**Global Determinants of Education Reform, 1960-2017\***

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**Abstract**

Starting after World War II and expanding especially through the 1990s, education experienced a period of massive globalization that generated a wave of reforms around the world. However, in the contemporary era the legitimacy of the liberal and neoliberal world order that supported globalized models of education is weakening, perhaps undercutting the prevalence of education reform. To shed light on how global changes are influencing education, we consider changes in the levels of education reform in 147 countries over the period 1960 to 2017. We use dynamic negative binomial panel regression models to examine the determinants of national education reform, focusing particularly on historical trends and the changing role of the World Bank and International Non-Governmental Organizations (INGOs). We find a sharp drop in levels of reform in recent decades, in line with arguments that globalized models of education are becoming less dominant. We also find evidence of changing power dynamics among prominent organizational actors in the global system. The influence of World Bank loans in promoting education reform declines over time, while the influence of INGOs grows. This suggests a changing system of governance, where formal coercive pressures, such as the loan conditionalities used by the World Bank, become less palatable, while the normative influences of civil society grow stronger. Overall, our findings show that education reform arises as a macro – global – process as much as a response to local needs and conditions.

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**Global Determinants of Education Reform, 1960-2017**

In recent decades, levels of democracy are falling in many countries around the world, while populism, authoritarianism, and nationalism are on the rise (Moffitt 2016; Bonikowski 2017; Adler-Nissen & Zarakol 2021; Simmons and Goemans, 2021). Civil society and non-governmental organizations (NGOs) are also increasingly restricted and regulated, especially on international dimensions such as foreign funding (Dupuy et al. 2016; Bromley et al. 2020). Additionally, around the world, there is growing recognition of polarization and inequality on multiple fronts, often attributed to the failure of neoliberal economic policy to live up to its lofty ideals (Ostry et al. 2016). Together, these changes indicate a rapid weakening of the legitimacy of the globalized Western institutions and ideologies that characterized the post-World War and, especially, the post-Cold War world order (Mearsheimer 2019; Borzel and Zurn, 2021). The worldwide expansion of education and the globalization of educational models have been a core feature of world society in the post-World War II era (Meyer et al 1992). But as challenges to the world order grow, the status of education as a central vehicle for individual and national development may weaken, and the roles of key carriers of educational ideologies such as international organizations are likely to change.

To shed light on how world changes are influencing education, we constructed a unique, primary database of education reforms, containing the most comprehensive cross-national, longitudinal information about policy changes to-date. Specifically, we consider changes in the levels of education reform in 147 countries over the period 1960 to 2017. In total, 6,696 reforms are distributed across 6,939 country-years in the analyses. We use dynamic negative binomial panel regression models to examine the changing determinants of national education reform. We pay particular attention to historical trends and the dynamic role of two distinct kinds of international organizations (the World Bank and International Non-Governmental Organizations [INGOs]). Together, our findings indicate that education reform largely emerges out of global processes beyond the specifics of national conditions.

We focus on the association between global influences and levels of education reform worldwide because this relationship provides insight into the rise and possible fall of the authority of globalized models of education. At global and national levels, efforts to change policies or laws in education partly indicate the intensity of belief in education as a core institution in society and in rationalized approaches to progress. Education reforms and policies often reflect government efforts to satisfy citizens’ preferences (Lu, 2014; Stasavage, 2005). For example, reforms that focused on expansion at the primary level were initiated to gain the support of median voters to increase state legitimacy (Paglayan, 2021). Reform discourse is also a leading indicator of government beliefs about how to pursue financial, economic, and political gain. In countries around the world, global models around the Education for All movement and neoliberal economic policies created a worldwide wave of reform through the 1990s and 2000s. But as the international order erodes, simultaneous global efforts to restructure education are likely to fade as well.

Our study makes three main contributions. First, neo-institutional scholars in transnational sociology and international relations have long documented the influence of Western cultural norms in shaping the world order (Finnemore 1996; Meyer et al. 1997). We posit that the dominance of these norms is weakening and empirically test our arguments by examining whether one core institution, education, is becoming less susceptible to global pressures. A great deal of research has focused on the political consequences of attacks on the liberal and neoliberal order, but few have examined social dimensions of change. In line with our expectations, we find declining levels of education reform in recent years. Second, our results provide evidence of changing power dynamics among prominent organizational actors in the global system. The influence of World Bank loans in promoting education reform declines over time, while INGO influence grows. This provides evidence of a changing system of governance where formal coercive pressures, such as the loan conditionalities used by the World Bank, become less palatable, while the normative influences of civil society grow stronger. Third, we introduce a new cross-national, longitudinal database of education reforms, and make it available for general use. The database is the most comprehensive effort of its kind and can provide a foundation for new research on the causes and consequences of education reform. Together, our findings suggest that education reform only partly arises as a technical response to local conditions. To a large degree, education reform has been driven by the globalized ideologies of world society, which are now weakening.

**Background: Education in World Society**

In the decades following World War II, a world society built on Western, liberal models of progress and justice became institutionalized and expanded worldwide, underpinning the development of post-War political, social and economic institutions (Meyer et al. 1997). This globalizing culture “emphasizes Weberian rationality as the means to both justice, defined as equality, and progress, defined as wealth accumulation” (Finnemore 1996: 325-326). As liberal world society became dominant, alternative ways of structuring society, such as duty, tradition, or fate became overshadowed by the rationalizing Western agenda as a cultural matter, as much as a functional one (Berger et al. 1973). The bureaucratic nation-state and its core components expanded dramatically: for instance, the mean number of national ministries in a state nearly doubled between 1945 and 1990 (Kim et al 2002). One key area of expansion was the growth of modern education systems, which grew massively around the world at all levels and over the whole life course, especially in countries most integrated into the world society and economy (Meyer et al. 1992; Schofer & Meyer 2005; Jakobi 2012).

Following the collapse of the Soviet Union, universalistic world society principles and policies globalized more rapidly, creating a new iteration of the world order. On one hand, American influence as a hegemonic power increased, and a more aggressive version of liberalism emerged, to a degree captured by the term “neoliberalism.” Many characterizations of the neoliberal era focus on the globalization of economic policies aimed at promoting free markets. On the other hand, the post-Cold War period is also marked by a more expansive set of changes. For example, the global human rights movement expanded rapidly during the 1990s (Stacy 2020), including in education (Bajaj 2010; Meyer et al 2010). Ruggie (1982) describes the central shift as moving from a post-World War II period of “embedded liberalism” (1982) to a post-Cold war period where liberal social, political, and economic principles are disconnected from bounded geographic territories (Ruggie 1993). Thus, the period following the fall of the USSR is best characterized as a period of globalization of broad cultural principles asserted that the choices of individual actors provided the key to successful economies, polities, and societies anywhere (Drori 2008; Meyer 2010; Jepperson & Meyer 2021). The rapid and global diffusion of economic, political, and social policies rooted in the valorization of individuals and choice was “the defining feature of the late twentieth century” (Simmons et al. 2006: 781).

The principles of world society supported not only privatization and deregulation, but also an intensified celebration of civil society, democratization, human rights and – especially important for our purposes – education reform. The earlier liberal focus on education as the key institution intended to help children grow into informed and rational citizens and consumers intensified through the 1990s. As one indicator, education became an increasingly prominent part of political platforms around the world (Jakobi 2011). Access to schooling, already important in earlier decades as part of nation building, took on newfound force as an individual matter; the 1990s witnessed the rise of a global focus on “Education for All” and the creation of a vast global movement to get all children into school (Mundy 2007; Chabbott 1998). And new fields of effort emerged, such as issues of school quality and expanding curricular emphases. Schools worldwide should now teach numeracy and literacy, but also human rights and “twenty-first century skills” of critical thinking and communication (Suárez and Ramirez 2007; Kay and Greenhill 2010). Furthermore, guided by the economic side of neoliberal ideologies, school systems were thought to best achieve their educational goals through structures, funding models, curricular programs, and management strategies that reflect the choices of parents and students (Renzulli & Roscigno 2005; Buckner 2017), as well as rationalized management strategies such as ongoing evaluation and assessment (Kamens & McNeely 2010; Ramirez et al. 2018). Education was a central focus of world society, envisioned as a fundamental building block to achieving progress and justice, and a wide array of rights-based and efficiency-based policies globalized in the 1990s (Ramirez et al 2016): A wave of reforms washed across the world to reflect the centrality of these global models.

**The Determinants of Reform**

*Education Reform in a Weakening World Order*

There are many reasons to doubt that the expanding visions of progress and justice in the ideologies of world society and the liberal and neoliberal world order could ever become reality. Serious flaws were evident decades ago. For instance, global financial markets collapsed during the Asian currency crisis in 1997, exposing the volatility of global capitalism and the fact that millions of vulnerable people could suffer from the self-interested decisions of distant and elite investors (Wade 2000). Shortly after, protests of the World Trade Organization in Seattle in 1999 demonstrated both the discontent with the instability of global capitalism, and the newfound power of transnational activism (Evans 2005; Tarrow 2005). The same year, Boris Yeltsin’s controversy-ridden efforts to bring democracy and capitalism to Russia stopped short with his unexpected resignation on December 31, 1999, which ushered in the increasingly illiberal Putin era (McFaul 2018). At the same time, the world increasingly recognized that NGOs were not a “magic bullet” for development and democracy; they could be corrupt, inefficient, and reproduce inequality, just like other actors (Edwards & Hulme 1995). Then, on September 11, 2001, the World Trade Center was attacked, and the United States went to war in Iraq and then Afghanistan, in what looked like a return to national self-interest to many observers (Dasgupta & Kiely 2006; Desch 2008). The widely criticized wars and then the 2008 financial crisis further undermined trust in the global system and, especially, undercut the legitimacy of American hegemony on cultural, political, and economic grounds (Kirshner 2014).

Although there have long been critics of liberal and neoliberal world society, oppositions have increased in the past decade (Guillén 2018; Norris & Inglehart 2019; Kotz 2015). The problems of capitalism represent one front of critique. Economically, the average person experiences more income inequality in 2015 relative to 1990, due to increases inside the countries with the largest populations (Hassell 2018; see also Alderson & Nielsen 2002, Held & Kaya 2007). But challenges arise on multiple fronts (see, e.g., Bonikowski 2017 for a discussion of nationalism, populism and authoritarianism reactions). A growing wave of empirical studies document falling levels of democracy worldwide (Fukuyama 2012; Kurlantzick 2013), increased restrictions on civil society around the world (Dupuy et al. 2016; Bromley et al. 2020), growing attacks on higher education (Schofer et al. 2019), and the rise of repressive laws against sexual minorities (Hadler & Symons 2018). Together, these studies suggest that the globalized liberal and neoliberal principles that underpin world society and the liberal international order are weakened.

This historical trajectory suggests several possible future scenarios for education reform. First, a shift in the global order could generate a new wave of education reform, bringing in a new set of policies that reflect alternative values and educational theories to (neo)liberal world society. There are certainly reactionary instances in individual countries. Hungary, for example, has enacted extensive curricular reforms at all levels of education to reflect an increasingly nationalistic and autocratic government (e.g., Schofer et al. 2019). And China is enacting reforms to promote obedience and national security: A *New York Times* articlereports, “Along with the national security lessons for schools, the government also is overhauling and halving the instruction time for a subject called liberal studies. [Pro-Beijing politicians say those lessons,](https://www.nytimes.com/2019/09/01/world/asia/hong-kong-protests-education-china.html) which are dedicated to nurturing critical thinking, have poisoned young people against the government. Officials say the new curriculum should teach facts about Hong Kong and China’s recent development but should not ask students to analyze them” (Wang 2021). Despite the existence of some cases that do not fit the frame of (neo)liberal world society, we do not (yet) see a consolidated global alternative that would provide a basis for a spate of reforms all around the world simultaneously (for example, through something like the creation of a competitor to the United Nations or a fundamental shift in its mission). Some individual countries are undertaking radical anti-liberal education reforms, but for the moment these shifts seem to come from local conditions more than a new dominant and globalized ideology ushering in a wave of reform around the world. We test this argument in our empirical analyses by showing how levels of education reform are changing across the world.

Second, if an alternative global paradigm emerges in the future, it needs to value education and rationalized progress as much as (neo)liberal doctrines to support equally high levels of school reform. But many alternative models of society put less faith in the individual, which may undercut expansive education systems. For example, anti-intellectual versions of populism generate hostility towards education in general and would likely generate declining support for education reform (Furuta, et al. forthcoming). Authoritarian models may also support some limited forms of mass schooling designed to promote conformity and obedience, but likely have little need for complex systems aimed at creating expanded individuals who are prepared to exercise choice in all realms throughout the life course; instead, they might support top-down forms of “deschooling” professional training and favor a system of vocational apprenticeships (Schofer et al. 2019; Sukarieh and Tannock 2020). In addition, the Weberian pursuit of an imagined bureaucratic rationality likely promotes particularly high levels of organizational and institutional reform, relative to more informal or pragmatic and incremental cultural alternatives (Brunsson 2009; Evans and Rausch 1999). Consequently, we expect dampened levels of reform in recent years rather than an increase. This discussion leads to two hypotheses:

H1a. The average number of education reforms in a country will be especially high during the 1990s and 2000s, reflecting the globalized heyday of the neoliberal era and Education For All.

H1b. The average number of education reforms in a country will decline starting in the late 2000s, reflecting the worldwide erosion of authority of liberal and neoliberal global principles.

*International Organizations and Education Reform*

Macro-historical trends reveal complex, large-scale shifts that unfold over time and cannot be reduced to a single indicator, but we can also look to more concrete mechanisms of change for further insight. International organizations are powerful actors in the global diffusion of policies in general (Finnemore 1993; Barnett & Finnemore 1999), and in education specifically (Benavot & Resnick 2007). Two kinds of international organizations are particularly well-known conduits of global norms around education: the World Bank and INGOs.

The World Bank is a famous (or infamous) catalyst of education reforms (Mundy & Menashy 2014). It has a long history of requiring governments to make dramatic and often contested changes to education systems as a condition for receiving loans (Heyneman 2003; Jones 2007; Klees 2012). Resource dependencies can “generate or alleviate pressure to reform” in ways that align with donor priorities (Steiner-Khamsi 2010: 331). Unsurprisingly, the World Bank has pressed countries towards decentralization and privatization, leveraging its financial and technical resources for the promotion of neoliberal education reforms (Mundy & Verger 2015). For example, a study of Nepal from the mid-1980s to 2010 describes how the “neoliberal world order” was thrust into the small Himalayan nation through the Bank’s educational policy recommendations of marketization, privatization, and decentralization (Regmi 2017).

In part, the Bank’s power to shape national policy directions is straightforwardly coercive, although it has less control over implementation. However, the cultural and ideological elements of the Bank’s work in education are increasingly apparent (Kim & Boyle 2012; Klees 2012). For example, a study of higher education policy reform in Ethiopia describes how World Bank influence is not only financial, but also symbolic (Molla 2013). Following Bourdieu, the study outlines how the Bank’s great cultural legitimacy during the neoliberal era renders the prescriptions acceptable to (or even welcomed by) local policy actors. In line with these cultural depictions of the World Bank, we focus on its role as a carrier of world society norms, where a prominent mechanism of influence is financial coercion.

INGOs are also carriers of world society norms, perhaps the most notable enactors and transmitters of global social and cultural principles (Boli & Thomas 1997, 1999; Kim 2013). Among other activities, INGOs provide education, develop curricula, build schools, conduct research and monitoring, and propagate world educational standards and goals around education through policy advocacy and campaigns to raise awareness (Schafer 1999; Bromley 2010). INGO memberships are repeatedly found to be associated with outcomes such as expanded enrollments, persistence in schooling, and education spending, net of features of countries such as aid dependence or state strength (Schafer 1999; Schofer & Meyer 2005; Kim & Boyle 2012). INGO memberships are also associated with features of education systems such as increased accessibility due to reduced school tracking and reduced use of high-stakes exams (Furuta 2020, 2021). Relative to the World Bank, INGOs have reduced capability for using financial coercion to press governments to change education policies. Instead, they rely on normative claims and voluntary action. Though lacking the formally coercive bite of loan conditionalities, social and normative pressures are powerful influences in the global system (Hafner-Burton & Tsutsui 2005; Hafner-Burton 2008).

It is no coincidence that the rise of neoliberal approaches to education policy grew together with stronger INGO networks (Mundy 1998; see also Boyle & Kim 2009). With decentralization, private organizations are encouraged to flourish and provide greater choice and social services, in replacement of the state. The Bank itself has long promoted the growth of civil society, beginning with a formal policy brief in 1981— by 2004 it had 220 dedicated civil society specialists (Murphy 2005). And there are dense interactions between INGOs and the Bank, as illuminated in the case of the Bank’s pursuit of universal basic education in Niger in the early 2000s (Murphy 2005). Overall, both the World Bank and INGOs are carriers of world cultural principles in education. Thus, we posit:

H2a. Countries that receive more World Bank loans in education will conduct more education reform.

H2b. Countries that have more memberships in INGOs will conduct more education reform.

Despite their shared linkage to some common global principles, the World Bank and INGOs also embody dimensions of world society that can be at odds with one another. As outlined in the canonical statement, world society is rife with “internal contradictions and inconsistencies” that “make certain forms of struggle inevitable” (Meyer et al. 1997: 168-169; see also Weaver 2008). Whereas the Bank represents a vision of progress with a focus on efficiency and effectiveness rooted in free market ideology, INGOs often represent a rights-based frame emphasizing access and inclusion (Boyle & Kim 2012). Even more sharply, the World Bank has relied on coercion via resource dependency to press countries to change their education policies, whereas INGOs rely on social and cultural controls such as transnational activism in education (Mundy & Murphy 2001).

The growing challenges to the world order lead us to suspect that the differences between INGOs and the World Bank may create divergent trends in their influence on education reform. Over time, the principles of world society create an expanding number of legitimate actors that the Bank increasingly needs to account for and compete with, while also undercutting the legitimacy of outright coercion as a control mechanism (Meyer 2010; Bromley & Meyer 2015). In line with our view, Mundy and Verger (2015) outline four reasons the Bank’s role in education may be changing: (1) the increasing power of emerging economies such as China and Brazil, (2) growing diversity of preferences among Bank borrowers (especially a preference for OECD assistance), (3) borrower resistance to the historical rigidity of Bank policy prescriptions, and (4) a struggle to address the complex needs of fragile and conflict-ridden states. Overall, a more complex and contested ideological environment contributes to reduced levels of education reform, both because borrower countries resist some Bank reforms and because the Bank has fewer clear prescriptions to impose (or offer).

Like the Bank, NGOs and INGOs face increasing criticism; they are often now depicted as interfering foreign agents of hegemonic world society (Bromley et al. 2020) and many countries are now seeking to restrict NGO and INGO activity (Christensen & Weinstein 2013; Dupuy, et al. 2016). However, for the most part, the intent of these restrictions is to prevent political interference and activism around democracy and human rights rather than to stop all foreign development aid (Carothers & Brechenmacher 2014). Many states aim to walk a line that allows them to dampen civil society activism while still enabling development aid. For example, the 2009 Ethiopian Charities and Societies Proclamation Act stipulates that NGOs working on any rights issues must acquire 90% of their funding from domestic sources – but it explicitly exempts development organizations from these restrictions (Brechenmacher 2017). Similarly, in a study of Guatemala, Honduras, the Philippines and Indonesia, Van der Borgh and Terwindt (2014: 164) find that NGOs are “not systematically repressed”, and only those engaged in making claims against the state or working on issues considered to be sensitive political topics experience repression. In fact, many states encourage NGOs to work on issues that are not considered contentious, as Teets (2014) describes in the case of China on issues of education reform, public health, and disaster relief. In some cases, NGO donors also press for a focus on “tamer” causes such as education, health, and social service provision (Bush 2015).

The growing pressure for INGOs to avoid contentious causes around rights and democracy, combined with the declining legitimacy of coercive strategies in education reform used by the Bank, may be driving additional support for INGO work in education reform in recent decades. Stated formally,

H3a. Over time, the association between World Bank loans and education reform will

decline.

H3b. Over time, the association between INGO memberships and education reform will

increase.

*Additional Country Factors*

In addition to the historical and organizational influences that are of primary interest here, country-level conditions are likely to influence levels of reform. To start, prior administrative actions and internal repertoires can predict future organizing efforts (Rao & Greve 2018). Administrative legacies create and maintain “a self-reinforcing cycle of organization building” that influences the future organizational capacity (Greve & Rao 2012, p. 638). Routines might be carried through several paths, such as the creation of new professional positions or formal policies, or the creation of local norms or stories that transmit these legacies into the future (Molotch et al. 2000; Voigtländer & Voth 2012). To control for the dynamics of organizing, we examine whether enacting reform in a prior year shapes the likelihood of undertaking more reform in subsequent years.

In addition, a country’s GDP per capita is known to be associated with other features of education systems, such as achievement, and may shape the pace of education reform as well (e.g. Hanushek & Woessman 2014). A country’s wealth could shape reform levels in two ways. For example, higher-income countries have more resources available to conduct reforms, and we could therefore see more reform in wealthier countries. Alternatively, it could be the case that lower income countries need more education reform; improved and expanded education may at times generate human capital that aggregates to economic growth (Barro 2001; Ramirez et al. 2006).

Similarly, the size of the education system itself may shape levels of reform, with the possibility of systems with a lower proportion of children enrolled needing more reform or, conversely, systems with more students enrolled requiring more complex management and therefore higher levels of reform. Relatedly, the size of the population could drive reform, with more populous countries needing larger and more complex education systems that require higher levels of reform to build or maintain.

Finally, features of the political system are likely to play a role in shaping levels of education reform. Within a country, political interest groups can shape the nature of reform, co-opting education in service of a broader political agenda (Finger 2018). For example, a detailed comparative study of structural education reform in Japan and the U.S. from the 1980s through the 2000s finds repeated evidence of “(a) politicians searching for symbolically significant victories and (b) elite bureaucrats fighting turf battles” (Nitta 2007: 8). Similarly, a study of school reform in the United Kingdom argues that elite political contests shape reform agendas in the 2000s, more than commitment to shared ideals of high-quality education for all (Gunter 2018). Generally, more competitive political systems may be likely to pursue more education reform. In addition, the division of power in a country may matter. Plausibly, decentralized or federal systems can have more reform, as there is greater formal complexity. At the same time, our data collection relied on national-level reports, which are more likely to capture country-wide reforms rather than policy changes in all subunits. We would expect countries with greater decentralization or a higher division of power between national and subnational units to report less national reform.

**Data & Methods**

*Database Creation*

To test our arguments, we created a database of education reforms in countries around the world over time. Following the strategy used in Braga, Checchi, & Meschi (2013), we assembled an extensive list of reforms from reports submitted to the major international organizations involved in education. We extend their approach by drawing not only on the OECD’s Education Policy Outlook (EPO) (36 reports), but also on the OECD’s Review of National Policies in Education (RNPE) (47 reports), the World Bank’s Systems Approach for Better Education Results (SABER) (121 reports), World Data on Education (WDE) reports produced by UNESCO and the International Bureau of Education (IBE) (189 reports), and the International Encyclopedia of Education (IEE) compiled by country experts (109 reports). Our database is, to our knowledge, the most comprehensive cross-national, longitudinal compilation of education reforms to-date. The reports list both domestically initiated reforms and those conducted in partnership with international organizations, often in a section describing key historical changes to education policy. But they tend to focus on national changes, rather than subnational reforms, and the reports are intended for an international audience so they may be more likely to reflect policy changes that are valued in the international community.

We relied on a team of 10 undergraduate research assistants to conduct the coding, which took approximately 2,000 hours over the summers of 2019 and 2020. When looking over a long period of time and across diverse contexts, it was not always immediately self-evident to coders what counted as an “education reform.” Thus, we developed a coding definition that described a reform as “planned, systemic, and non-routine” (a detailed set of coder instructions is available upon request). We conceptualize education reform as intentional (‘planned’) change (‘non-routine’) occurring at an administrative level above an individual school (part of a ‘system’), distinguishing it from unplanned, non-systemic, or non-formal education fads, initiatives, or projects (Bromley et al. 2021). Importantly, the concept of reform is different from general change, such as demographic shifts, and it is also distinct from implementation. Many reforms involve extensive discursive activity, and implementation of the rhetorical commitments occurs on a separate continuum (Bromley and Powell 2012). Thus, reform is important as it indicates intentions or beliefs about appropriate policies, but enacted change needs to be studied separately. We provided training to each research assistant, and on-going support by being available to answer questions in real-time during group coding sessions. The intra-class correlation for coding reforms from the aforementioned list of documents, using these criteria, is 0.85 (which is considered “excellent” by common standards of inter-rater reliability; see Cichetti 1994).

As an example, the 2017 SABER report from Liberia, contains five reforms in the entire 30-page document: 1989 Act Establishing a National Commission of Higher Education, 2011 Education Reform Act, 2014 National Policy on Higher Education in Liberia, 2016 university admissions reform, and the 2017-2021 Sector Plan (excerpt shown in Figure 1). In our analyses, the dependent variable includes reforms for Liberia in 1989, 2011, 2014, 2016, and 2017. The year and type of the report are included as control variables.

[insert Figure 1 about here. Example of Education Reform from the SABER 2017 Liberia Report: “Getting to Best” Education Sector Plan 2017-2021]

*Analytic Strategy*

Our dependent variable is a count of the number of reforms reported in a country in a year. The modal response is “0”, with a mean of 0.95, and a maximum of 27.

Given that the count data are over-dispersed, we employ a negative binomial count model for panel data to consider factors associated with the outcome (Long 1997). International panel designs are most appropriate for studying the association between country or world conditions and changing policies. In single country or cross-sectional designs, country-specific unobservable factors may confound estimation of the associations of interest, and secular trends are difficult to observe. Our large panel (147 countries observed for up to 58 years, from 1960 to 2017) allows us to use country fixed effects models to eliminate bias due to such confounding.[[1]](#footnote-1) The estimates cannot be interpreted as causal, because they may be biased if there are unobserved time-varying country characteristics correlated with both reforms and our predictors. Nonetheless, fixed effects models with a set of time-varying controls do eliminate many possible sources of bias in the estimates. This approach follows best practices in large-scale cross-national, longitudinal research, where quasi-experimental designs are implausible (Wooldridge 2010; Baltagi 2013).

As our argument describes, we also incorporate a lagged dependent variable to account for how prior levels of reform may shape current levels in any given year. This specification also allows us to address potential forms of serial correlation in our analyses (Beck and Katz 2011; Baltagi 2013). While including a lagged dependent variable biases the coefficients estimated in fixed effects models with smaller-T panel data (i.e., fewer waves of data), standard econometric work has shown that these biases decrease in larger-T panels and are less consequential as the number of waves of data approaches 30 (Nickell 1981; also see Schofer & Longhofer 2011).  In our analyses, the lagged dependent variable is measured as the number of reforms a country has undertaken in the prior year.

*Independent and control variables*

To identify the *historical periods* relevant to our argument, we include a series of dichotomous variables that identify the time periods from 1960-1991, 1992-2008, and 2009-2017. We use 1992 to mark the post-Cold War era and 2009 to mark the post-global financial crisis, as these two events likely intensified longer term shifts in the expansion and weakening of the world order. In our analyses, the period from 1960-1991 is the reference category.

A country’s *World Bank loans for education projects* identifies the cumulative number of loans a country has received from the World Bank for an education-related project up to a given year (Furuta 2020). To code this variable, we drew on publicly available records of all World Bank projects funded from 1947 to 2017 (World Bank 2017), and we identified whether a project was education-related by the project title. A country like Romania, for example, received funding for several projects over this time period, including a project titled “Education Reform Project” in 1994, “Reform of Higher Education and Research Project” in 1996, “Rural Education Project” in 2003, and “Romania Secondary Education Project” in 2015. This measure is logged to address the positive skewness of the distribution and mean-centered in all of our analyses.

A country’s *memberships in international non-governmental organizations* is a widely used measure that captures a country’s diffuse linkages to global institutional models (e.g., Boli and Thomas 1999). This variable is coded using the UIA’s Yearbook of Organizations (Union of International Associations, 1960-2018), using the natural log to reduce the positive skewness of the distribution. The variable is also mean-centered in all our analyses.

In the models estimated below, we also include several control variables that reflect more nation-specific and functionalist processes that shape the pace of education reform in a given country.

A country’s *GDP per 10,000 capita* is included in our models to identify a country’s level of economic development, using data from the Penn World Tables (Feenstra, et al. 2015); this measure is logged, to reduce the skewness of the distribution. To examine arguments that higher- and lower-income countries are both more likely to engage in education reform, we also include a variable that identifies a country’s *GDP per 10,000 capita squared (logged).*

The size of a country’s education system is coded as its *gross secondary enrollment ratio*, using data from the World Development Indicators (World Bank 2020a).

A country’s *population* is measured using data from the World Development Indicators (World Bank 2020) and logged to reduce the skewness of the distribution.

The degree of *political competition* in a country is measured using a variable from the Varieties of Democracy dataset that jointly captures the institutionalization of political competition, as well as government restrictions on political competition (Coppedge et al. 2020). This combined variable is measured on a scale from 1 to 10, where a 1 indicates “repressed competition” (i.e., almost all political activity conducted outside of a country’s hegemonic regime is not permitted), and a 10 indicates “institutionalized open electoral participation” (i.e., political groups compete for influence without the use of coercion, and no groups are excluded from politics).

To consider the extent to which political centralization shapes reform we use the *division of power index* from the Varieties of Democracy dataset (Coppedge et al. 2020). The score ranges from 0 to 1, where the lowest score indicates a country that has no elected local or regional governments. The highest scores are found in countries in which both local and regional governments are elected and able to operate without restrictions from unelected actors at the local or regional level (except for judicial bodies).

In our models, we also control for the number of reports of each of the five report types listed above. We “lead” (the converse of lag) this variable by one year, to account for the fact that country reports identify more reforms in the year immediately prior to their publication, and we consider alternate specifications in our sensitivity checks.

Table 1 presents the descriptive statistics for each of these variables.

[Insert Table 1 about here. Descriptive Statistics (n=6,939 country-year)]

**Findings**

[Insert Figure 2 about here. Number of reforms over time (n reforms = 6,700; n countries = 147)]

[Insert Figure 3 about here. Total Number of Reforms Reported

by Country over period 1960-2017 (n countries = 147)]

Figure 2 shows the number of reported reforms over time as a global total, and as an average per country in three periods. From 1960 to 1991, countries reported an average of one reform every two years, from 1992 to 2008, the average increased to 1.65 reforms per year, and from 2009 to 2017 the average drops to less than one reform per country per year. These periods capture rough historical eras in the world system: The fall of the Soviet Union and the global financial crisis were shocks to the global system that exacerbate the trends of neoliberalism. We also show the average number of reforms per country per year because the number of countries in our sample each year varies, raising the concern that peaks may represent years where there are more countries in the data. However, the country average trends closely with the global count; fluctuations are not driven by changes in the number of countries in the sample.[[2]](#footnote-2)

These descriptive findings align with our first hypothesis and provide cross-national, large-scale evidence in support of existing case studies and historical descriptions of the growth of education reform activity through the 1990s. For example, Pogrow (1996) describes a period of “hyper-reform” in the US education system in the mid-1990s, noting an earlier wave starting in the mid-1960s and running for about a decade. Globally, many have noted an explosion of education reform activity and the globalization of education policy during the neoliberal era (Ball 2004; Mundy et al. 2016; Ramirez et al 2016). Going beyond existing studies, our data also reveal a decline in levels of reform in the most recent decade. This decline is in line with arguments that the weakening hegemony of world society may be leading to a reduced focus on education reform.

In addition to change over time, there is substantial variation between countries. Figure 3 shows the count of reforms reported for each country over the entire period, which ranges from a low of just 1 reform to a high of 215 reforms. The countries with the highest levels of reform come from all over the world and are spread across several levels of economic development. Illustratively, the following countries reported 100 or more reforms pooled across the entire time frame of our study (number of reforms in parentheses):

|  |  |  |
| --- | --- | --- |
| United Kingdom (215)  Colombia (176)  Egypt (142)  Finland (141)  Turkey (135) | Ireland (133)  Denmark (130)  South Korea (129)  Italy (129)  Chile (121) | Belgium (110)  Costa Rica (104)  Singapore (101)  South Africa (100)  Thailand (100) |

Our regression analyses help explain the longitudinal and cross-national variation observed. We start with three models showing our control variables in Table 2. Model 1 presents the controls for the numbers of each type of report in a year.[[3]](#footnote-3) Model 2 introduces a lagged dependent variable to control for the dynamics of reform; as expected, reform levels in a prior year are positively associated with subsequent reform. In Model 3 we include additional country conditions that could shape levels of education reform. GDP per capita has curvilinear relationship with the level of education reform in a country, with countries doing more reform at higher and lower levels of GDP per capita. Plausibly, need and ability both play a role in supporting education reform. As a country gains resources, it may have greater capability to take on reform, while lower levels of GDP may promote reforms to stimulate economic productivity. In addition, the size of the education system matters. As the proportion of students enrolled in secondary school increases, countries do education reform in preliminary models. (Nonlinear associations between secondary enrollment and reform are insignificant in the final model.) A larger population is also associated with more reform in these preliminary models.

Lastly, features of the political system shape levels of education reform. Political competition has a positive and significant correlation with levels of reform, but only in early models, its significance declines after controlling for our core arguments. Country case studies document the powerful effect of political forces on education reform in particular instances (Nitta 2008; Finger 2018; Gunter 2018). But on average and across many countries over time, there is a weak correlation between political competition and levels of education reform. An index of the division of power in a country is negative and significant in early models, suggesting more decentralized polities report less reform. This finding likely reflects the fact that our data sources capture national levels of reform more than subnational trends, so levels of reform appear lower in decentralized or federal systems. For example, in the United States the national reforms triggered by the *A Nation at Risk* report in 1983, and in the No Child Left Behind law in 2002, appear in our data, but the multitudes of state-level reforms of curricular standards, teacher training, and other matters are not present. These country characteristics matter only to a degree; only levels of prior reform, GDP/capita (and the squared term), and secondary enrollment remain significant after controlling for all the measures presented in our core arguments presented next. Nonetheless, in the interest of rigor, we include all controls throughout subsequent models.

[Insert Table 2 about here. Negative Binomial Regression Predicting Number of Education Reforms with Controls, 1960-2017 (n=6,939 country-years; 147 countries)]

We turn to our core arguments in Table 3. Model 1 supports the descriptive historical trend shown above. After controlling for levels of reporting, prior reform, and relevant country conditions, on average there is an increase in reforms in the neoliberal era relative to the liberal period (Hypothesis 1a), and then a recent decline (Hypothesis 1b). One possible interpretation of the recent slowdown in reform activity is that the world has reached a natural saturation point of education reform. However, the “ceiling effect” argument is hard to sustain in the face of long-term, unsolved, wicked problems, as well as the rise of new issues such as socio-emotional learning and increasingly urgent matters of sustainable development and climate change, which hardly appear in mainstream education. In addition, the idea of a “natural” level of reform is hard to mesh with the great cross-national variation observed. The average country conducts less than one reform per year, but some countries conduct upwards of a dozen reforms in a year, suggesting very high rates are possible.

A more likely explanation is that the 1990s era ushered in an unprecedented wave of universalistic models of education, encompassing expanded content (e.g. to include emphases such as human rights), expanded access (e.g. the Education for All movement), and structural changes (e.g. decentralization and privatization). These global models were pushed and pulled around the world as a dominant vision of what “proper” education systems should look like. Today, the legitimacy of the international order is being challenged, which dampens the celebration of common global models. Unless a new set of global principles that celebrate education and rationalized progress to the same degree as liberal world society emerges in its place, we are unlikely to see such rapid reform occurring simultaneously worldwide on so many fronts.

We expected international organizations to be key catalysts of education reform and find support for our second set of hypotheses in Model 2. There are positive associations between World Bank loans and INGO memberships and increased education reform net of relevant country characteristics (Hypotheses 2a and 2b). Both World Bank loans and INGOs are intertwined with the neoliberal world system, and INGOs additionally carry global principles of rights and justice. The World Bank is notorious for its coercive mechanisms of requiring reforms in exchange for loans (Heyneman 2003; Jones 2007; Klees 2012). INGOs are considered to have more normative influences, carrying the principles of individual agency, progress, and justice that are central to world society (Boli & Thomas 1997).

We conducted additional analyses to consider how the influence of international organizations might be changing over time. In Models 3 and 4, we present interactions between our organizational indicators, World Bank loans and INGO memberships, and the historical periods. For interpretability, we also depict average marginal effects of the interactions in these models in Figure 4. As hypothesized, we see a declining role of World Bank loans in driving education reform over time (Hypothesis 3a). At least since the mid-1990s, it has faced a growing chorus of voices criticizing its policies (Ogbu & Gallagher 1991; Sen 1999; Vavrus 2005). These findings provide some evidence in support of speculations that the Bank’s neoliberal model of policy reform of the 1980s and 1990s is losing legitimacy in the world system (Bonal 2002). But our results leave open the possibility that the World Bank may embrace alternative forms of influence, such as a focus on providing research or technical advice over policy prescriptions.

[Insert Table 3 about here. Negative Binomial Regression Predicting Number of Education Reforms with Controls plus Core Arguments, 1960-2017

(n=6,939 country-years; 147 countries)]

[Insert Figure 4 about here. Illustration of Interactions between International

Organizations and Time Period in Predicting Number of Reforms]

Some studies have shown the Bank is attentive to the (il)legitimacy of its practices and adapts accordingly. For example, it moved away from pressing for fee-based schooling and embraced universal free primary education in the face of pressure from civil society (Kim & Boyle 2012). In 2011, in its *Education Strategy 2020* plan, the Bank made national-level education reform a key focus of future work (World Bank 2011). But in a recent World Bank study of the effectiveness of education interventions, Angrist et al. (2020: 7) report that “many interventions are less effective at scale and political economy factors may impede effectiveness at the system-level.” This quotation may suggest a reduced belief in the effectiveness of systemic education reform as a tool. If the conditions revealed in our study persist – namely, a secular decline of education reform activity in general, alongside reduced influence of Bank loans in shaping country education policy – reform efforts may be increasingly difficult to sustain. Perhaps in recognition of this dynamic, the Bank is increasingly trying to position itself as a “Knowledge Bank” more than a traditional lender (Zapp 2017). In other words, it may be attempting to turn away from coercive mechanisms and towards epistemic influences to shape policy (Zapp 2017).

In contrast to the Bank’s influence through loans, the association between INGO memberships and education reform grows stronger over time, as shown in Model 4 (Hypothesis 3b). We argue this trend is driven by the growing legitimacy of social and cultural mechanisms of influence in recent decades. Although there is pushback against INGOs as challenges to the liberal world order grow, the attacks have been primarily on democracy and human rights promoting associations. In part, these attacks drive NGOs and INGOs more towards the safety of development work, amplifying efforts in arenas like education. Of course, the perception of educational development as “apolitical” and “technical” can be challenged (Ferguson 1990). And, given the direction of the world order, it is easy to imagine the legitimacy of INGO work in education coming under greater attack in the future. A handful of countries, such as North Korea, Hungary, or Syria, engage in wholesale rejection of nearly all links to the world community and perhaps more states will go in this direction. However, up to the present, our findings show that, on average, the coercive resource-dependence mechanism of linking reforms to loans are weakening, while normative influences of civil society have become even more powerful in the realm of education. Overall, our findings show that the dynamics of how international organizations wield influence in the world order are changing.

*Limitations and Robustness Checks*

As with any study, ours has limitations. Importantly, we do not focus on the content of reforms, although our study provides a starting point upon which to build this future work. As a robustness check, we performed a preliminary analysis of several types of reforms that might plausibly be linked to globalized economic and social models of education. As shown in Table 4, the proportion of reforms related to financing, monitoring and evaluation, human rights, and marginalized groups all expand over time. The only exception is a statistically significant decline in reforms around human rights in the most recent period, which could reflect the growing contentiousness of the human rights paradigm, discussed earlier. Suggestively, the greatest consequence of attacks on the neoliberal world order is to the frequency of education reform, rather than the form it takes.

[Insert Table 4 about here. Illustrative Trends in the Proportion of

Reforms by Type across Periods]

The content of reforms warrants full treatment in future studies; this endeavor would be possible to do with our data with substantial investment. Content analyses should be supplemented with qualitative case studies of specific reforms and countries. In the case of public sector reform, Lee and Strang (2006) found that countries copied their neighbors’ downsizing reforms during the neoliberal era but did not copy the upsizing reforms. If this finding can be generalized to education, we would expect many of the reforms to align with neoliberal patterns. However, there might be greater diversity of the types of reforms that spread in the earliest and latest periods of our study when world society is weaker.

Further, we study reported reforms and do not include a measure of implementation or effectiveness. Most certainly, some of the reforms in our extensive database were conducted in name only, and for many others implementation would have been incomplete or incorrect. It will be important for future studies of the consequences of education reform to consider checks for implementation levels. However, given our conceptualization of reforms as an indicator of the prevalence of globalized aspirational models of education, discursive trends have great value in their own right, and are less confounded by material forces that shape implementation (like government capability or resources).

We conducted many additional sensitivity checks to weigh the extent to which weaknesses of the study may influence our findings, some of which are worth mentioning here. All results are available upon request. First, given that our count of reforms come from reports, it is a concern that reports are more likely to discuss reforms that have happened in the most recent few years prior to their publication date. In the analyses, we include an indicator for the number of reports of each type published in the subsequent year to control for years that have more reporting. But we also examined the data using alternative controls indicating up to ten years prior to a report being published. The findings are not directionally changed, but we lose significance in some instances because of the reduced sample size. Our data generation process may also mean the database is less accurate for early decades of the study, which could shape the findings. To look at the issue, we examined results starting at each decade up to 1990. The core findings of historical time and contagion are directionally the same and statistically significant.

Second, a handful of countries report very high numbers of reforms in a single year. We considered these potential outliers by (a) confirming a natural process generated the high count rather than a data entry error and (b) considering the findings when dropping cases over a series of cutoffs such as when the number of reforms in a country in a year was more than 2 and 3 standard deviations above the mean, and when the number of reforms in a country-year was over 14 (which looked to be a natural cutoff in the distribution). None of this materially shaped our findings, and the negative binomial analyses help account for the skewed distribution.

Third, because our dependent variable consists mainly of zeros and ones, we wanted to examine whether the results look the same if we estimated models that identify whether countries conducted any type of reform, rather than measuring the count of the number of reforms. We converted our outcome to a dichotomous variable and looked at the results of a logistic panel model. Our core arguments are supported in a full model, and two potentially meaningful changes occur to control indicators when analyzing a dichotomous outcome. Political competition has a positive and significant association with the likelihood of conducting any reform in all models. And GDP/capita and its squared term have no association with reform in a full model.

Fourth, we considered an array of additional country-level factors that might have been associated with reform but are excluded from our final analyses. Generally, these were insignificant after including relevant controls, and in some cases the sample size became quite small due to missing data. In a few cases, the measures were collinear with measures we included in the model, and so we opted to exclude them. For example, we considered a standard measure of democracy from the Polity V database, but it is highly collinear with political competition and only one of those measures can be included (Marshall et al. 2014; Coppedge et al 2020). We include political competition because it aligned more closely with existing arguments in the literature about the political processes that generate reform. Other potentially important factors we considered that did not have an association with reform or were collinear with measures in the model included: government spending on education as a percent of GDP, the extent of national and international assessment activity in a country, human rights violations in a country, government corruption, multiple measures of dependence on Official Development Assistance, regime durability, abrupt regime transitions, election years, and income inequality (Gini coefficient) (World Bank 2020; UNESCO 2015; Coppedge et al. 2020).

Beyond these indicators, we considered contagion processes that are well-theorized and well-documented in institutional theories of organization (Meyer & Rowan 1977; Renzulli & Roscigno 2012). In an overview of research on the global diffusion of public policies, Dobbin, Simmons, and Garrett (2007) identify transmission via competition, learning, coercion, and social construction. These pathways build on DiMaggio and Powell’s (1983) classic conception of coercive, mimetic, and normative mechanisms driving similarities among organizations. These mechanisms can include both the desire of actors to please third parties upon whom they depend for resources, as well as more subtle pressures, such as expectations regarding appropriate behaviors and ‘best practices’ or mimicking high-status actors. We opt to focus directly on the mechanisms envisioned to facilitate diffusion (i.e. World Bank loans and INGO memberships) rather than on a general indicator for peer adoption: the peer indicators and our direct mechanisms are highly correlated and cannot be included in the same model, but it is worth noting the results of peer indicators given their prevalence in the literature. We considered diffusion measures capturing the number of education reforms adopted globally in the prior year (omitting the focal country) and the number of education reforms adopted regionally in the prior year (omitting the focal country). These are both positive and statistically significant. Also of interest, a measure for the number of reforms adopted in the West in the prior year was insignificant; copying high status countries is not a key channel for the spread of reforms.

**Conclusion**

Our findings show that, on average, levels of education reform decline in recent decades. We attribute the drop to the undercutting of a globalized educational regime that emerged in the 1990s and 2000s, which is linked to a more general erosion of the liberal world order. In a worst-case scenario, lowered levels of reform could lead to weakening education systems with reduced access and deteriorating quality. Enrollment growth has already slowed (Furuta et al. forthcoming) and, in the future, average levels of education could begin to fall. However, a great deal is unknown. As a start, the link between education reform and access or quality is unclear. Some assert that education reforms can increase the health of societies and economic competitiveness by helping citizens acquire the knowledge, skills and attitudes necessary for civic success and work in a knowledge-based economy (Sahlberg 2006; Braga, et al. 2013). But the evidence is mixed. Although many actors advocate for more reform, accusations of ‘reformitis’ and widespread doubts about the efficacy of education reforms are also commonplace (Debeauvais & Livesey 1986; Zaff 2011). Some observe a ‘predictable’ and ‘persistent’ failure of education reform (Sarason 1990; Payne 2008). Historians of education observe that the same reforms “return again and again” (Cuban 1990, p.3). And scholars document cyclical patterns that are linked to changing domestic political ideologies and elections but disconnected from improved education systems (Schlesinger 1986). To this point, Farrell (2007) argues that gains in education are the result of economic growth and social structural change outside of schools, rather than a product of education reform. Moreover, a reduction in some kinds of reforms may be a positive and welcome shift (e.g. the much-criticized spate of neoliberal reforms around accountability and monitoring). Our database creates the possibility to systematically explore the association between education reform and education quality around the world over time.

Beyond levels of reform, there are likely to be additional changes to education if the current liberal world order continues to decline. A reduced belief in education as a cultural principle is expected – over the long run – to lead to changes, such as declining enrollment or achievement, budget cutbacks, a global surge in homeschooling or a focus on narrow technical and vocational training as opposed to expansive human development. Institutions are sticky (Thelen and Mahoney 2010), so these changes would likely take several decades to materialize. But we suspect declining reform efforts are a leading indicator of transformation. We would only expect a resurgence of reform efforts worldwide if there is a renewed celebration of liberal and neoliberal principles, or if a new world order that also valued education came to dominate.

A future world society need not have liberal roots to value education. Both Hungary and China, for example, break from the downward global trend and report steadily increasing numbers of education reform over time. It is easy to imagine Chinese, Islamic, socialist, or other cultural systems as a basis for organizing society that would promote education reform. For example, values of national security, obedience, and anti-liberalism, which partly shape China’s recent education reforms, could someday become the global norm. China’s goal is not to reduce education, but to increase it in ways that are aligned with national values rather than global neoliberalism. In another scenario, should we witness the globalization of something like Boko Haram’s principles as a core organizing foundation for world institutions, education would be suppressed. We argue that a worldwide wave of reform, as we saw during the 1990s, requires the globalization of a cultural model that values education. Under a hypothetical new world order, the content of reforms would likely look very different, perhaps towards emphases on obedience and conformity under a collective system (instead of empowered individual actors), or towards protection of nature that places the earth and humans on equal footing. Future studies that track the changing content of reforms are needed to understand what sorts of educational values are intended and where.

Returning to present empirical realities, our data support arguments that globalized models of education are weakening and they are not (yet) replaced by an alternative world order that values education. Much attention has been directed towards attacks on democracy and capitalism, but the social consequences of challenges to the world order -- such as changes to education systems -- are similarly immense.

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Figures & Tables

**Figure 1. Example of Education Reform from the SABER 2017 Liberia Report: “Getting to Best” Education Sector Plan 2017-2021**

Text, letter

Description automatically generated

**Figure 2. Number of reforms over time (n reforms = 6,700; n countries = 147)**

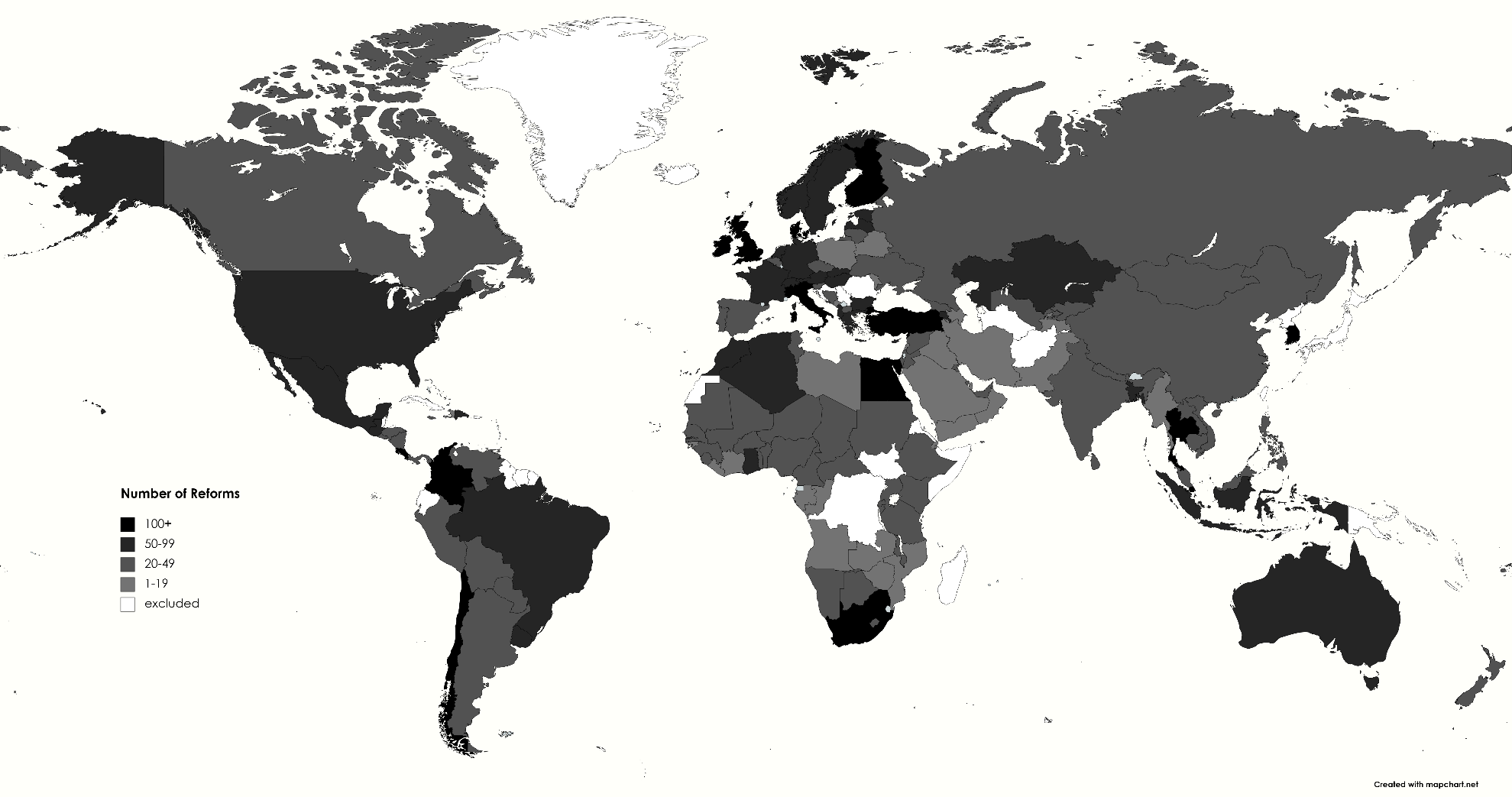
**Postliberal Era: 2009-2017**

0.95 reforms/country/year

**Neoliberal Era: 1992-2008**

1.65 reforms/country/year

**Figure 3. Total Number of Reforms Reported by Country over period 1960-2017 (n countries = 147)**



Note: Countries excluded from the analyses lacked information on core independent variables and/or did not report any reforms at any point during the study.

**Figure 4. Illustration of Interactions between International Organizations and Time Period in Predicting Number of Reforms**

|  |  |
| --- | --- |
|  |  |

**Table 1. Descriptive Statistics (n=6.939 country-years)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Mean | St. Dev. | Min. | Max. |
| Dependent Variable | |  |  |  |  |
|  | N. National Reforms | 0.95 | 1.93 | 0 | 27 |
| Reporting Controls | |  |  |  |  |
|  | Education Policy Outlook (EPO) | 0.01 | 0.07 | 0 | 2 |
|  | International Encyclopedia of Education (IEE) | 0.02 | 0.13 | 0 | 2 |
|  | Review of National Policies in Education (RNPE) | 0.01 | 0.09 | 0 | 2 |
|  | Systems Approach for Better Education Results (SABER) | 0.02 | 0.14 | 0 | 3 |
|  | World Data on Education (WDE) | 0.03 | 0.17 | 0 | 4 |
| Country Conditions | |  |  |  |  |
| N. Natl Ref Prior Year, log | | -4.07 | 3.69 | -6.91 | 3.30 |
|  | GDP/capita, log | 3.99 | 1.22 | 0.81 | 7.83 |
|  | Secondary Enrollment, log | 55.48 | 35.25 | 0 | 163.93 |
|  | Population Size, log | 6.76 | 1.54 | 2.48 | 11.80 |
|  | Political Competition, log | 5.74 | 3.62 | 1 | 10 |
|  | Division of Power Index | 0.39 | 0.35 | 0 | 0.99 |
| Historical Period | |  |  |  |  |
|  | 1960-1991 | 0.48 | n.a. | 0 | 1 |
|  | 1992-2008 | 0.34 | n.a. | 0 | 1 |
|  | 2009-2017 | 0.18 | n.a. | 0 | 1 |
| Intl Organization Influences | |  |  |  |  |
|  | INGO Memberships, loga | 0.00 | 1.19 | -5.32 | 2.38 |
|  | World Bank education loans, loga | 0.00 | 1.98 | -2.10 | 4.75 |

Notes: a Variable is scaled so the mean equals zero to facilitate meaningful interpretation of main effects in an interaction in the analyses.

**Table 2. Negative Binomial Regression Predicting Number of Education Reforms with Controls, 1960-2017 (n=6,939 country-years; 147 countries)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) |  | (2) |
|  |  |  |  |
| *Reporting Controls* |  |  |  |
| EPO | .898\*\*\* | .507\*\*\* | .303\* |
|  | (.149) | (.149) | (.143) |
| IEE | .421\*\*\* | .212+ | .198+ |
|  | (.122) | (.120) | (.118) |
| RNPE | .723\*\*\* | .442\*\*\* | .285\* |
|  | (.121) | (.118) | (.118) |
| SABER | .136 | .033 | -.078 |
|  | (.113) | (.112) | (.113) |
| WDE | .495\*\*\* | .292\*\*\* | .203\*\* |
|  | (.066) | (.068) | (.068) |
| *Country Conditions* |  |  |  |
| N. country reforms in prior year |  | .119\*\*\* | .103\*\*\* |
|  |  | (.005) | (.005) |
| GDP/capita, log |  |  | -.589\*\*\* |
|  |  |  | (.150) |
| Squared GDP/capita, log |  |  | .060\*\*\* |
|  |  |  | (.017) |
| Secondary Enrollment |  |  | .011\*\*\* |
|  |  |  | (.001) |
| Population, log |  |  | .061\* |
|  |  |  | (.027) |
| Political Competition |  |  | .032\*\*\* |
|  |  |  | (.009) |
| Division of Power Index |  |  | -.192+ |
|  |  |  | (.112) |
| *Country Fixed Effects* | Yes | Yes | Yes |
| Constant | -.682\*\*\* | -.207\*\*\* | -.099 |
|  | (.039) | (.043) | (.356) |
| chi2 | 137.72 | 635.84 | 798.46 |
| df | 5 | 6 | 12 |
| bic | 15980.45 | 15468.32 | 15354.16 |

Standard errors in parentheses

+ p<.1, \* p<.05, \*\* p<.01, \*\*\* p<.001

**Table 3. Negative Binomial Regression Predicting Number of Education Reforms with Controls plus Core Arguments, 1960-2017 (n=6,939 country-years; 147 countries)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| *Historical Periods* |  |  |  |  |
| Period 1. 1960-1991 | Ref. | Ref. | Ref. | Ref. |
| Period 2. 1992-2008 | .696\*\*\* | .533\*\*\* | .532\*\*\* | .540\*\*\* |
|  | (.057) | (.062) | (.062) | (.063) |
| Period 3. 2009-2017 | -.117 | -.328\*\*\* | -.266\*\* | -.523\*\*\* |
|  | (.079) | (.087) | (.088) | (.111) |
| *Intl Organization Influences* |  |  |  |  |
| INGO Memberships, log |  | .185\*\*\* | .140\*\* | .187\*\*\* |
|  |  | (.051) | (.050) | (.053) |
| World Bank (WB) Loans, log |  | .063\*\*\* | .144\*\*\* | .067\*\*\* |
|  |  | (.017) | (.024) | (.017) |
| *Interactions* |  |  |  |  |
| Period 2 X WB Loans, log |  |  | -.097\*\*\* |  |
|  |  |  | (.024) |  |
| Period 3 X WB Loans, log |  |  | -.158\*\*\* |  |
|  |  |  | (.031) |  |
| Period 2 X INGO Memb., log |  |  |  | -.015 |
|  |  |  |  | (.044) |
| Period 3 X INGO Memb., log |  |  |  | .183\* |
|  |  |  |  | (.073) |
| *Reporting Controls* | Yes | Yes | Yes | Yes |
| *Country Conditions* | Yes | Yes | Yes | Yes |
| *Country Fixed Effects* | Yes | Yes | Yes | Yes |
| Constant | -1.245\*\*\* | .087 | -.391 | -.046 |
|  | (.363) | (.423) | (.430) | (.427) |
| chi2 | 1154.07 | 1178.89 | 1177.66 | 1176.76 |
| df | 14 | 16 | 18 | 18 |
| bic | 15059.60 | 15039.01 | 15029.01 | 15047.08 |

Standard errors in parentheses

+ p<.1, \* p<.05, \*\* p<.01, \*\*\* p<.001

**Table 4. Illustrative Trends in the Proportion of Reforms by Type across Periodsa**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Reform Type | 1960-1991 | 1992-2008 | | 2009-2017 | |
| Human Rightsb | .05 | .08 | \*\*\* | .06 | \* |
| Marginalized Groupsc | .05 | .07 | \*\*\* | .09 | \* |
| Financingd | .10 | .11 |  | .13 | \*\* |
| Monitoring & Evaluatione | .08 | .14 | \*\*\* | .16 | \* |

Notes: (a) Stars indicate statistical differences between periods 1 and 2, and between periods 2 and 3 using standard significance levels: \* p<.05, \*\* p<.01, \*\*\* p<.001. (b) The exact coding question was: “Does the policy mention justice, equity, equality, or the expansion or protection of human rights as a specific goal, or is human rights or justice used as a justification for the policy?” (c) The exact coding question was: “Does the policy intend to target a special student population that has historically or traditionally been marginalized in the policy’s country context, for example, women or girls; refugees; indigenous groups; ethnic minorities; religious minorities; students with learning differences?” (d) The exact coding question was: “Does the reform discuss financing/ economic resources for education?” (e) The exact coding question was: “Does the reform discuss monitoring and evaluation?”

1. We do not use year fixed effects because we are interested in directly theorizing and observing the change over time. [↑](#footnote-ref-1)
2. A corollary point of note about our sample is that the number of country reports available in each period varies substantially, but this also does not account for the rise and fall of reform. The number of reports coded in each period increases steadily over time: there are 0 reports before 1991, 200 from 1992 to 2008, and 297 from 2009 to 2017. [↑](#footnote-ref-2)
3. We “lead” (rather than lag) the reporting controls by one year because we expected reports to discuss more reforms in the year prior to their publication. The findings support this expectation, and sensitivity checks using alternate “lead” lengths of up to ten years did not raise concerns (but substantially reduced our sample size). [↑](#footnote-ref-3)