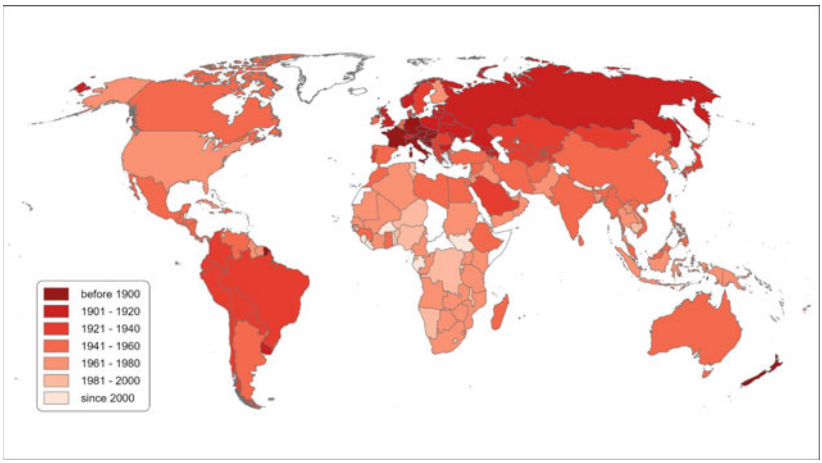
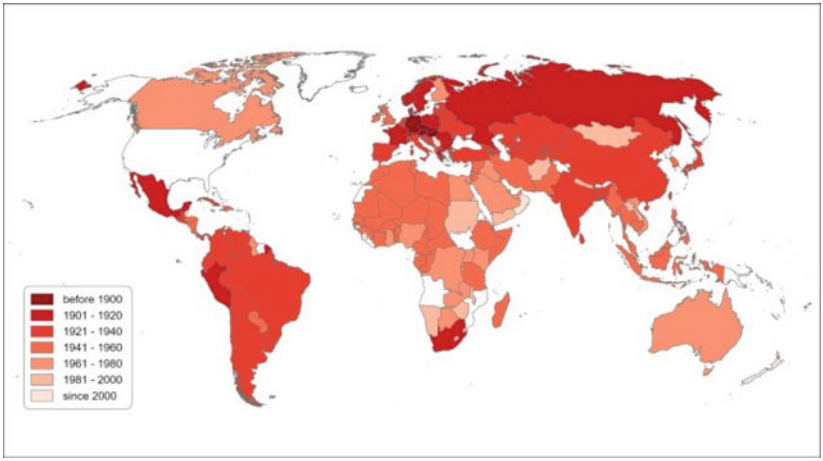


Fig. 10.2 The introduction of four basic social policies by regions. **a** Work Injury Systems. **b** Health Care Systems. **c** Paid Maternity Leave. **d** Compulsory Education

c) Paid Maternity Leave



d) Compulsory Education

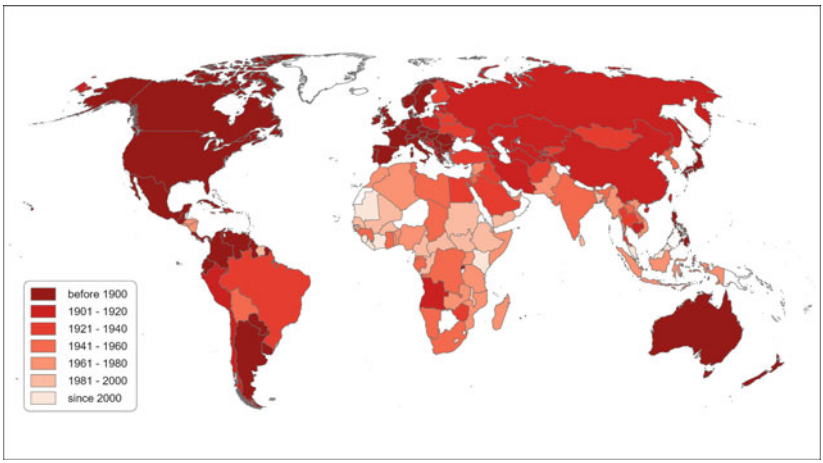


Fig. 10.2 (continued)

Chapter 4 on adult basic education, regulating access to training in basic reading, writing, and numeracy skills for those who did not have the chance to learn it in formal education, does find some evidence that colonial ties matter. It is argued in that chapter that the importance of

colonial linkages can be attributed to coercive diffusion, as the USSR imposed this policy on its satellite states. In the case of health care systems (see Chapter 5), the authors conclude that health care systems are more likely to have been introduced in earlier periods in affluent countries connected by close trade relations. Later on, other factors like nation-building processes in former colonies gained importance. While also geographical proximity was important, colonial ties did not seem to play a role for legislative activities in this field. With regard to long-term care (see Chapter 6), geographical proximity turned out to be the most relevant network driving the international proliferation of this program. In the case of paid maternity leave (see Chapter 7), program adoption is influenced by continuous advocacy as well as technical assistance provided by the ILO.

By contrast, workplace childcare facilities are shaped by colonial ties. More specifically, workplace childcare regulations were particularly widespread in former French colonies. Chapter 8, which analyzes the ratification of ILO's antidiscrimination convention from 1958, only finds evidence for the relevance of geographical proximity. All other networks play a minor role in the diffusion process. With regard to LGBTQ+ policies, diffusion seems to be driven to some extent by trade relations with other countries. Interestingly, the effect of cultural spheres has even been identified as negative (see Chapter 9).

Apart from the various international linkages that swayed the spread of social policies, domestic factors also have to be examined. Democratization processes have been identified as a key driving factor for the introduction of work injury programs, long-term care, and the adoption of LGBTQ+ antidiscrimination policies. In the case of the latter the state of gender equality at the domestic level increased the probability of a country enacting antidiscrimination policies. In addition, state formation is crucial for the adoption of work injury programs, while family allowances are spurred by low fertility levels. The introduction of long-term care has mostly been a reaction to population aging and strong political and social participation of women in the respective countries, while economic prosperity was important for the early introduction of health care systems. Lastly, the ratification of the ILO's discrimination convention is highly influenced by the legal origin of a country, particularly the French legal tradition.

To summarize, this book contributes to the literature in the following respects. Firstly, several social policies and different types of networks were considered simultaneously. This allows us to study and compare program-related policy diffusion and to evaluate the importance of different types of international and transnational relations for social protection legislation. The findings suggest that spatial proximity is the most relevant network in this regard. Geographical proximity implies strong international linkages in many respects such as cross-border migration, cultural ties, and trade relations. Moreover, all these linkages are indicative of intensive cross-border communication, which is widely seen as a main prerequisite for policy diffusion.

Secondly, all individual chapters show that it is the interplay between international interdependencies and national factors that explains the adoption and spread of social policies. In terms of domestic determinants, the results presented in the book chapters suggest that democratization processes are of central importance. Interestingly, the results for economic variables such as economic prosperity are very heterogeneous, indicating that the diffusion of social policies does not follow the linear logic emphasized by modernization theory (Wilensky 1975). Rather, in line with the findings by Collier and Messick (1975), it seems that economic development is only relevant in the early stages of program adoption, while at later stages international factors such as international organizations or horizontal diffusion between states become increasingly important.

Lastly, the book analyzes the diffusion of social policies for a global sample and thus overcomes the bias towards OECD countries that is typical for the vast majority of the pertinent literature. Existing research not only focuses on the spread of policies within the OECD world, but often also restricts the analysis of international interdependencies to relationships between Western countries. However, policymaking in OECD countries as well as elsewhere is shaped by global economic relations, cultural and colonial ties linking countries across regions and continents (Schmitt et al. 2015; Schmitt 2020). It is necessary to take all interdependencies into account that have relevance to a specific national policymaking process.

Critical Outlook

While some key challenges in the diffusion literature have been addressed in this volume, the approach suggested here also has its limits. Addressing them opens up promising avenues for further research.

To begin with, several chapters have shown that geographical proximity is the most relevant network for understanding welfare legislation. However, the advantage, mentioned above, that spatial proximity is a strong indication for the relevance of international relationships, is also its disadvantage, as it subsumes many different types of interdependencies. Spatial proximity is a catch-all indicator comprising cultural ties, close communication or important trade relations between neighboring countries. Disentangling these overlapping linkages that are altogether reflected by spatial proximity is a major challenge for further studies.

Moreover, actors have not been considered in this volume. This is problematic as neither communication nor the transmission and processing of information is possible without agency. A promising next step towards a more comprehensive understanding of diffusion processes would be to directly measure cross-border communication or information exchange between actors, rather than extrapolating the intensity of cross-border communication from cultural, spatial, and economic relationships between states.

In this volume, the relevance of four different networks, i.e., cultural, colonial, economic relations as well as geographical proximity between countries was tested. However, countries are connected with each other via more than these four networks. Important networks not considered here are, for example, constituted by migration or communication flows. However, as the chapters cover a long time span stretching from the late nineteenth century to the present, the possibility of integrating these networks is limited, because bilateral and dyadic information for the formative period of the welfare state is scarce. Collecting further network information from earlier periods would be a promising avenue to come towards a more comprehensive understanding of long-term social policy diffusion.

A further problem refers to data quality, which is likely to vary greatly across the long time periods considered in this book. It is plausible that

the quality of data for the formative period of social policy in the late nineteenth century is much lower compared to that of contemporary data.

In the diffusion literature, several mechanisms underlying diffusion processes such as learning, imitation, coercion, and competition are discussed (Simmons et al. 2008; Simmons and Elkins 2004). However, it is very difficult—if not impossible, especially for macro-quantitative studies—to identify which diffusion mechanism ultimately gave rise to policy diffusion, as many of these mechanisms clearly overlap. For example, learning and emulation are closely connected and hard to separate from each other. Do governments really get a better understanding of the causal mechanisms between policies and outcomes from experiences made by other countries, or do they simply comply with the policies adopted in a particular peer group for symbolic reasons? To answer this question we need theoretical clarifications as well as alternative methodological tools that allow us to distinguish between the different mechanisms underlying policy diffusion (Obinger et al. 2013).

Moreover, the analysis of the impact of international interdependencies and networks on domestic social policy dynamics is restricted to the adoption of similar policies. However, it is also possible that governments deliberately refrain from adopting a policy because they have learned from the failure of similar policies implemented abroad (Marsh and Sharman 2009; Shipan and Volden 2012). This type of learning cannot be captured by contemporary statistical techniques. In a similar vein, governments might implement alternative policies because they cannot or do not want to pursue the same policy strategy as competing countries. One way of dealing with this problem is to study policy diffusion not only by analyzing policies that have already been implemented, but also by examining the policy formulation process, or what Gilardi et al. (2021) call the issue definition stage.

Diffusion processes are also dependent on the characteristics of a particular policy. Diffusion should vary with the complexity and observability of specific reforms. Complexity is "the degree to which an innovation is perceived as relatively difficult to understand and use" (Rogers 2004, p. 242). Technically complex policies are not easy to translate into legislation. The policy effects are not clearly observable or

ambiguous, whereas the necessity of technical and scientific expertise to link solutions to policy problems is typically high (Makse and Volden 2011, p. 111; Nicholson-Crotty and Carley 2016).

Furthermore, the fit between policies adopted abroad and national circumstances might be a crucial factor when examining why some countries adopt specific policies and not others. A policy is more likely to spread among those countries in which it is compatible with the existing national institutional setting (Pacheco 2012). Compatibility is "the degree to which an innovation is perceived as consistent with existing values, past experiences, and needs of potential adopters" (Rogers 2004, p. 224). If a policy of a foreign state can easily be combined with another country's existing policies, it is more likely to be adopted (Boushey 2010; Shipan and Volden 2012). To test whether the institutional fit or policy compatibility between countries influences the diffusion process, indicators that describe the institutional structure and the existing (social) policy portfolio of each country could be used to generate time-varying similarity matrices, e.g., by using two-mode networks.

Overall, the methodological approach applied in this volume has its strengths and provides interesting insights. However, it also has weaknesses. Many aspects, such as the direct transfer of a particular policy from one country to another, can only be addressed with qualitative, in-depth studies. Recent scholarly work in the social sciences has shown promising ways as to how this can be done (Kuhlmann et al. 2020; Starke 2013). Diffusion research must also consider the approaches and methods of transnational historical research and global history (Kettunen and Petersen 2011; Rodgers 2014). In short, interdisciplinary collaboration and the consistent application of mixed methods designs are needed more than ever in order to better understand both the contextuality and the patterns of global social policy diffusion.

Literature

Boushey, Graeme. 2010. *Policy Diffusion Dynamics in America*. Cambridge: Cambridge University Press.

Collier, David, and Richard E. Messick. 1975. "Prerequisites versus Diffusion: Testing Alternative Explanations of Social Security Adoption." *American Political Science Review* 69 (4): 1299–1315.

Gilardi, Fabrizio, Charles R. Shipan, and Bruno Wüest. 2021. "Policy Diffusion: The Issue-Definition-Stage." *American Journal of Political Science* 65 (1): 21–35.

Kettunen, Pauli, and Klaus Petersen, eds. 2011. *Beyond Welfare State Models: Transnational Historical Perspectives on Social Policy*. Cheltenham: Edwar Elgar.

Kuhlmann, Johanna, Delia Gonzalez de Reufels, Klaus Schlichte, and Frank Nullmeier. 2020. "How Social Policy Travels: A Refined Model of Diffusion." *Global Social Policy* 20 (1): 80–96.

Makse, Todd, and Craig Volden. 2011. "The Role of Policy Attributes in the Diffusion of Innovations." *Journal of Politics* 73 (1): 108–124.

Marsh, David, and Jason C. Sharman. 2009. "Policy Diffusion and Policy Transfer." *Policy Studies* 30 (3): 269–288.

Nicholson-Crotty, Sean, and Sanya Carley. 2016. "Effectiveness, Implementation, and Policy Diffusion or 'Can We Make That Work for Us?'" *State Politics & Policy Quarterly* 16 (1): 78–97.

Obinger, Herbert, Carina Schmitt, and Peter Starke. 2013. "Policy Diffusion and Policy Transfer in Comparative Welfare State Research." *Social Policy & Administration* 47 (1): 111–129.

Pacheco, Julianna. 2012. "The Social Contagion Model: Exploring the Role of Public Opinion on the Diffusion of Anti-smoking Legislation across the American States." *Journal of Politics* 74 (1): 187–202.

Rodgers, Daniel T. 2014. "Bearing Tales: Networks and Narratives in Social Policy Transfer." *Journal of Global History* 9: 301–313.

Rogers, Everett. 2004. *Diffusion of Innovations*. New York: Free Press.

Schmitt, Carina. 2015. "Social Security Development and the Colonial Legacy." *World Development* 70: 332–342.

Schmitt, Carina. 2020. "The Coverage of Social Protection in the Global South." *International Journal of Social Welfare* 29 (1): 6–19.

Schmitt, Carina, Hanna Lierse, Herbert Obinger, and Laura Seelkopf. 2015. "The Global Emergence of the Welfare State: Explaining Social Policy Legislation 1820–2013." *Politics & Society* 43: 503–524.

Shipan, Charles R., and Craig Volden. 2012. *Policy Diffusion: Seven Lessons for Scholars and Practioners*. Public Administration Review.

Simmons, Beth A., and Zachary Elkins. 2004. "The Globalization of Liberalization: Policy Diffusion in the International Political Economy." *American Political Science Review* 98 (1): 171–189.

Simmons, Beth A., Frank Dobbin, and Geoffrey Garrett, eds. 2008. *The Global Diffusion of Markets and Democracy*. Cambridge: Cambridge University Press.

Starke, Peter. 2013. "Qualitative Methods for the Study of Policy Diffusion: Challenges and Available Solutions." *Policy Studies Journal* 41 (4): 561–582.

Wilensky, Harold L. 1975. *The Welfare State and Equality*. Berkeley: University of California Press.

Index

M. Windzio et al. (eds.), *Networks and Geographies of Global Social Policy Diffusion*, Global Dynamics of Social Policy,
https://doi.org/10.1007/978-3-030-83403-6