

Beyond narrow definitions: quantifying school privatisation across countries and over time

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Abstract

The OECD (2020) reported that the proportions of students enrolled in 'private schools' have remained stable since 2000. Drawing on the concepts of endogenous and exogenous privatisation, we question this statement, arguing that school privatisation can be disaggregated into four dimensions: private provision, restricted access, school competition and school autonomy. We operationalise these dimensions using indicators from the PISA school questionnaire. We explore changes cross-nationally between 2000 and 2018 in 35 educational systems, revealing increases in secondary school competition dynamics over time and some cases of substantial increases in autonomous school-level decision-making. We also provide an up-to-date landscape of school privatisation for 64 countries in 2018 and highlight the relevance of using a wide set of indicators to report the extent of privatisation, accounting for both endogenous and exogenous sides of the phenomenon. Finally, we discuss ways in which cross-national quantitative data collection on schools might be developed to produce a more appropriate quantification of privatisation.

Keywords: School autonomy, School Competition, Educational Markets, New public management, Education Provision, International comparisons, Endogenous privatisation, Exogenous privatisation.

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1. Introduction

Scholarly literature on the privatisation of school-based education in high-income countries has become vast in recent decades. Such literature has analysed a wide range of different facets of school privatisation. One influential distinction drawn by Stephen Ball and Deborah Youdell in a 2008 book on 'Hidden Privatisation in Public Education'¹ has been that between privatisation 'of' and 'in' school-based education, or *exogenous* and *endogenous* forms of school privatisation, respectively.

Exogenous privatisation within schooling can be summarised as all which involves *private sector participation* in the funding, delivery and regulation of schools (Ball and Youdell, 2008: 14). Exogenous school privatisation is a phenomenon that has to some degree been captured quantitatively in cross-national terms in recent decades. The OECD produces comparative data on proportions of students attending secondary schools that are managed by non-state actors. It reports that proportion attending such schools has remained relatively modest and stable in OECD countries since 2000, at just under two in ten (OECD, 2020: 161). Such figures do, however, take an approach to defining private schooling that 'fail[s] to adequately represent the complexity of school provision' – more nuanced approaches requiring consideration of a 'taxonomy of characteristics' (Mockler et al., 2021: 199) constituting school privateness

Beyond the above, endogenous privatisation, as a form of 'hidden privatisation', is described by Ball and Youdell as neoliberal 'policy tendencies' within public education which 'draw on techniques and values from the private sector', transforming how *the public sector itself* functions and making it 'business-like' (2008, p.14). Such policy tendencies have developed 'extremely rapidly' (p.41) in many countries, and Ball and Youdell describe them as fast becoming the 'dominant approach to public education around the world' (p.14). Endogenous privatisation introduces fundamental changes to the way that school-based education is organised. It comprises multiple facets which have been written about by many authors.² Recognition of such facets has led scholars such as Verger et al. (2017a) to state that 'over the last two decades, education privatisation has become a widespread phenomenon, affecting most education systems and giving place to a consistent increase in private school enrolment globally' (p.757).

Despite recognition of school privatisation as being a complex and multifaceted phenomenon, detailed *quantification* of such a phenomenon, particularly across countries and over time, has been limited to very few studies so far. Mockler et al. (2021) highlight a lack of 'comparable or indeed comprehensive databases [on school public/ privateness] from different jurisdictions to allow a reasonable comparison to be made' (p.208). Scholars of education would, we argue, benefit from there being more quantitative capturing of the extent to which schools are becoming privatised, not just exogenously but also endogenously.

In this paper we take the concepts of exogenous and endogenous school privatisation and we seek to capture some core aspects of these in quantitative terms, examining their extent cross-nationally and inter-temporally. We aim to contribute to a less narrow, or more balanced, expressing of what school privatisation is. We begin by describing how both have been defined in literature, drawing heavily on the work of Ball and Youdell, among others. We unpack some constituent features of exogenous and endogenous privatisation, categorising these under four dimensions. We then use quantitative data to select indicators that we argue fit well with these

¹ See also Ball, 2007.

² There are too many to list – according to Google Scholar Ball and Youdell's specific work has been cited over 1100 times. Recent examples discussing endogenous privatisation include Wilkins and Gobby, 2022; Holloway and Keddle, 2019.

constituent dimensions. We report on differences in the dimensions' prevalence, across school systems and over time.

Our own work uses data from the OECD Programme for International Student Assessment (PISA). This triennial exercise includes a survey instrument administered to school leaders, who provide information about funding, organisation and decision-making in their individual schools. We make use of PISA data rounds over time, allowing us to examine changes between 2000 and 2018 in the secondary school systems of 35 countries/economies.³ We are furthermore able to compare 2018 data across 64 countries/economies.

This work offers a substantive contribution to knowledge on how far dimensions underpinning endogenous and exogenous school privatisation can be found in a range of countries. As qualitative research has long reported, school privatisation does not look the same everywhere and nor is it always happening everywhere. Just as public education historically developed at different times and rates in different places (Ramirez and Boli, 1987), while broad privatising trends in education may be found across countries, different ways in which this has happened, where, when, and at what pace, is a matter known to be mediated by local contexts (Verger et al., 2016; Koinzer et al., 2017). In our study we aim to highlight quantitative differences in 'degrees of penetration' (Ball and Youdell, 2008: 15) of some key features of endogenous and exogenous privatisation. We reflect on the contribution of PISA data for operationalising and quantifying exogenous and endogenous school privatisation, and we consider too how comparative quantitative data on school privatisation might be developed further in future research.

Our study is necessarily restricted to measuring privatisation in *schools*, and specifically secondary schools. Restricting scope in this way permits a more focused unpacking of specific modalities and policy tendencies (Ball and Youdell, 2008: 14) making up privatisation in secondary schools. School-based education is notably also the education phase worldwide that has historically been most extensively publicly funded, delivered and regulated. Examining secondary school changes may therefore show particularly interesting patterns of change over time.

We do not seek to provide explanations for cross-national differences and changes over time in school privatisation; nor does the paper focus on offering critical appraisals of specific privatising trends. Discussions of causes and consequences of school privatisation are beyond this paper's scope and they have been covered extensively by others.⁴ Our contribution is more exploratory, as systematic observational comparative research in education (see, e.g. Bray et al., 2014) is an important part of enriching understanding of the extent to which different aspects of privatisation have 'taken root' (Ball and Youdell, 2008: 45) in different places. It creates a basis for further exploration of what has produced specific developments and what may be their ramifications.

In what follows, we begin by reviewing key literature on exogenous and endogenous school privatisation, unpacking the meaning of both and identifying core features and dimensions. We then review past studies which have sought to quantify endogenous and exogenous school privatisation cross-nationally and we introduce the PISA School Questionnaire as including important variables that can be used for operationalising core dimensions. We identify valuable

³ Here we follow OECD labelling of administrative regions participating in PISA as either countries or economies (OECD, 2019). We describe as a (secondary) school system all sampled cases (students plus schools) included in PISA for each country/economy.

⁴ Again there are too many to list, but see e.g. Verger et al. (2016) who offer cultural political economy accounts of school privatisation in various countries – different 'paths' to privatisation – and how these shape the nature of privatisation in different domestic contexts. On arguments and evidence about consequences, Rizvi (2016) provides a useful overview.

indicators and we then present four summary variables, each one representing a key dimension of school privatisation: 1) private provision; 2) restricted access; 3) school competition; 4) school autonomy. While 1) here reports on a core aspect of exogenous privatisation, 2), 3) and 4) capture core aspects of endogenous privatisation. We report on changes over time in the extent of these aspects of exogenous and endogenous school privatisation across 35 school systems, and additionally we examine 2018 data on school privatisation across 64 school systems. In our discussion and conclusions, we highlight substantial prevalence, and increases in certain aspects, of endogenous school privatisation across countries. We consider this important in a context of prior narrower OECD reports on there being only modest proportions educated in 'private schools' in OECD countries. We finish by reflecting on how quantitative capturing of school privatisation might be developed further in future research.

1.1 Defining exogenous and endogenous privatisation in schools

Ball and Youdell (2008: 14) describe *exogenous privatisation*, or the privatisation of education as being that where public education is opened up to actual private sector participation, 'using the private sector to design, manage or deliver aspects of public education'. In schooling, government extensions of the use of contracting, from specific services such as catering and cleaning, through to innovations in technology, curriculum and assessment, teacher professional development, the overall management of schools, to the overarching design and making of education policy itself (see for example academic work on the growing use of consultants in education policy and service design - Ball and Junemann, 2012; Gunter and Mills, 2017). Such may all be considered private provision of school education (i.e. where the public sector pays but private sector agents undertake delivery).

To this, we may further consider private ownership of and funding for schools, be it as part of various models of public-private partnership (Ball and Youdell, 2008: 33), forms of school sponsorship, philanthropic donations, investments and fundraising (Powell, 2019; Yoon et al., 2020; Rowe and Perry, 2022), and indeed the basic notion of schools charging fees to some or all service users (Belfield and Levin, 2002). In analysing private sector involvement, one may also distinguish between profit-seeking actors and those which are not-for-profit, though such distinctions can also be difficult to draw (Ball, 2007; Courtney, 2015; O'Neill and Powell, 2021).

Endogenous privatisation, or privatisation *in* public education, is defined by Ball and Youdell as comprising 'the importing of ideas, techniques and practices from the private sector in order to make the public sector more like businesses and more business-like' (p.9). This regularly happens alongside exogenous privatisation, but specifically it describes practices occurring in services that are publicly-financed and delivered. Within public schooling, endogenous privatisation is often not 'named as privatisation' (ibid, p.15). However, it is significant in that it comprises 'not just technical changes in the way in which education is delivered', but also 'a new language, a new set of incentives and disciplines and a new set of roles, positions and identities within which what is means to be a teacher, student/ learner, parent etc. are all changed' (ibid, p.11).

One central element of endogenous school privatisation is the idea that public school supply and demand, even where publicly-funded and delivered, ought to function as a quasi-market, wherein parents and children act as consumers and choosers of schools (Ball, 2002; Davies and Aurini, 2011; Winton, 2022). Schools in turn experience competitive pressure to attract families' 'business'. Government policies associated with facilitating such market dynamics include demand-side per capita financing of schools, wherein government money 'follows the pupil'.

Student exam scores in individual schools are also often published by governments, helping parents to see which are the highest- and lowest-performing schools (Ball and Youdell, 2008: 18). School principals 'have to be almost as concerned about the success of other schools in the district as they are about their own school' (ibid, p.23). They are incentivised and responsabilised to compete with other schools, building strong brand images and showing success relative to others (Keddie, 2015; Wilkins, 2016; Gunter, 2018).

Linked to the notion that schools ought to compete for pupils is the notion of granting school leaders, and governing bodies at the level of individual schools, significant autonomy to become 'enterprising' (Ball and Youdell, 2008: 19), self-managing and responsible for their own institutions' fate. Premised on new public management theory and a belief that liberalised schooling will offer better value for public money,⁵ budgetary decision-making is often decentralised in various ways to school leaders, as are decisions about teacher recruitment, teacher minimum qualifications, pay, conditions and performance review. Autonomy is often also granted over how to organise school curriculum and pedagogy, admissions, disciplinary policies and exclusions (Mockler et al., 2021: 202). School leaders are given enhanced 'freedom' to fail or succeed (Belfield and Levin, 2002; Rizvi, 2016). In turn, they are expected to behave increasingly like chief executives in a market (Ball and Youdell, 2008: 22). Decision-making occurs increasingly in spheres where 'access is restricted and visibility reduced' (Starr, 1988: 7), removed from the scrutiny of wider public authorities. Carrasco and Gunter (2019) refer similarly to a growth of 'depoliticised privatism' in school-level decision-making. Autonomy has been described as an indispensable condition in the process of marketisation of educational systems (Thompson et al., 2022).

In such contexts 'market values are both elevated and internalised' (Lubienski, 2006: 266). There is some transformation in how schooling itself is being understood – away from it being primarily a decommodified public good and towards its being considered more a private, positional good. Prestigious schools run by leaders keen to educate 'the best' today offer essentially a rival and excludable form of property to families who secure access (ibid; Connell, 2013). This contrasts with ideals of public schooling as educating comprehensive student intakes and striving for 'open[ness] to the children of all citizens within a given community' (Mockler et al., 2021: 198). Ball and Youdell highlight consequences in terms of schools' 'differential valuing of students and distortions in patterns of access' (2008, p.16). Numerous authors have pointed to dynamics of 'cream skimming' in marketised school contexts (Whitty and Power, 2000; Bohlmark et al., 2016; Zancajo, 2019).

In turn, we may also conceive of endogenous privatisation as including schools being 'closed off' to certain groups. Starr (1988) argues that publicness in human services is in large part a matter of how far these serve 'the whole of the people as opposed to that of a part' (p.8). Fischmann and Ott (2018) describe education 'publicness' as being characterised by a commitment to serving the broad public interest and to ensuring wide, inclusive access for the whole community (see also Hursh, 2016). Similarly, Mockler et al. (2021, p.204) argue that school entry requirements should be considered key in determining how 'public' or otherwise schools may be.

Gerrard (2015; 2018) and Rowe (2017) emphasise that even education classically considered 'public' (state-funded and delivered) has always had exclusionary elements – groups within an overarching public who have faced marginalisation and whose needs have gone unmet. Relevant considerations across all schools include, first, the basic fact that many (including those receiving public funding) charge fees which some will find unaffordable. Schools are also regularly

⁵ For summaries of such arguments see Patrinos et al. (2009); Verger and Curran (2014).

academically selective, excluding lower-performing (often the most disadvantaged) students (Carrasco et al., 2017). Religious schools discriminate based on students' religion or lack thereof (Perry-Hazan, 2019) and single-sex schools discriminate based on sex. Geography matters in that schools regularly admit only those living in close residential proximity. Schools in neighbourhoods surrounded by expensive housing are, in this sense, not 'for the whole public' (Rowe and Lubienski, 2017). Lastly, one may also consider here issues of school exclusions, for example where students have needs that schools are no longer able/ willing to meet, or where students are simply deemed generally not to be performing well enough.

1.2 Quantifying School privatisation from an international perspective

In defining exogenous and endogenous school privatisation above, we have identified numerous key dimensions. While exogenous privatisation is clearly a matter of *direct private sector involvement* in school-based education, endogenous privatisation is more a matter of importing private sector policy tendencies, techniques and values into schools. Central to endogenous privatisation are themes of *schools experiencing pressures of competition* with one another, schools being granted enhanced *autonomy* in key decision-making domains, and relatedly schools *restricting access* in terms of the extent to which they serve a broad and inclusive cross-section of the community.

Although influential in the academic debate, endogenous and exogenous privatisation notions have not inspired efforts to measure nor quantify the phenomena beyond classifications based on funding or private sector school management. Only a few attempts have been made to quantify school privatisation more broadly.

One important prior study by Winchip et al. (2019) generated a quantitative scale for measuring numerous aspects of school privatisation. Drawing on survey data from the European Trade Union Committee for Education (ETUCE), this study utilised the perceptions of 68 education union officials in European countries to ascertain how far certain elements of school privatisation were deemed salient across countries. Exogenous privatisation characteristics were asked about such as the system-wide presence of publicly-funded but privately-managed schools, in addition to endogenous privatisation features such as teacher pay being determined at school level. The study focused on capturing officials' perceptions of the prevalence of privatisation, and latent constructs underpinning perceptions of privatisation. It was not aiming to capture quantitatively the extent of specific practices taking place in secondary schools, as documented by sampled school leaders. Gutiérrez et al. (2023) used administrative education data on London and Santiago to measure school publicness/ privateness in multiple respects. These included both exogenous elements of privatisation such as private sector school management, and endogenous elements including how far schools are inclusive or restrict access, and how far school leaders have autonomy over areas such as teacher pay and the school curriculum. Due to the breadth of data on local landscapes needed to produce their detailed multidimensional privatisation index, however, analysis was necessarily restricted to two cities.

Our next task is to consider:

- How can these dimensions be captured quantitatively and specifically by PISA data?
- What can PISA data tell us about how exogenous and endogenous school privatisation vary across school systems, and over time?

2. Data and Methods

2.1 International comparative study using PISA.

Endeavours for capturing school privatisation quantitatively, cross-nationally and inter-temporally face numerous challenges. Notably, all major studies to date which gather detailed internationally comparative data on education - e.g. PISA, the Trends in International Mathematics and Science Study (TIMSS) and the OECD Teaching and Learning International Survey (TALIS) - suffer from the clear limitation that they have not been designed specifically to observe changes in school privatisation over time. Sources which prioritise gathering data on individual students do not always have comprehensive records on schools. Some data sources also change their recording focus between measurements, making inter-temporal comparisons difficult. Additionally, there are methodological difficulties in measuring privatisation. Some survey items within cross-national studies are based on the opinions of educational actors (by definition, subjective, and probably affected by contingent political discussions). Other studies, often including detailed information, are local or only allow comparisons within small groups of countries.

This paper aims to overcome these difficulties as best possible while using PISA data on students and the secondary schools they attend. These records have several advantages. First, PISA encompasses a large number of school systems covering OECD countries and beyond. Second, since PISA's inception in 2000, data have become available allowing inter-temporal comparisons for many countries. Other cross-country sources of information that could have served our purposes started to be implemented later (e.g., TALIS, which began in 2008). Third, PISA involves detailed data collection from school leaders - importantly there is a questionnaire for school principals who are surveyed on administrative details of their own schools, school climate and their implementation of education policies. This information allows us to observe various aspects of secondary school exogenous and endogenous privatisation. Finally, although including subjective elements as any survey does, many questions in the PISA instrument attempt to collect information to describe how things operate in concrete terms at the school level - formal policies and administrative details - rather than principals' perceptions regarding privatisation. In that sense, the principals' responses may be less affected by current political discussions about privatisation (unlike ETUCE).

Under this framework, we now examine what information from PISA can be used to account for the four dimensions we have defined for capturing the exogenous and endogenous manifestations of privatisation. It is important to note that the indicators we outline below, deploying PISA data, are not exhaustive in that they do not and could not capture every aspect of exogenous and endogenous school privatisation covered in prior literature on this topic. We believe, however, that they do make an important contribution to knowledge in that they cover several key elements discussed in such literature, allowing us to examine these cross-nationally and inter-temporally.

2.2 Operationalising exogenous privatisation – private sector involvement

As has been noted above, all PISA studies since 2000 have gathered data on proportions of students cross-nationally who are being educated in schools where non-state actors have overall management responsibility. Privately *provided* or *delivered* schools in this respect include both

privately-run schools that are dependent on government funding, and also those operating independently of government funding.

2.3 Operationalising endogenous privatisation

Restricted access

Within all schools, including those that are publicly-provided as previously discussed, one first key element of endogenous privatisation is the extent to which schools over time and cross-nationally have been inaccessible to some within the relevant age range. The PISA school survey has included numerous relevant indicators on these issues. First, each round it asks whether schools, in terms of gender, admit both girls and boys. The survey also usually asks whether schools practise selectivity of various kinds, restricting access based on e.g. families' support for a particular religious or instructional philosophy, and/or on student academic performance (including placement tests). The survey asks each round, too, about the proportion of schools' income that comes from student fees (fees being in turn a barrier to access for students whose families cannot afford to pay).

Competition

As we have established above, endogenous privatisation is also a matter of how far school leaders experience a sense of disciplinary competition with other schools. The PISA school survey has in most rounds asked school leaders whether they use standardised tests to judge their own school's performance against that of other schools (as distinct from simply comparing with a national or local average). Where they do, we might reasonably infer that this practice is driven in part by concerns about school reputation and competitive pressures experienced in marketised contexts where parents can choose schools.

School autonomy

PISA school surveys over time have captured numerous respects in which schools may be granted decentralised decision-making autonomy. School leaders were asked about how far schools control several decision-making domains. Within each question, school leaders could specify whether or not local, regional or national authorities also retained some control. Questions were asked about: school admissions, school disciplinary policies, curricular course content, choice of school textbooks, teacher recruitment and termination of teacher contracts, budgetary allocations and teacher salary levels.

2.4 Data and four dimensions of school privatisation

Since we aim to understand how school privatisation has evolved over time and across countries, we have used questionnaires answered by school principals in PISA. We use three PISA rounds (2000, 2009, 2018) to examine the evolution of school privatisation. This selection of PISA rounds has sought to balance two purposes. On the one hand, it includes the largest number of school systems and gives the most global view of privatisation. On the other hand, it includes as many indicators as possible to reflect privatisation in both its exogenous and endogenous manifestations (considering that the survey instruments are not the same over time). Including three rounds allows us to observe the extent to which each dimension of privatisation has changed over time and to define trends in each. Unfortunately, information from PISA 2022 does not include critical variables for our analysis. Therefore, it has been excluded from the study.

Our analysis focuses on four dimensions: Provision, Restricted Access, Competition, and Autonomy. The first expresses exogenous school privatisation, while the others capture its endogenous side. In total, we have included 14 indicators distributed across the four dimensions. Each indicator is described in Table 1. In some cases, we had to impute a variable from another period to keep all the indicators (as detailed in the table). For example, the PISA 2000 questionnaire did not include a question on whether the school used the information it collected from standardised tests to compare itself with other schools. In such a case, that information was imputed from the base of the adjacent year (in that case, 2003) that did contain that information. Eventually, this imputing method was also applied when a question had invalid values in a particular year for a given country. Although we have tried to include as many school systems as possible in the analysis, in some cases, this has been impossible because certain samples present problems of comparability over time or have a sample size that is insufficient. We have not applied any exclusion based on the response rate of countries beyond the limits proposed by the OECD (see OECD, 2017).

Table 1. The Identification of Private/Public Features in PISA School Questionnaires

Dimension	Subdimension	Variable/Indicator	Original type of variable	Public	Private
Provision <i>(Exogenous Privatisation)</i>	School management (2000/2009/2018)	1. Percentage of student enrolment (based on OECD classification of schools as either publicly- or privately-managed)	Continuous	Publicly Managed	Private, government independent Private, government-dependent
Restricted Access <i>(Endogenous Privatisation)</i>	Restrictions based on price. (2000/2009/2018)	2. About what percentage of your total funding for a typical school year comes from student fees or school charges paid by parents?	Continuous	10% or less	More than 10%
	Restrictions based on academic factors. (2000/2009/2018)	3. How often are the following factors considered when students are admitted to your school? Students' record of academic performance (including placement tests)	Categorical	Never	-Sometimes -Always
	Restrictions based on sociocultural factors. (2000/2009/2018)	4. How often are the following factors considered when students are admitted to your school? Parents' endorsement of the instructional or religious philosophy of the school	Categorical	Never	-Sometimes -Always
	Restrictions based on gender. (2000/2009/2018)	5. As of <date>, what was the total school enrolment (number of students)? Number of boys As of <date>, what was the total school enrolment (number of students)? Number of girls	Continuous	1 or more.	Zero.
Competition <i>(Endogenous Privatisation)</i>	Compares with other schools (2003/2009/2018)	6. In your school, are assessments of students in <national modal grade for 15-year-olds> used for any of the following purposes? To compare the school with other schools	Dichotomous	No	Yes
Autonomy <i>(Endogenous Privatisation)</i>	Control of tasks (2000/2009/2015)	Regarding your school, who has a considerable responsibility for the following tasks? 7. Approving students for admission to the school 8. Establishing student disciplinary policies 9. Determining course content 10. Selecting teachers for hire 11. Firing teachers 12. Determining teachers' salary increases 13. Deciding on budget allocations within the school 14. Choosing which textbooks are used	Categorical	The decision includes the Local/regional educational authority or the National Education Authority	The decision is made at the school level (Headteacher, Teachers, Head of Department, Governing Board), and the National/Regional/ Local authorities do not take part in it.

It is important to highlight that PISA uses a two-stage sampling approach. First, schools are selected using probability proportional to size (enrolment of 15-year-old students). In the second stage, students are sampled from those schools (with equal probability). Using the final students' weights provided by PISA, descriptive statistics representing a country's population of 15-year-old students may be drawn⁶. Then, following the OECD recommendation, we merged the student databases with the reports of the principals of the schools in which they were enrolled. Consequently, although we rely on school questionnaire information, our article does not report on proportions of schools displaying certain characteristics, but on proportions of a country's student population attending schools with certain characteristics. For example, we do not refer to the percentage of schools that are privately provided, but to the percentage of students enrolled in privately-provided schools.

Defining what is private and what is public is a critical step in quantifying privatisation. We decided to transform all the original variables into dichotomous ones. This allows us to distinguish between publicness and privateness straightforwardly for each indicator/ variable. Table 1 summarises the criteria by which students would be considered as attending a school that was 'private' or 'public' in each regard, for each variable/ indicator. While for exogenous privatisation (our Provision dimension) we follow the basic definition used by the OECD (i.e. regarding what counts as a publicly- or privately-managed school), in the case of endogenous privatisation several decisions had to be made. For example, the originally categorical variables regarding school autonomy were transformed into dichotomous ones according to who was taking part in critical decisions regarding the school. Therefore, schools where specific types of decisions were being made without the involvement of local, regional or national educational authorities were considered to be private in these regards.

For each variable/indicator, we can then calculate the percentage of students enrolled in schools with that particular privateness characteristic in each country. By averaging the variables within each dimension in each country, we obtained a continuous variable for each dimension on which our analyses are based.

3. Results

Privatisation trends: a matter of competition and autonomy.

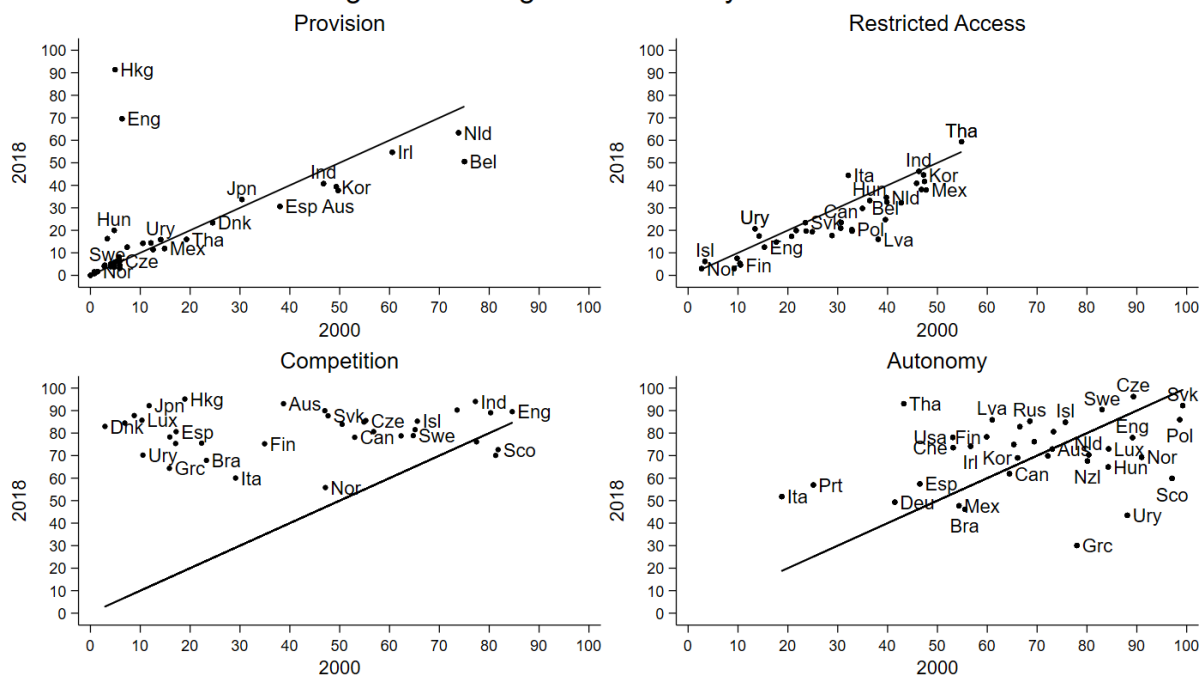
We aim to analyse to what extent privatisation, both exogenous and endogenous, has evolved in schools in different countries between 2000 and 2018. For this, we focus on four dimensions based on existing theoretical knowledge of privatisation processes as covered in our literature review. Figure 1 shows the changes in privatisation over time plotting the first and last data points in each of the four dimensions. The graphs allow us to identify countries⁷ with relevant inter-temporal variations and global trends. In these figures, the diagonal lines represent an equal value in both years (2000-2018), implying that no change has occurred over time. Countries located above this line present an increase in the value of the dimension of privatisation, while those located under the diagonal line show a decrease. The further a country is from the diagonal line, the greater the increase/decrease in that dimension.

⁶ We limited our analysis to the national level (typically countries). We have only included economies that took part in PISA rounds and, in all methodological respects, are treated as a country (e.g., Macao). Therefore, we do not analyse subnational levels related to states, regions, or communities.

⁷ Full names for each International Organisation for Standardization (ISO) country code can be found in Appendix 3.

The data show that few countries have experienced changes over time in proportions being educated in privately-run schools, with levels of this sort of provision remaining relatively low (from 18% in 2000 to 21% in 2018). Three types of scenarios can be identified. First, some school systems have experienced policy changes in this aspect since the 1990s, with increased proportions over time enrolling in privately-run schools, such as Hong Kong, England, Hungary and Sweden. While the former two have experienced radical transformations in this area (see, for example, policy trends towards Academisation in England - West and Nikolai, 2017; see also Cheung et al., 2016, on the Hong Kong context), the latter two show more moderate increases. Second, there are school systems that have maintained relatively high private provision throughout the period analysed, such as the Netherlands, Indonesia, Spain, Belgium, Ireland, Japan and Korea. These cases correspond to countries where private provision has an important longstanding historical tradition, often associated with religious institutions' participation as education providers (Maussen and Vermeulen, 2015; Dupriez et al., 2020). Finally, most school systems show stable, low levels of privately-run schools. This group includes some Nordic countries (Finland, Norway, Iceland), European countries (Germany, Scotland, Czech Republic, Italy, Greece), and countries from other latitudes (United States, Uruguay, New Zealand). In global terms, it is confirmed that privatisation associated with non-state-run provision of this kind (our indicator of exogenous privatisation) does not correspond to a worldwide trend, and, on the contrary, relative stability is observed over time. Of course, this general conclusion does not ignore that certain countries have experienced radical changes in levels of private provision of this type.

Figure 1. Changes over time by dimension



The first dimension capturing endogenous privatisation is Restricted Access.⁸ Comparatively, this dimension shows low variability across countries (with standard deviations of 14.4 and 14.0 in

⁸ We decided against excluding those in privately-provided schools in our analysis of dimensions making up endogenous privatisation - i.e. restricted access, competition and autonomy. A 'pure' capturing of endogenous privatisation would involve such an exclusion; however, it would also prevent us from knowing how far privately-provided schools restrict access and behave competitively and autonomously. Our analysis therefore prioritises giving the fullest report possible of the 4 dimensions. However, marked

2000 and 2018, respectively). Countries showing lower levels of access restrictions include Finland, Norway, Scotland and Iceland. These are iconic cases of comprehensive systems where schools are free and selective student admissions are scarce (Lundahl, 2016). In contrast, Australia, Indonesia, Japan, Korea, and Thailand have the highest proportion of students enrolled in schools implementing access restrictions. In some cases, the extended use of school fees at the secondary level (i.e. Korea, Australia) may explain the presence of some countries in this group (Perry and Southwell, 2014; Exley, 2020). Regarding changes over time, in our data, more countries decreased the use of such barriers to access than increased them between 2000 and 2018. In the first scenario, downward variations are recorded in countries including Belgium, Latvia, Ireland, Germany and Luxembourg. These figures may reflect different policy changes established in countries with heterogeneous levels of private provision. For example, in the Belgian French-speaking community, new regulations have been promoted to regulate access to secondary school, fostering a social mix (Danhier and Friant, 2019). More radically, Poland has undergone several educational reforms in recent decades, including expanding comprehensive general education and postponing tracking practices (Jakubowski et al., 2016). Only Italy and Thailand show significant increases in restricted access.

The second dimension capturing endogenous privatisation is Competition. Unlike the Provision and Restricted Access dimensions, here, most countries have a clear upward trend. The average increases from 43.3 to 80.6 in the period analysed, while the standard deviation decreases from 26.5 to 9.5). Some countries, such as Belgium, Denmark, Uruguay, Spain, Hong Kong and Luxembourg, show large increases. In cases like Denmark, this may be related to widening parental choice to all schools within and across municipalities, as opposed to the traditional use of catchment areas (Moos, 2016). In Spain, new laws mandate the State to subsidise private providers in cases of unsatisfied demand, with a subsequent increase in the number of private schools (Bonal et al., 2023), which may cause schools more broadly to experience competitive pressures. Other countries already showing high values on this dimension in 2003 have continued their upward trajectory, such as New Zealand and Indonesia. Exceptionally, some countries show decreases of low magnitude or remain unchanged (Russia, Hungary, Scotland). It is clear from the data that competition between schools has increased not only in those few countries where privately-run schools have grown but also in those that have maintained stable, largely state-run provisions. For example, Finland, Greece, Germany and Italy have maintained less than 10% of student enrolment in the privately-run sector but have shown significant increases in competition between schools. This change captures an increased use of standardised tests among school leaders to compare their school's performance with that of other schools. Thus, in 2018, in all countries under analysis, at least 50% of secondary education students in our dataset overall were enrolled in schools that used information from standardised tests to compare themselves with other schools.

The last dimension capturing endogenous privatisation is Autonomy, which is characterised by the presence of two opposite trends. In aggregate terms, we observe a slight reduction in the standard deviation of this dimension (which drops from 19.5 in 2000 to 15.6 in 2015) and stability in the average (which has values of 68.7 and 70.6 in 2000 and 2015, respectively). However, the data show countries in this period that have registered significant rises in this area - some with very low proportions of privately-run schools - and others that have experienced the

endogenous privatisation in its pure sense can be noted wherever countries show high values on the restricted access, competition and autonomy dimensions, yet low values for the 'provision' dimension. Such examples are discussed in the text.

opposite phenomenon. For example, Italy, Switzerland, the United States, Portugal, Albania, Thailand and Latvia show rises of more than twenty percentage points. Indeed, some countries have explicitly transferred different responsibilities to schools, increasing autonomy. For example, Italy has moved from a traditional centralised bureaucratic system to one where headteachers have a more managerial frame, especially in curriculum and organisational matters (Mentini and Levinato, 2023). In contrast, Greece, Uruguay, Scotland, Norway and Hungary show decreases in levels of Autonomy. Trends here are likely attributable to a variety of different policy trends in different national contexts – for example in Hungary there has been government centralization of school policy in various respects in recent years (Semjén et al., 2018). In Scotland, underpinning data shows that decreased autonomy reflects some loss of decision-making power for school leaders over teacher salaries – this may be related to the national introduction of the Chartered Teacher initiative (Crehan, 2019). Other countries show increases or decreases of lesser magnitude. Thus, despite the relative stability of the average, this is an area in which there have been important transformations in specific school systems.

A review of changes over time for the 35 countries with available data has made it possible to identify the school systems that have experienced variations in each of our four dimensions. However, comparing only two points in time can be misleading because differences observed may be associated with the samples. In the appendix, we present two background documents that reinforce the information presented in this section. First, a summary table (appendix 1) with descriptive information for each dimension in each sample used (2000, 2009, 2018). It shows the gradual changes in each dimension over time, expressed in central tendency and dispersion measures. Second, a graph detailing the evolution of each dimension for each country (appendix 2), including an intermediate point (2009) that allows us to confirm the gradualness of these transformations visually. In light of this background, our overall conclusion is that the results we presented remain valid.

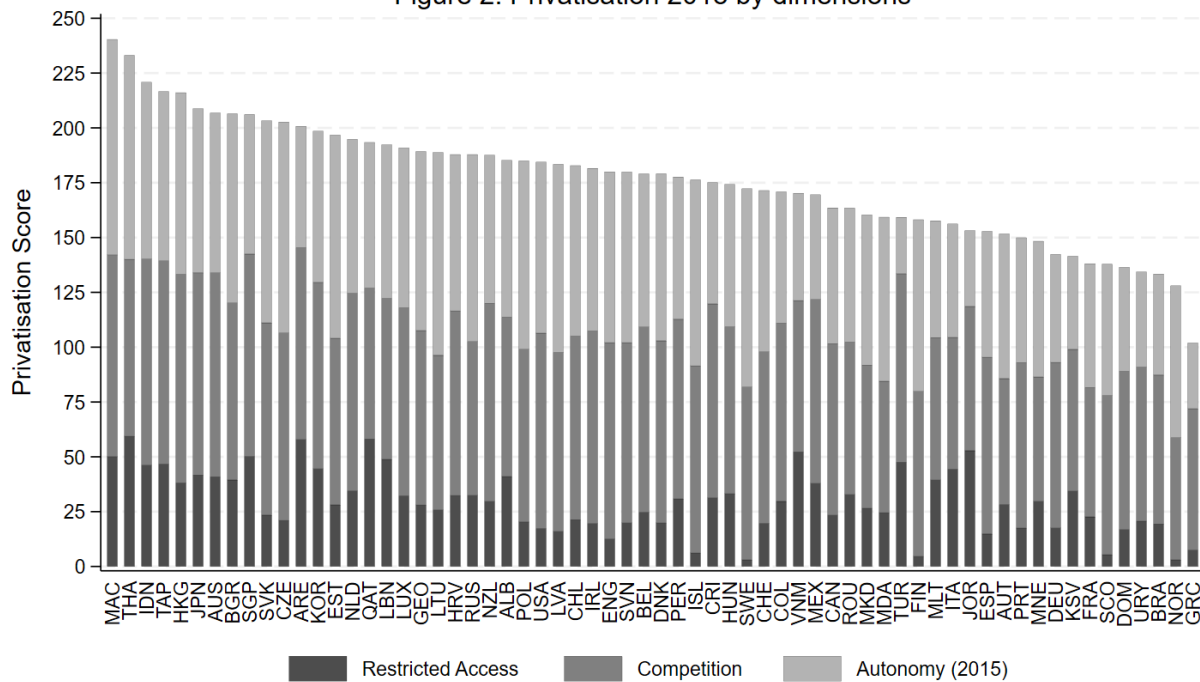
An up-to-date overview of dimensions capturing endogenous privatisation

So far, analyses have included 35 countries participating in three PISA rounds. However, this approach is limited in its coverage of the current state of school privatisation in the wider world. As more and more countries have progressively joined the PISA studies over time, we have been able to produce a 2018 dataset that allows us to look at 64 school systems (i.e. a third of the countries worldwide). Among the 29 systems added to our expanded analysis at this point, only a few have high proportions of students in privately-run schools (United Arab Emirates, 47%; Chile, 44%; Lebanon, 27%; Macao, 47%; Qatar, 29%). All others have less than 15% of students enrolled in such schools. Figure 2 shows specifically the dimensions of Restricted Access, Competition and Autonomy for each school system, with data available in 2018 (2015 for the Autonomy dimension). In this figure, we present the three dimensions added together for each system. Each dimension can take values from 0 to 100 (under the same calculation described before). To facilitate the data's readability, we have limited the values in the vertical axis to 250 (instead of 300, which is the maximum value the sum of the three dimensions could take). The data allows us to express each dimension's importance by country visually.

Figure 2 confirms the presence of endogenous privatisation, especially considering the aspects of Competition and Autonomy. Thus, there is no educational system in which the dimension referring to Restricted Access obtains a higher value than those of Autonomy or Competition. High values for Competition and Autonomy can be noted in countries both with high and low presences of state-run schools. When observing these dimensions capturing endogenous privatisation, we note that countries frequently discussed in literature on the privatisation of

education generally do not appear among the countries with the greatest values for these dimensions (for example, Chile, England or Belgium, which appear only to have average values for the three dimensions). Likewise, countries with predominantly state-run schools may show high levels of privatisation in Competition and Autonomy terms (Bulgaria, Slovakia, Czech Republic, Estonia). Other countries commonly identified as part of a tradition of public solid provision also appear with high values in these two dimensions (Finland, Sweden, Iceland).

Figure 2. Privatisation 2018 by dimensions



4. Conclusion and discussion

In this paper we have sought to address a surprising gap in quantitative research to date on education and the privatisation of schools – namely that created by a rather narrow focus only on the extent to which non-state providers are running schools (see for example OECD, 2020). Such a focus on this aspect of ‘exogenous’ privatisation (Ball and Youdell, 2008) neglects the existence of a substantial and growing body of qualitative research on the concept of ‘endogenous’ privatisation in education. This additional aspect encompasses a number of other ways in which schools may be deemed ‘private’, such as in the extent to which they may restrict access to some within a community, the extent to which they experience and engage in competition with other local schools, and the extent to which they are making autonomous decisions outside the purview of local, regional and national public authorities.

While a cross-national focus only on proportions being educated in privately-provided schools may emphasise stasis over time – i.e. that school systems are not becoming more ‘privatised’ in this respect (at least on average – see OECD, 2020) – in our paper we show that actually in recent decades school systems in many countries have witnessed high levels and some marked increases in certain aspects of endogenous school privatisation. Schools do, in most countries examined over time, seem to be moving away slightly from some admissions arrangements that systematically restrict access to certain groups. However, greater proportions of students over time are being educated in schools that are subject to competitive pressure, where leaders compare their standardised test performance to that of other schools. In numerous countries,

already high and/or growing proportions of schools have been making a variety of key decisions without oversight from local, regional or national authorities. Marked endogenous school privatisation in these respects notably can be found in multiple countries where only low proportions of students are being educated in privately-managed schools. On the flipside, in some countries renowned in education literature for having high proportions of schools run by non-state actors (e.g. Chile, England, Belgium), levels of school competition and school autonomy, without oversight from public authorities, are modest by comparison.

The latter point above suggests a possibility that in some countries – going beyond those simply with larger proportions of privately-managed schools – new research investigations could be beneficial, examining more how endogenous school privatisation and its dynamics of ‘depoliticised privatism’ (Carrasco and Gunter, 2019) are manifesting. Our study reinforces the idea that what is ‘public’ and what is ‘private’ in schooling are not straightforward questions to answer. Narrow definitions of school ‘privateness’ can be found in many branches of educational research. For example, school choice studies might in the future look to detach more from traditional notions of public/private when assessing parental preferences and try to capture specific, more nuanced public/private features of schools that may be attractive to parents. Policy challenges in the realm of privatisation, such as those stated by Verger et al. (2017: 779), who underline the difficulties of instigating “reverse education privatisation trends through public policy instruments once the percentage of private schools has exceeded a certain threshold”, may be re-interpreted based on our findings. Quantification, as presented in this article, enables the observation of whether countries over those thresholds may, at times, mitigate privatisation through policies reducing endogenous aspects, even without reducing the proportion of students enrolled in privately managed schools (as has recently occurred in Chile, according to Gutiérrez et al., 2023). Conversely, it brings an opportunity to capture in more detail the extent to which state-run schools adopt the private sector's logic.

Our findings contribute to what is so far only a small but emerging literature on the quantification of exogenous and endogenous aspects of school privatisation. We have used a new approach and data source to explore comparatively selected dimensions of exogenous and endogenous school privatisation. We have also compared a wider range of countries over time than in previous literature on this topic. Our findings corroborate those of Winchip et al. (2019), who noted that, in a range of European countries, endogenous privatisation was perceived by education officials as being the ‘dominant form of privatisation in the statutory age education sector’ (p.95). We concur with these authors that where countries’ numbers of privately-run schools may remain stable, this should not be taken as ‘decisive evidence that privatising behaviour in public-sector schools is in retreat’ (p.96). In quantifying and comparing school privatisation trends in London and Santiago, Gutiérrez et al. (2023) interestingly found that these two cities showed divergent trends, both in terms of schools being privately provided and schools making autonomous decisions without wider public oversight. Our study builds yet further on such findings, however, broadening geographic scope to show, for example, that whole national education systems can be divergent regarding levels of school decision-making autonomy. Our study contributes to knowledge furthermore in the way that it captures numerically, cross-nationally and over time the extent of specific privatisation phenomena long reported on in qualitative research. Examples include a cross-national growth of marketised, performative school leadership manifesting in principals’ concern with school league tables (Lingard et al., 2017; Moos, 2016; Wilkins, 2016); also many countries’ ongoing high or rising school autonomy - instances where the daily work of schools has become more and more ‘a private issue’ (Thompson et al., 2022, p.83; see also Keddie, 2014; 2015; Mentini and Levinato, 2023; Mockler et al., 2021).

Our method is of course not perfect, being as it is constrained by the limits of what past PISA school questionnaires have covered. Future research and international survey data collection efforts could certainly take the quantitative measurement of exogenous privatisation further – gathering for example information on other types and levels of private sector involvement in countries’ schools. These efforts could be particularly relevant in contexts where this work has been unable to observe fully and that have been highlighted as landscapes with sharp increases of enrolment in privately-run schools such as South Asia (UNESCO, 2022), Saharan Africa, and Latin America (Crawford et al., 2022). On endogenous privatisation, new data collection efforts by school survey methodologists could seek to capture for example demand-side financing in school funding allocations and phenomena such as teacher performance-related pay. Combined, these initiatives could help to shed light not only on the extent of privatisation's most obvious manifestation (its exogenous side) but also on the depth of the phenomena across different countries (the endogenous dimension).

There are certainly positive signs that the OECD PISA studies will continue to generate useful information that may enable increasingly nuanced quantitative pictures and understandings of school privatisation. The most recent 2022 PISA study for example has asked school leaders a question about teacher bonuses.⁹ Recent rounds of PISA have also asked school leaders whether their schools are being run on a for-profit basis, and also the number of local schools with whom they see themselves as being in competition. Notably in additional analysis of PISA 2018 data that we carried out using this latter indicator, we noted that nearly two-thirds of school leaders in 2018 perceive their schools as being in competition with two or more other local schools. On the dimension of schools’ restricted access, we note that, in PISA 2022, questions about factors schools use to determine school admissions are becoming more nuanced. There are new items on schools’ consulting of students’ prior disciplinary records, recommendations from feeder schools and student needs for/ interest in special programmes. PISA 2022 and some past rounds of the survey have also asked school leaders about the general perceived likelihood of students being transferred to other schools on, e.g. poor behaviour or low academic achievement grounds.

Overall, our exploration of PISA data highlights clear contributions that the data can make to research seeking to operationalise and quantify exogenous and endogenous school privatisation, across countries and over time. We hope that education researchers will be intrigued to build on this line of inquiry, using similar methods not only to explore school privatisation trends and cross-national variation going forward, but also reflecting on their meaning for the future of school systems.

⁹ https://www.oecd.org/pisa/data/2022database/CY8_202111_QST_MS_SCQ_CBA_NoNotes.pdf

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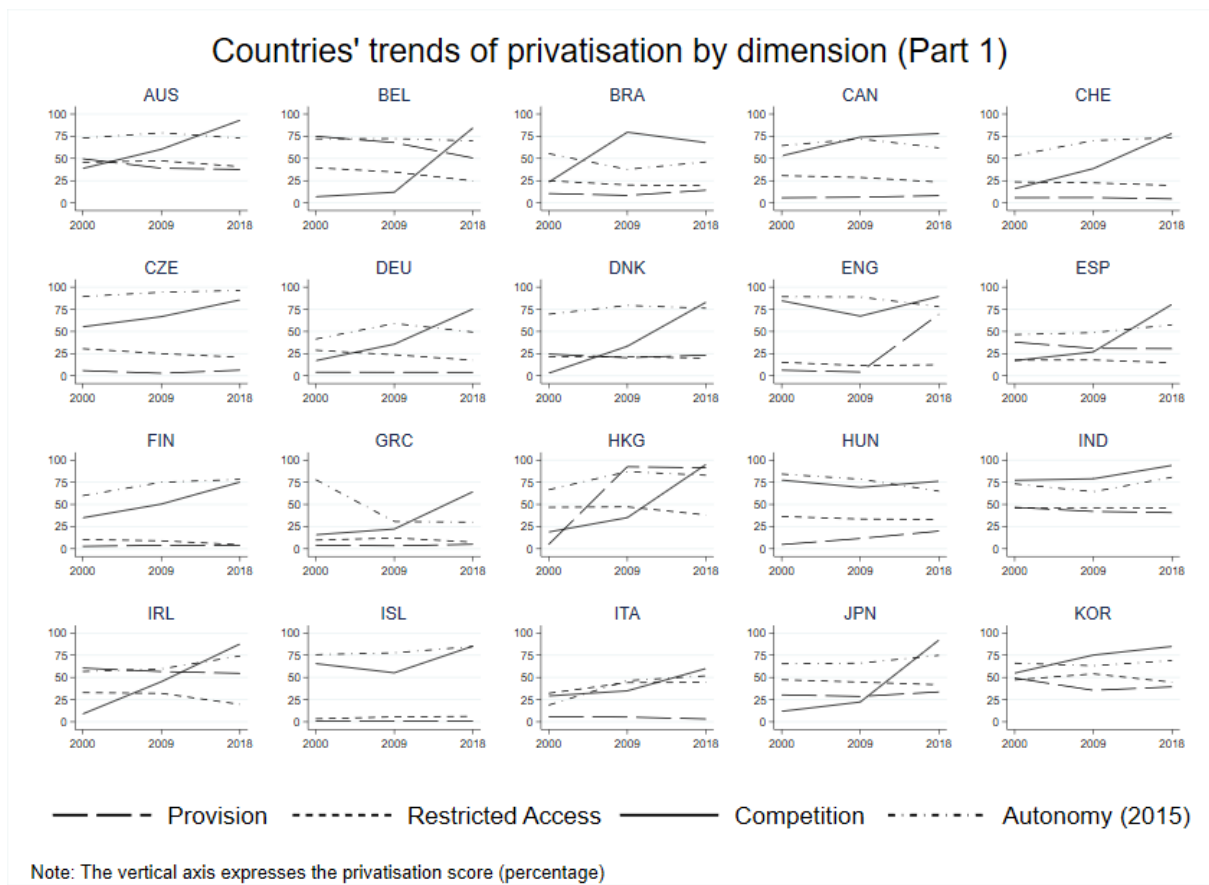
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Appendix 1 - Descriptive statistics - values of each dimension in 2000, 2009, 2018

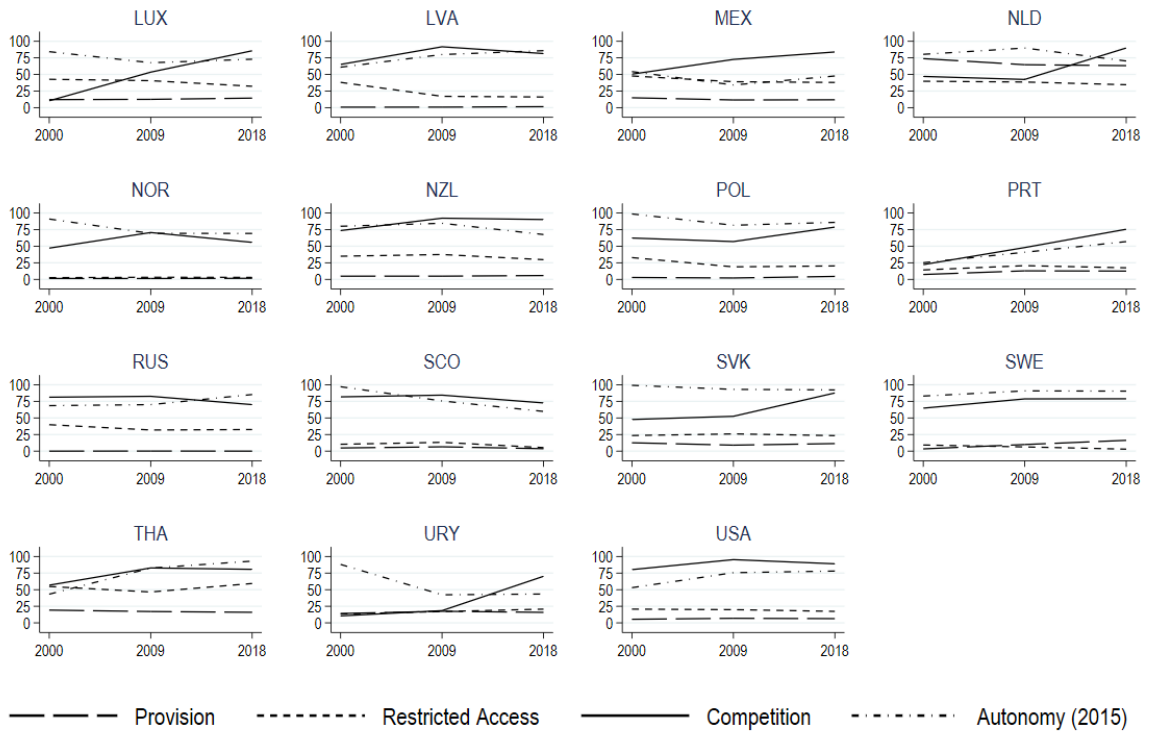
Database/Dimension	P-10	P-50	P-90	Mean	SD
PISA 2018 (n=35)					
Provider	1.6	12.5	54.7	20.8	22.5
Restricted Access	5.3	20.7	44.4	24.4	14
Competitive Environment	67.9	81.5	92.2	80.6	9.5
Autonomy*	47.7	73	90.4	70.6	15.6
PISA 2009 (n=35)					
Provider	1.4	9	56.6	18.5	22.4
Restricted Access	9	25	46.7	27.4	13.9
Competitive Environment	22.3	57	84.4	57.3	23.3
Autonomy	40.9	72.5	89.9	69.3	17.5
PISA 2000 (n=35)					
Provider	1.4	5.9	49.7	17.5	21.4
Restricted Access	9.8	30.7	47.7	29	14.4
Competitive Environment**	10.3	47.1	80.2	43.1	26.3
Autonomy	43.2	69.4	90.9	68.7	19.5
PISA 2018 (n=64)					
Provider	1.3	8.3	28.9	12.1	12.4
Restricted Access	12.5	28.9	50.1	29.7	14.3
Competitive Environment	52.1	72.3	88.4	69.9	14.2
Autonomy*	47.4	69.6	90.4	68.4	16.3

* 2015 data imputed ** 2003 data imputed

Appendix 2 - Trends of privatisation by dimension and country (2000-2018)



Countries' trends of privatisation by dimension (Part 2)



Note: The vertical axis expresses the privatisation score (percentage)

Appendix 3 - International Organisation for Standardization (ISO) country code

Country/Economy	Code	Country/Economy	Code
Albania	ALB	Lebanon	LBN
Australia	AUS	Lithuania	LTU
Austria	AUT	Luxembourg	LUX
Belgium	BEL	Macao	MAC
Brazil	BRA	Malta	MLT
Bulgaria	BGR	Mexico	MEX
Canada	CAN	Moldova	MDA
Chile	CHL	Montenegro	MNE
Chinese Taipei	TAP	Netherlands	NLD
Colombia	COL	New Zealand	NZL
Costa Rica	CRI	North Macedonia	MKD
Croatia	HRV	Norway	NOR
Czechia	CZE	Peru	PER
Denmark	DNK	Poland	POL
Dominican Republic	DOM	Portugal	PRT
England	ENG	Qatar	QAT
Estonia	EST	Romania	ROU
Finland	FIN	Russian Federation	RUS
France	FRA	Scotland	SCO
Georgia	GEO	Singapore	SGP
Germany	DEU	Slovakia	SVK
Greece	GRC	Slovenia	SVN
Hong Kong	HKG	South Korea	KOR
Hungary	HUN	Spain	ESP
Iceland	ISL	Sweden	SWE
Indonesia	IDN	Switzerland	CHE
Ireland	IRL	Thailand	THA
Italy	ITA	Türkiye	TUR
Japan	JPN	United Arab Emirates	ARE
Jordan	JOR	United States of America	USA
Kosovo	KSV	Uruguay	URY
Latvia	LVA	Viet Nam	VNM