Understanding Cross-National Differences in Inclusive Education Coverage: An Empirical Analysis

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Abstract

With the adoption and ratification of the United Nations' Convention on the Rights of Persons with Disabilities in 2006, inclusive education became an international human right and a global norm. But, "Education for All" remains a worldwide challenge. It appears that some countries achieved higher inclusive education rates than others. Why this is the case has barely been empirically investigated. To address this gap, this study analyzes cross-national differences in inclusive education coverage in over 50 societies. First, the data gap is addressed by providing an overview of inclusive education rates in 52 societies. In the theoretical part of the paper, hypothetical causes for the cross-national differences are discussed from a new institutionalist perspective, before concrete, testable hypotheses are derived. Third, a secondary meta-analysis based on self-assembled data from national and international sources is conducted predicting the cross-national differences by means of ordinary least squares regressions. Findings show that national income or educational expenses have no impact on the level of institutionalization of inclusive education in a society; the cross-national differences in school inclusion are mainly due to the structural conditions of the school system and its own institutional logic (especially the degree of institutional differentiation); and the definition of what is recognized as special educational needs and promoted in a national education system largely affects the extent of inclusive education coverage. The findings of this analysis prove to be a good start for future endeavors in macro-sociological and educational analyses of international inclusive education and have major policy implications.

Keywords: cross-national comparison, country-level analysis, inclusive education, new institutionalism, secondary meta-analysis, special education

With the adoption and subsequent ratification of the United Nations' *Convention on the Rights of Persons with Disabilities* (UN-CRPD) in 2006 (United Nations, 2006), inclusive education became an international human right and a global norm. Most of the 182 countries that signed the petition also ratified it soon after, thus expressing their commitment to reducing the exclusion of pupils with special educational needs (SEN) (United Nations Office of Legal Affairs [UN-OLA], 2020). Nevertheless, "Education for All" remains a worldwide challenge and is seen as a process and goal rather than an achieved status (Powell, 2018; United Nations Educational, Scientific and Cultural Organization [UNESCO], 2015). Whereas some societies with comparatively advanced inclusive education systems (e.g., the Nordic countries of Europe) were praised for their efforts to provide education for all, in countries with highly stratified education systems, such as Germany and Switzerland, students with special educational needs remain predominantly or exclusively schooled in special schools (Biermann & Powell, 2014; Powell, 2016, 2018; Werning, 2014).

The objective of this study is to find explanations for the cross-national difference in the level of institutionalization of inclusive education. Therefore, this study for the first time analyzes cross-national differences in Inclusive Education Coverage (IEC) in over 50 societies. The article is structured as follows. First, the still existing gap in valid and reliable data on inclusive education provision across the world is addressed by providing self-assembled inclusive education rates for 52 societies. Second, hypothetical causes for the cross-national differences in IEC are discussed from a neo-institutionalist perspective, before concrete, testable hypotheses are derived. Third, the cross-national differences in IEC are empirically analyzed by means of ordinary least squares (OLS) regressions using self-assembled data from national and international sources. Finally, findings are discussed for their meaning and significance for the further development of inclusive education, before future directions and policy implications are discussed.

Literature and Data Review

Mapping Inclusive Education Coverage

The need for reliable data on inclusive education to enable evidence-based policy-making for long-term development of inclusive education systems is well recognized (Ramberg & Watkins, 2020). However, although more attention is devoted to collecting data on cross-country special and inclusive education coverage (European Agency for Special Needs and Inclusive Education [EASIE], 2020; Organisation for Economic Co-operation and Development [OECD], 2005; UNESCO, 2015), serious gaps in data and research remain.

First of all, the data collection related to inclusive education is still quite problematic (Watkins et al., 2014). Apart from the European Agency Statistics on Inclusive Education, which collected longitudinal, comparative national data of 31 European societies, data collected by other international organizations (e.g., OECD, UNESCO, World Health Organization [WHO], United Nations International Children's Emergency Fund [UNICEF]) are rarely harmonized or suited to fill the existing data gap for countries outside Europe (Ramberg & Watkins, 2020).

Second, there is still a lack of systematic and sophisticated empirical studies examining the differences regarding inclusive education provision. Comprehensive cross-national analyses of the determinants and effects of Special Education Coverage (SEC) significantly contributed to our knowledge about the influence of economic and educational factors on the level of special education provision in a country (Anastasiou & Keller, 2014; Anastasiou et al., 2018). According to this research, whether more or less special education is generally provided in a

country depends on economic resources (i.e. gross national income per capita) and educational context (e.g., adult literacy rate, net enrollment in primary education, pupil teacher ratio, and school life expectancy). However, this kind of study provides few answers to the question why more pupils are schooled in inclusive settings (in the sense of the UN-CRPD) in some countries than in others. To answer this question, valid and reliable cross-national data on inclusive education coverage are necessary to enable evidence-based education policy-making.

Based on the data at hand, in most countries there has been a noticeable improvement in the provision of special needs education (EASIE, 2020; UNESCO, 2015). However, more than a decade after the adoption of the UN-CRPD, the worldwide transition from an exclusive to an inclusive organization of special education must be described as rather slow. A large proportion of SEN students is still either schooled in special schools (segregation: students are enrolled in fully separate special schools) or special classes *(*separation: students are enrolled in special classes in mainstream schools for more than 20 % of their time). Sometimes this kind of instruction within the regular schooling system allows for shared lessons (integration), but only if SEN students receive 80% or more of their instruction in regular classes among students without SEN can we truly speak of inclusive education according to international standards (EASIE, 2020; Ramberg & Watkins, 2020). Often, what is officially recognized as inclusive schooling does not necessarily comply with this definition (D'Alessio & Watkins, 2009; Ramberg & Watkins, 2020). In societies where the more exclusive forms of special education are socially deeply rooted and have been institutionalized over many years, it is likely that they prevent the further expansion of inclusive education (Powell, 2018). Although inclusive educational structures have been developed in all regions, there are currently very few educational systems around the world in which all pupils learn together in inclusive settings within the mainstream schooling system (Ramberg & Watkins, 2020).

Following the definition of EASIE (2020), Figure 1 reports inclusive education participation rates of SEN students based on self-assembled data from 52 societies (details on data collection in the methodology section). The data show that the proportion of SEN students in inclusive settings has considerably increased between 2008 and 2018 in many societies. In Australia, Czech Republic, Germany, Hungary, France, and Turkey, for example, this proportion significantly increased. In other societies, not much seems to have happened since 2008. In many societies with traditionally high inclusive education rates (over 90%), such as Italy, Norway, Portugal or the United States, continuation is observed. In other societies with traditionally low inclusive schooling, such as Japan or, especially, Switzerland, only marginal or no improvement is visible. Surprisingly, in Finland, Estonia, and, especially, Sweden, inclusive schooling rates considerably decreased even.

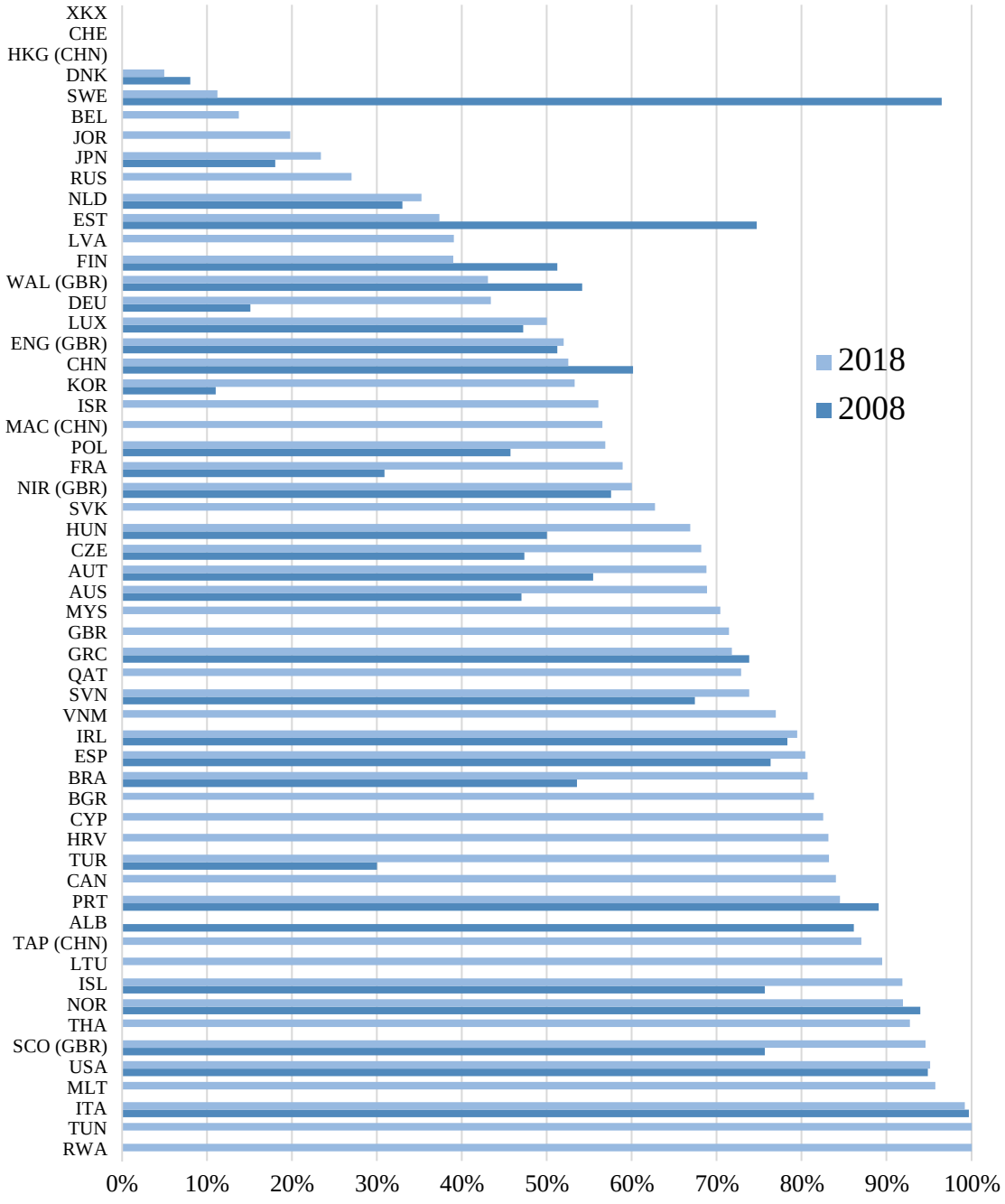

Figure 1: Percentage of students with official SEN-status attending inclusive classes in regular schools as a proportion of all students with SEN status in 52 societies, 2008 and 2018

Note: Data for 2008 for Albania from 2012; for Brazil from 2009; for China from 2007; Data for 2018 for Korea, Russian Federation, and Vietnam from 2017; for China, Canada (Ontario), Croatia, Cyprus, Denmark, Hungary, Macao and Thailand from 2016; for Brazil from 2015. Data for Rwanda and Tunisia are based the actually schooled number of students with SEN status; it is unclear whether all SEN students are enrolled in education.

The data presented imply a higher level of commitment to the provision of inclusive education opportunities in some countries compared to others. Why this is the case and these massive cross-national differences occur is all but clear. To address this issue, I apply neo-institutionalism in the following section and derive testable hypotheses.

Theoretical Approach: New Institutionalism

In order to clarify under which national conditions inclusion is implemented or institutionalized more comprehensively, the present work draws on theoretical assumptions of the new institutionalism. Although this theoretical perspective has so far found little application in the discussion on inclusive education, it still offers important insights for the introduction and institutionalization of inclusive school systems (Nohl, 2018). According to Berger and Luckmann (2003), institutionalization takes place as soon as habitualized actions are reciprocally typified by types of agents. Every typification that is carried out in this way is an institution (p. 58). Hence, instead of simply accepting the existence of institutions, the new institutionalism points to the importance of institutions as connecting structures between society and the individual actor. Only then, the formation, nature and change of institutions can be understood. The institutional development and establishment of inclusive education therefore depends on the overall societal recognition of instruction for all students as a common good. In most societies, however, the learning environment appropriate to the needs of students with SEN was – if at all – for the longest time located in exclusive settings such as special schools rather than in regular schools.

The institutionalization of special education support systems took place in three phases. Around 1900, guiding and structural principles of the general school system for the establishment of "institutions" for the schooling of children with disabilities were adopted (e.g., auxiliary schools in Germany; special classes in the United States). Between 1900 and 1970, schools for children with disabilities were expanded and institutionalized, with a following differentiation in the course of educational expansion. It was not until 1970 that options for common lessons for all children were pursued in different school experiments and models. However, these new concepts often found it difficult to assert themselves. Instead, the institution "special school" was accepted as necessary or even inevitable in many countries (Powell, 2009, p. 216). In these societies, the institutionalization of the special school system was extremely effective, because schools orient themselves in their organizational form on the institutionalized expectations of their environment (Meyer & Rowan, 2009): that is, in the segregating or separating schooling of children classified as possessing disabilities or SEN. With the inclusion of SEN students, schools often fear to risk their own legitimacy and thus their continued existence, regardless of whether school inclusion is more effective or not (Nohl, 2018).

Without a doubt, the resolutions passed by the UN-CRPD became a powerful instrument of global educational governance, which made inclusive education a new element of the "world culture" of education (Meyer et al., 1992) and thus part of the globally institutionalized expectation structure for education (Biermann & Powell, 2014). The effective implementation of inclusive education ultimately depends on forms of isomorphism; that is, processes of aligning school organizations to this globally institutionalized expectation structure. Three different types of isomorphism can be distinguished (Powell, 2009): the imitation of highly successful inclusive schools (mimetic isomorphism); the change of standards, classifications and expectations within special education (normative isomorphism), which led to a global diffusion of school inclusion (Biermann & Powell, 2014); and the pressure on states and their education systems to introduce inclusive education (forced isomorphism). The latter case is quite problematic, as it deviates from Berger and Luckmann's concept of institutions. Here the creation of institutions underlies no longer reciprocally typified habitualized actions, but rather explicit rules that have been internationally and/or nationally codified (Nohl, 2018).

The UN-CRPD is a perfect example of forced isomorphism, because all countries that ratified the UN-CRPD are obliged to guarantee inclusion in schools. However, school organizations are still confronted with the respective historically grown expectations and previously institutionalized support systems, which can conflict with the resolutions of the UN-CRPD. There are therefore different forms of coupling: close coupling where the school's educational practices correspond to institutionalized environmental (and policy) expectations; loose coupling wherein expectations in educational practice are reinterpreted by the schools; and decoupling which is when educational practices are completely detached from the externally communicated image of the schools and the postulated policy goals (Nohl, 2018).

The replacement of the special school system as an institution by the inclusive school is therefore a lengthy process and strongly dependent on the willingness to consistently implement inclusion. The different ways in which organizations deal with inclusion, which is influenced by internal logics and practices and carries the risk of lip service, is particularly problematic. To reduce the risk of decoupling of schools from the official goal of providing education for all and thus explain cross-national differences in IEC, four national factors are deemed especially important: economic resources, education system, political conviction, and classification of SEN in a country. The hypothetical impact of these factors on IEC is briefly discussed and the derived hypotheses to be tested in the analysis section.

Hypotheses

Economic resources. The implementation of inclusive instruction in mainstream schools is believed to be quite a costly endeavor. Whether more or fewer children receive any form of special education was found to be positively related to the economic resources of a country, in other words, to the gross national income (GNI) per capita. With higher mean income, the proportion of SEN students who receive education increases (Anastasiou & Keller, 2014; Anastasiou et al., 2018). However, these arguments fall short in countries in which an extensive special education system is already in place. In fact, cost arguments speak against the maintenance of special needs schools and in favor of inclusion. Not only is the average cost of lessons per pupil in mainstream schools lower than in special schools; human resources can be distributed differently and transport, possible accommodation and operating costs can be saved by closing special schools. Overall, it can be seen that rising costs for teachers and other educational staff are foreseeable, but falling investment and operating costs for special schools and student transport costs should more than compensate for this. In addition, demographic change is making special schools less profitable, as falling numbers of pupils per school increase operating costs, while space is freed up in mainstream schools (Sibanda, 2018). Hence, in contrast to SEC, no significant effects of national education expenditure or the mean income per capita of a country on the level of inclusive schooling are to be expected. This leads to the first hypothesis:

> *Hypothesis 1.* Higher mean income and educational expenditure in a country does not significantly enhance IEC.

Education system. The implementation of inclusive schooling is ultimately a question of the institutional logic with regard to selection criteria of the established school system. Educational institutional differentiation in the form of tracking and standardization arguably influences the extent to which the principle of "Education for All" is supported or prevented by the institutional logic of the education system. Tracking describes the level of stratification of an education system (Bol et al., 2014). External tracking refers to the formal differentiation of schools by tracks (school types), school maintainer (public versus private) or specializations,

or the informal differentiation according to reputation (ranking), resources, or student composition. Internal tracking (within schools) often refers to formal specializations and ability grouping, among others (Blossfeld et al., 2016). Based on in-depth evidence covering the full range of educational differentiation and institutional arrangements across 17 countries, Blossfeld et al. (2016) developed a framework to categorize four dominant models of secondary schooling with different levels of institutional differentiation, including tracking and age of first selection (from least selective to most selective): the Nordic Inclusive Model, the Individual Choice Model, the Mixed Tracking Model, and the Early Tracking Model. Entrich (2021) extended the number of societies covered by this classification to over 60. In countries with lower levels of differentiation, inclusive education should be more readily accepted and easier to integrate and implement than in highly stratified education systems. In combination with higher levels of differentiation, centrally administered high-stakes exit or entrance examinations as a form of rigid standardization of learning contents should foster higher competition for placement in elite educational tracks or the most prestigious institutions (Bol et al., 2014). Based on these institutional differences and underlying institutional logics in relation to selection criteria, varying organizational forms of learning support are to be expected (Powell, 2018). Countries with higher levels of differentiation and standardization are thus expected to have experienced more difficulties in the implementation of inclusive education.

> *Hypothesis 2.* In societies with higher levels of differentiation and standardization of education, IEC will be significantly lower.

Political conviction for inclusion. Whether inclusion is actively pursued and how many resources are made available to achieve the internationally set goal of education for all is of course largely related to when and to what extent the representatives of a country decided to introduce inclusion. Countries in which the resolutions of the UN-CRPD were signed and ratified immediately after they were presented in 2007 and in which the additional protocol was also ratified show a heightened interest in meeting the international expectations of a school for all. Although other countries have also ratified these resolutions, this may have been more a result of international pressure than based on the conviction that inclusion is absolutely necessary and should be implemented as soon as possible. There are still examples where the UN-CRPD has been ratified, but exclusive forms of special education continue to dominate and were even expanded in recent years (e.g., Switzerland). In many societies, the rhetoric is more ambitious than school realities (Powell, 2018).

> *Hypothesis 3.* In societies where the UN-CRPD was ratified earlier, the conviction to implement inclusive education is higher and thus IEC will be significantly higher as well.

Classification of SEN. In order to enjoy inclusive school education, pupils with disabilities must be officially classified as SEN students. According to estimates by the World Health Organization, around 15.3% of people across all age groups are counted in the category “moderate and severe disabilities” (WHO, 2011, p. 30), which refer to severity classes III and above. Of the 0–14-year-old population about 5.2% have SEN of this severity. However, there are very large differences in the proportion of students with SEN among the considered societies. Who ultimately receives a SEN status and who does not depends largely on what is officially recognized as SEN (D’Alessio & Watkins, 2009; Kim et al., 2019; Mithout, 2016; Ramberg & Watkins, 2020). Hence, it is not surprising that the proportion of students with an official SEN-status can vary greatly from country to country (see Figure 2).

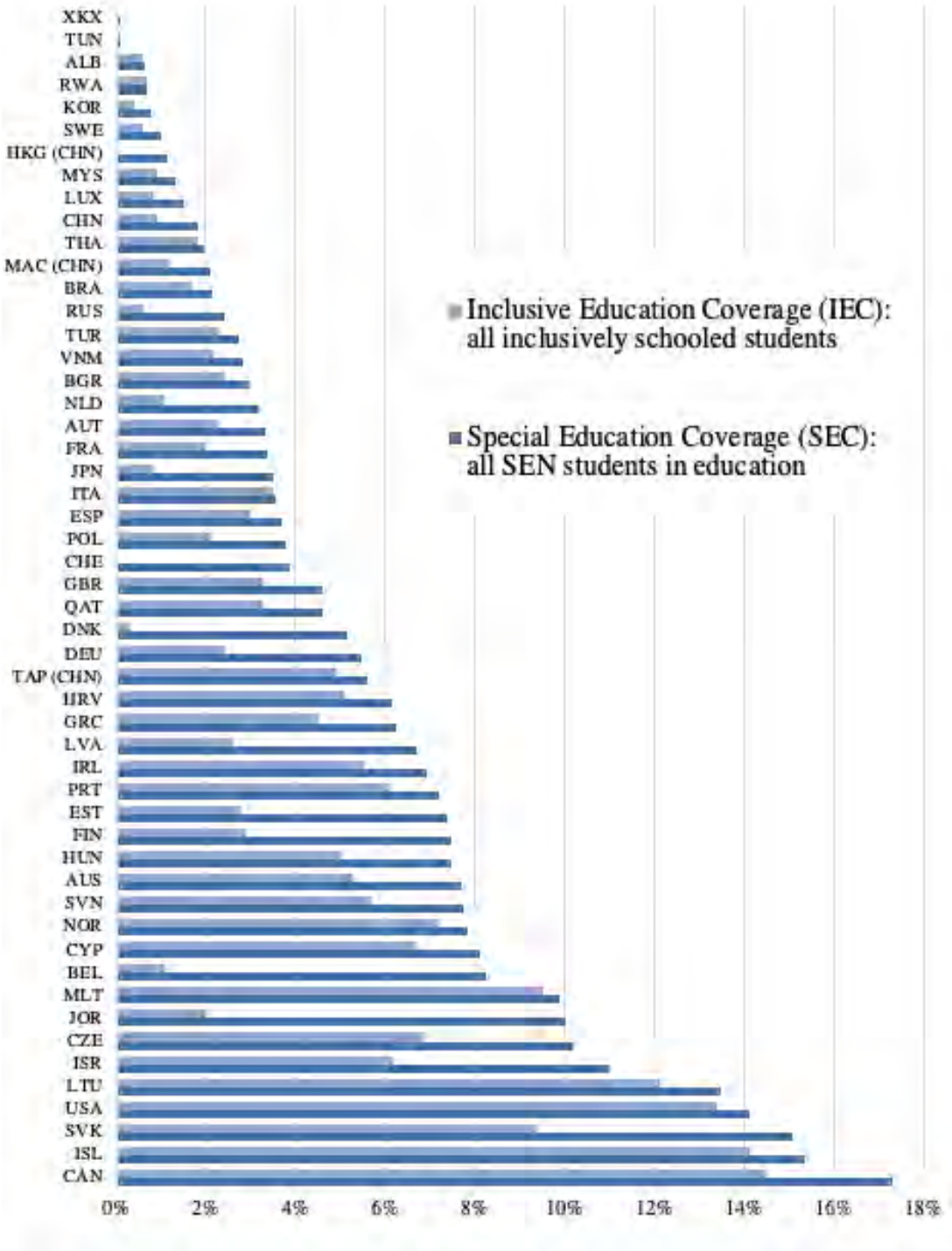

Figure 2: Special Education Coverage (SEC) and Inclusive Education Coverage (IEC) in 52 societies, 2018

Note: Data for 2018 for Korea, Russian Federation, and Vietnam from 2017; for China, Canada (Ontario), Croatia, Cyprus, Denmark, Hungary, and Macao from 2016; for Brazil from 2015; for Albania from 2012.

While in Sweden and Korea, for example, only about 1% of all students possess an attested SEN status, about 14% of US students are recognized as SEN students. Contrasting to countries like Korea or China, for instance, in the US almost 40% of all SEN students are recognized as having specific learning disabilities – a category that is marginal in Korea and completely missing in China (Kim et al., 2019). These significant differences in SEC between countries

refer in particular to the internal logic according to which a SEN status is assigned at all. How many students in a country receive inclusive schooling basically depends on the intrinsic logic of the system, that is, on the conditions under which someone is certified with the special SEN status and can accordingly qualify for special educational support. Perhaps unsurprisingly, the overall IEC rates shown in Figure 2 imply a clear relationship between SEC and IEC. In countries with larger proportions of students with an official certification of SEN, the potential proportion of inclusively schooled students is larger as well. Of course, the difference between SEC and IEC can be quite enormous across countries. Still, there seems to exist a general tendency. In sum, higher IEC is expected in countries where the SEN classification covers a larger range of disabilities and learning disadvantages and thus more students receive the SEN-status.

Hypothesis 4. In societies with generally higher special education coverage (SEC), IEC will also be significantly higher.

Methodology

Data

The data used in this analysis cover 52 societies and come from different international (World Bank, UNESCO, United Nations, and EASIE) and national sources (ministries of education as well as national statistics bureaus). Data were targeted for the year 2018 or the closest available to that year. Table 1 provides a detailed description of all variables.

Measures

Outcome Variable: Inclusive education coverage (IEC). This measure reflects the overall percentage of students who are schooled in inclusive settings as a percentage of the overall student population in a country. Data was obtained from the European Agency Statistics on Inclusive Education (EASIE) for the 31 European countries in the sample and supplemented by data from national ministries of education and their statistics bureaus for 21 societies for other regions of the world, including the Chinese special administrative regions of Hong Kong and Macao. To achieve comparable measures of IEC, instead of the postulated inclusive schooling rates in the considered societies, which do not necessarily match (D'Alessio & Watkins, 2009; Ramberg & Watkins, 2020), the operational definition of an inclusive setting from the UNESCO and the EASIE was used. Accordingly, the IEC rate for all considered societies "refers to education where the child/learner with SEN follows education in mainstream classes alongside their mainstream peers for the largest part – 80% or more – of the school week" (EASIE, 2020, p. 11). Furthermore, the IEC rates used are restricted to compulsory schooling, that is, to primary and lower secondary education in most societies. According to these data, the proportion of students schooled in inclusive settings within the mainstream schooling system varies between 0 % (Hong Kong/Switzerland) and 14.53 % (Canada) with a mean of 3.75 %.

Economic resources. To test the economic argument, 2018 data on Gross Domestic Product [GDP] per capita as direct measurement of the level of national economic development were used. Data was obtained from the World Bank (https://data.worldbank.org) and national statistics. According to these data, the GPD per capita is lowest in Rwanda (782.62 US Dollar) and highest in Luxembourg (116654.26 US Dollar), with a mean of 29,702.1 US Dollar. The data on GDP were transformed into a natural logarithm (logged GDP) to resemble normal distribution. To also control for governmental spending on education as a proxy for national value of education, national educational expenditure on education as a percentage of GDP was

used. Data were obtained from the UNESCO Institute for Statistics (UIS: http://data.uis.unesco.org) showing that governmental spending on education among the considered societies is lowest in China (1.89 % of GDP) and highest in Norway (7.91 % of GDP), with a mean of 4.72 % of GDP.

Educational differentiation and standardization. To account for educational institutional differentiation across societies, following the framework put forth by Blossfeld et al. (2016) and the work of Entrich (2021), a series of dummy variables was created for the different secondary schooling models. Based on in-depth evaluation of data on educational differentiation, the most selective secondary schooling model (Early Tracking) was assigned to those 9 societies where the first major selection occurs very early (age 10 or 11) and where formal external differentiation into different school types is found. The second most selective model (Mixed Tracking) was assigned to those 32 societies where selection typically occurs at age 14 or 15 and is followed by strong formal and/or informal external differentiation. For another 5 societies, the second least selective model (Individual Choice) was classified. Here formal internal differentiation is the norm. Finally, the least selective model (Nordic Inclusive) was assigned to those 6 societies with comprehensive systems focusing on informal internal differentiation.

To control for educational standardization, the existence of centrally administered high-stakes exit or entrance examinations is included drawing on the framework and data of Bol et al. (2014) and Entrich (2021). Additional data was obtained from national reports of UNESCO (http://www.ibe.unesco.org/en/resources/world-data-education) and national ministries of education. In total, 36 societies possessed central exams (1), 12 did not (0), whereas in 4 countries these exams were present only in subnational regions and are represented by respective proportions (i.e., Australia: 0.81, Canada: 0.51, Germany: 0.44, and the United States: 0.09).

Political conviction for inclusion. To measure when and to what extent the representatives of a country decided to introduce inclusion, 2 variables were introduced based on data from the United Nations (https://indicators.ohchr.org): years since the ratification of the UN-CRPD: that is, the number of years which have passed since the resolutions of the UN-CRPD were ratified referencing the year 2007, where the first ratifications are documented (0 to 11 years); and ratification of the optional protocol (1 = yes; 0 = no).

Classification of SEN. The proportion of students counted as SEN students reflects the special education coverage (SEC) of a country and is thus measured as the percentage of students schooled in any special education context: in special schools, special classes, and integrated/inclusive settings. In most of the considered societies, all students with SEN are schooled in one way or the other. In some, however, there may be students with SEN not counted in these statistics, because they are not schooled in state recognized institutions but at home or elsewhere. Nevertheless, the author is confident that the data used cover the actual situation of special education in the considered countries quite well.

Table 1: Descriptive statistics

Country code	Country/ Society	IEC (total inclusive students)	SEC (total SEN students)	GDP per capita (in US$)	Educational expenditure (% of GDP)	Model of secondary schooling	Central exams	UN-CRPD	
								Years since rat.	Rat. of opt. prot.
ALB	Albania	0.55	0.64	5284.38	3.61	Mixed Tracking	1	5	No
AUS	Australia	5.30	7.70	57395.92	5.12	Indiv. Choice	.81	10	Yes
AUT	Austria	2.29	3.34	51525.05	5.36	Early Tracking	0	10	Yes
BEL	Belgium	1.13	8.25	47491.32	6.41	Early Tracking	0	9	Yes
BGR	Bulgaria	2.41	2.96	9423.56	4.09	Mixed Tracking	1	6	No
BRA	Brazil	1.73	2.14	9001.23	6.32	Mixed Tracking	0	10	Yes
CAN	Canada	14.53	17.30	46313.17	5.27	Nordic Inclusive	.51	8	No
CHE	Switzerland	0.00	3.86	82818.11	5.13	Early Tracking	0	4	No
CHN	China	0.95	1.80	9976.68	1.89	Mixed Tracking	1	10	No
CYP	Cyprus	6.68	8.10	28689.71	5.78	Mixed Tracking	0	7	Yes
CZE	Czech Rep.	6.95	10.19	23046.95	3.85	Early Tracking	1	9	No
DEU	Germany	2.37	5.45	47639.00	4.91	Early Tracking	.44	9	Yes
DNK	Denmark	0.26	5.13	61390,69	7.82	Nordic Inclusive	1	9	Yes
ESP	Spain	2.97	3.69	30337,68	4.21	Mixed Tracking	0	11	Yes
EST	Estonia	2.75	7.38	23258,47	4.97	Mixed Tracking	1	7	Yes
FIN	Finland	2.91	7.45	50021,29	6.38	Nordic Inclusive	1	2	Yes
FRA	France	2.00	3.39	41631,09	5.45	Mixed Tracking	1	8	Yes
GBR	United Kingdom	3.28	4.59	43043,23	5.44	Indiv. Choice	1	9	Yes
GRC	Greece	4.49	6.25	20324,31	3.96	Mixed Tracking	0	6	Yes
HKG	Hong Kong	0.00	1.16	48542,89	3.33	Mixed Tracking	1	10	No
HRV	Croatia	5.09	6.13	14920,19	3.92	Mixed Tracking	1	11	Yes
HUN	Hungary	4.99	7.47	16150,77	4.67	Early Tracking	1	11	Yes
IRL	Ireland	5.51	6.93	78621,23	3.51	Indiv. Choice	1	0	No
ISL	Iceland	14.08	15.34	72968,70	7.66	Nordic Inclusive	0	2	No
ISR	Israel	6.16	11.00	41719,73	6.09	Mixed Tracking	1	6	No
ITA	Italy	3.52	3.55	34520,09	4.04	Mixed Tracking	1	9	Yes
JOR	Jordan	1.98	10.00	4241,79	3.03	Mixed Tracking	1	10	No
JPN	Japan	0.82	3.50	39159,42	3.18	Mixed Tracking	1	4	No
KOR	Korea, Rep.	0.41	0.77	33340,27	4.33	Mixed Tracking	1	10	No
LTU	Lithuania	12.05	13.48	19080,62	3.81	Indiv. Choice	1	8	Yes
LUX	Luxembourg	0.75	1.50	116654,26	3.57	Early Tracking	1	7	Yes
LTA	Latvia	2.62	6.71	17805,28	4.40	Mixed Tracking	1	8	Yes
MAC	Macao	1.19	2.10	87208,54	2.74	Mixed Tracking	1	10	No
MLT	Malta	9.47	9.90	30133,47	4.82	Mixed Tracking	1	6	No
MYS	Malaysia	0.93	1.32	11373,23	4.48	Mixed Tracking	1	8	No
NDL	Netherlands	1.13	3.20	53048,10	5.18	Early Tracking	1	2	No
NOR	Norway	7.20	7.84	81734,47	7.91	Nordic Inclusive	1	5	No
POL	Poland	2.15	3.77	15460,64	4.56	Mixed Tracking	1	6	No
PRT	Portugal	6.09	7.21	23461,57	5.02	Mixed Tracking	0	9	Yes
QAT	Qatar	3.35	4.60	68793,78	2.86	Mixed Tracking	0	10	No
RUS	Russian Fed.	0.65	2.40	11370,81	4.69	Mixed Tracking	1	6	No
RWA	Rwanda	0.68	0.68	782,62	3.07	Mixed Tracking	1	0	Yes
SVK	Slovak Rep.	9.45	15.07	19428,12	3.94	Mixed Tracking	1	8	Yes
SVN	Slovenia	5.72	7.75	26054,54	4.78	Mixed Tracking	1	10	Yes
SWE	Sweden	0.64	1.02	54589,06	7.57	Nordic Inclusive	0	10	Yes
TAP	Taiwan	4.89	5.62	22294,00	5.05	Mixed Tracking	1	10	No
THA	Thailand	1.83	1.97	7295,48	4.12	Mixed Tracking	1	10	Yes
TUN	Tunisia	0.10	0.10	3438,79	6.60	Mixed Tracking	1	10	Yes
TUR	Turkey	2.26	2.72	9370,18	4.37	Mixed Tracking	1	9	Yes
USA	United States	13.41	14.10	62840,02	4.99	Indiv. Choice	.09	0	No
VNM	Vietnam	2.16	2.81	2566,60	4.17	Early Tracking	1	3	No
XKX	Kosovo, Rep.	0.00	0.08	4419,91	3.30	Mixed Tracking	0	0	No
Mean		**3.75**	**5.60**	**35038.48**	**4.73**	—	**.73**	7.25	—

Analysis Strategy

In this secondary meta-analysis, first, correlation statistics for the country-level predictors are presented. These correlations allow statements about fundamental relationships between variables and are important for the subsequent identification of possible mediation effects.

Second, using the percentage of IEC per country as a dependent variable, hypotheses are tested using the most popular quantitative approach to analyze country effects: OLS regressions.

Although many multi-country data sets contain thousands of individuals, most include rarely more than 30 countries. With more than 50 cases (societies) the data used here offer a comparatively high number of cases and greater reliability than most other studies (see Bryan & Jenkins, 2016).

In Table 3, the different predictor groups are independently tested before they are combined in one overall model. This way, the hypotheses are tested individually before checking which factors best describe the differences in IEC across countries.

Finally, to ensure the reliability of results, robustness and multicollinearity checks are briefly discussed.

Findings

Bivariate Correlation Statistics

Correlation statistics between all country-level variables are reported in Table 2. Cross-national differences in IEC are positively correlated with Nordic (r = .279) and Individual Choice schooling models (r = .367), and, above all, SEC in a country (r = .900), but negatively correlated with the Mixed Tracking schooling model (r = -.278). These bivariate statistics provide first support for hypotheses 1, 2, and 4.

Table 2: Bivariate correlation statistics

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1)	*DV: Inclusive Education Coverage (IEC)*	1.00									
(2)	Mean income (logged GDP per capita, in US$)	.265	1.00								
(3)	National educational expenses (as % of GDP)	.194	**.327**	1.00							
(4)	Nordic Inclusive Model (vs other)	**.279**	**.325**	***.649***	1.00						
(5)	Individual Choice Model (vs other)	**.367**	.217	-.037	-.118	1.00					
(6)	Mixed Tracking Model (vs other)	**-.278**	***-.466***	***-.425***	***-.457***	***-.413***	1.00				
(7)	Early Tracking Model (vs other)	-.164	.156	.027	-.165	-.149	***-.579***	1.00			
(8)	Standardized exit/entrance exams (vs no)	-.147	-.222	-.256	-.120	.040	.157	-.132	1.00		
(9)	UN-CRDP: Years since ratification	-.150	.074	-.013	-.142	-.189	.223	-.020	.052	1.00	
(10)	UN-CRDP: with optional protocol (vs no)	-.075	-.038	.245	-.014	.053	-.049	.033	-.126	***.378***	1.00
(11)	Special Education Coverage (SEC)	***.900***	**.311**	.231	**.293**	**.292**	**-.328**	-.053	-.111	-.102	-.028

Note: Significant correlations ($p < .05$) are printed in bold and highly significant correlations ($p < .01$) in bold italics.

Correlations between the predictor variables are mostly weak to moderate. Notable positive correlations exist between national mean income and educational expenditure; Nordic inclusive model and mean income and educational expenditure; both UN-CRPD variables, (time since the resolutions of the convention were ratified in a country) and whether the optional protocol was ratified at all correlate with each other; and SEC and mean income, Nordic Inclusive and Individual Choice Models. These correlations indicate that while SEC is clearly related to the economic resources of a country, thus confirming past findings (Anastasiou & Keller, 2014; Anastasiou et al., 2018), IEC is not. Furthermore, in societies with more egalitarian schooling systems, SEC and IEC are generally more advanced.

Multivariate Regressions

To explain the cross-national differences in IEC, OLS regressions test the impact of national characteristics (Table 3). In model 1, the possible impact of economic resources on IEC is tested. Results show that neither with higher mean income (logged GDP per capita) nor with larger proportions of educational expenditure in a society the proportion of students receiving education in inclusive settings increases, thus confirming hypothesis 1.

Table 3: OLS Regression predicting cross-national differences in inclusive education coverage (IEC) (showing standardized beta-coefficients, *N*=52)

	M1		**M2**		**M3**		**M4**		**M5**	
Predictor groups:	**Economic Resources**		**Education System**		**Political Conviction**		**Classifi-cation**		**All predictors**	
	B	p	B	p	B	p	B	p	B	p
Economic resources										
Mean income (logged GDP per capita, in US$)	.226								-.039	
National educational expenses (as % of GDP)	.120								.015	
Educational differentiation and standardization										
Model of secondary education (Early Tracking Model omitted)										
Nordic Inclusive Model			.360	*					.121	
Individual Choice Model			.455	**					.199	*
Mixed Tracking Model			.095						.126	
Standardized exit/entrance exams yes (vs no)			-.136						-.085	
Political conviction for inclusion										
UN-CRDP: Years since ratification					-.142				-.007	
UN-CRDP: with optional protocol yes (vs no)					-.022				-.060	
SEN classification										
Special Education Coverage (SEC)							.900	***	.851	***
Adjusted R^2	.046		.198		-.017		.805		.809	

Note: ***P<0.001; **P<0.01; *P<0.05

Model 2 then tests the influence of educational differentiation and standardization on IEC, showing that in societies with lower educational institutional differentiation (Nordic Inclusive or Individual Choice Models) the likelihood that students will be schooled in inclusive settings is significantly higher than in societies with highly differentiated systems (Early Tracking Model). Evidence for the suspected relationship between standardized examinations and IEC is not found.

As already reported in the correlation statistics, a clear impact of the official political conviction for inclusion as expressed in the speed of ratification of the UN-CRPD and its optional protocol cannot be confirmed (model 3).

Model 4 tests the assumptions related to the classification of SEN in a society. Results show similar effects to those reported in the bivariate correlations, thus further supporting hypothesis 4.

Model 5 brings together all predictors, testing for dominant effects. Results show robust effects for Individual Choice Model and SEC. It appears that SEC largely mediates other effects in the model, such as those previously found for societies with the Nordic Inclusive model of education. This model provides clear support for hypotheses 1, 2, and 4.

Robustness and Multicollinearity Checks

Given the limited number of observations, the difference in measurement of the variables from diverse data sources (possibility of noisy data), and the considerable correlations between several predictor variables, robustness and multicollinearity checks are in order. First, to check for country outliers and influential cases which could considerably affect the results due to the low number of cases (N = 52), robust regressions were carried out using the STATA routine for robust regressions (rreg). Results show no indication of biased results through the selection of countries.

Second, to make sure the estimation of coefficients is not biased due to strong correlations between predictor variables (multicollinearity), collinearity statistics were carried out and show a variance inflation factor (VIF) between 1.166 (standardized tests) and 2.240 (Nordic Inclusive model). Hence, the tolerance for all measures was well beyond the critical 0.1 level (.446 to .858), wherefore multicollinearity can be ruled out for this analysis.

Discussion

The results of the OLS regressions confirmed that there are generally no higher rates of inclusion in high-income countries or those with higher educational expenditure (hypothesis 1). It is true that there is a connection between national income and the provision of special education (Anastasiou & Keller, 2014; Anastasiou et al., 2018). However, this connection cannot be extended to inclusive education. In fact, resources that have already been provided and are thus available for special education can be redeployed for effective schooling in inclusive settings. This way, exclusive forms of special education, such as special schools and classes, could be shut down, while at the same time enhancing inclusive education provision. Ultimately, this requires conviction and the will to effectively implement and expand inclusive education in a country.

Analyses also showed that less differentiated education systems generally have higher rates of inclusion (Hypothesis 2). Institutional differences and underlying institutional logics in relation to selection criteria clearly affect the degree to which education for all is implemented. Even though no evidence was found that standardization in the form of central exams results in less inclusive schooling, the basic principles of inclusion seem to gain more recognition in countries with less stratified education systems than in those with more stratified systems.

In contrast, neither the earlier ratification of the UN-CRPD nor the additional ratification of the optional protocol, contrary to the assumptions of Hypothesis 3, lead to a noticeable increase in IEC. This implies the possibility of decoupling educational practices from fixed political goals. The effectiveness of already established special education support systems may actually prevent or at least slow down the implementation of inclusive education. Whether the political conviction regarding the absolute necessity of inclusion in school is sufficiently well covered by the two indicators chosen remains questionable though. In future work, more reliable indicators need to be used, such as national directives and reform plans with concretely formulated milestones.

The general SEC of a country is the most powerful influencing factor. The extraordinarily strong effect of the coefficient as well as the high R2, which alone explains 80% of the variance, are proof of the decisive connection between the inclusion rate and the general belief in the importance of special needs education in general. In countries with a higher proportion of schoolchildren with certified SEN, after the adoption of the UN-CRPD, a higher proportion of inclusively schooled schoolchildren can be found on average.

Taking into account the results of the bivariate correlations, an important mediation effect can be isolated: SEC mediates significantly the effects of the secondary schooling model. This suggests that the cross-national variation in IEC is not only highly linked to SEC in a country, but that higher SEC and IEC are generally more common in societies with lower educational institutional differentiation (e.g., societies employing the Nordic Inclusive or Individual Choice Models).

For future research, it will become increasingly important to clarify whether increasing inclusive education rates are actually due to improved conditions and organizational change or due to the softening of the SEN classification.

Conclusion

The findings of this work lead to the following conclusions. Firstly, the theoretical approach employed in this analysis, the new institutionalism, proved beneficial for the understanding of the institutional development and establishment of inclusive education based on the societal recognition of “Education for All” as a common good. The further development of education systems towards this goal largely depends on determined educational policies, which can only have success if politics and public commonly value and push inclusive education. Since the UN-CRPD and other similar agreements are examples of forced isomorphism, the danger of decoupling the set goal of education for all from educational practices in school is likely. So long as school systems are characterized by high educational institutional differentiation and its immanent institutional logic, a fully inclusive education system will not be achieved. Hence, whether a shift towards full inclusion becomes reality largely depends on how willing policy-makers and societies at large are to change their education systems, focusing stronger on equality instead of competition, stratification and excellence. Comprehensive education reforms targeting the whole education system are necessary to enable fully inclusive education.

Second, and connected to this point, the cross-national differences in inclusive education are not least due to what is officially recognized as SEN and promoted in an education system. The national differences in the classification or attribution of what is considered SEN are highly problematic and often serve to overlook students with actual need for inclusive schooling. The results of this work thus call for an international measure of SEN and corresponding international standards and subsequent education reforms targeting the general education system.

Third, this analysis also shows how different factors generally assumed to be influential (e.g., economic resources, political conviction) were found to exert no effect on the provision of inclusive education. Additional financial expenses due to the change from an exclusive to an inclusive school system are not necessarily required. Instead, policy makers need to create legal and administrative options for a dovetailing and reallocation of existing resources. Political postulates must ultimately be followed by action in order to fully establish inclusive education.

In sum, the findings of this analysis are a good start for future endeavors in macro-sociological and educational analyses of international inclusive education. The quite challenging collection of data to meet the international standard definition of inclusive education was and remains a prerequisite for this kind of comparative analysis. Future studies should extend the range of countries, consider different and other country-level measures as well as multi-level modeling to connect macro- with micro-level data, and stronger concentrate on the collection and analysis of trend-data.

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