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Manufacturing an illusory consensus? A bibliometric analysis of the international debate on education privatisation

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ABSTRACT

As one of the most polarised areas in education research, the education privatisation debate generates opportunities for knowledge-brokers to promote their preferred policy alternatives. Based on bibliometric analysis techniques, this paper maps the configuration of the academic debate on privatisation, and explores how it is connected with the references mobilized by a group of international agencies located at the interstices of the research and policy fields. Our findings suggest that, when confronted with certain incentives, some international agencies use evidence in a selective and tactical way as a means to support their pre-established policy pReferences.

1. Introduction

Education privatisation is one of the most polarised areas in education policy research. A swath of highly contradictory empirical research surrounds the issue of private involvement in education provision on a variety of related themes such as school choice, voucher schemes or charter schools. The academic research on the impact, costs, and benefits of public-private partnerships and educational privatisation policies is far from conclusive. However, the lack of robust evidence has been unequally captured and discussed by key international agencies in the education for development field. In fact, a range of relevant educational stakeholders, including think tanks, private foundations, and international aid agencies promote the adoption of privatisation solutions in different educational settings and often justify their support for education privatisation by citing scientific evidence.

Based on a combination of bibliometric and social network analysis techniques, this paper maps the epistemic configuration of the education privatisation debate in academia and explores how a group of global players engage and collaborate with the debate. The specific objectives of the paper are: (1) to review the state of the art of research on public-private partnerships/privatisation in education in the last two decades; (2) to analyse to what extent it is possible to identify different epistemic communities within the public-private partnerships (PPPs)/privatisation research field on the basis of research attributes such as methodology or discipline; (3) to explore how the knowledge products on education privatisation of key international actors fit within and engage with this research field and the existing epistemic communities within it. Specifically, we will focus on some of the most emblematic publications on private education produced by the World Bank, the Council for British Teachers (CfBT),[1] the UK's Department for International Development (DfID), and Ark Education Partnerships Group. These international agencies were selected on the basis of their capacity to influence education policy decisions in low- and middle-income countries through lending and/or consultancy operations, but also because they play an important role as knowledge brokers between the domains of research and policy. One of the main channels through which these organisations develop their role as knowledge brokers is the elaboration of *literature reviews* on different policy topics such as those analysed in this paper.

The main findings of our research are that in spite of the variety of methodological and disciplinary approaches, the literature on education privatisation is created and disseminated by a moderately well connected academic community – in which only a limited share of the nodes remain isolated, and where ties are homogeneously distributed beyond discipline or methodological divides. However, a clear difference can be identified between the main corpus of academic literature on education privatisation and the references and sources mobilised by key knowledge brokers in the education for development field. Some of these actors, when confronted with certain incentives, tend to use knowledge products and references that occupy remote or isolated

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positions in the education privatisation study network, and hardly incorporate peer-reviewed academic knowledge from outside their policy circle. By doing so, these actors reproduce like-minded policy discourses that usually focus on the pros and benefits of education privatisation.

The paper is organized into five main parts. In the first part of the paper, we present our conceptual framework for evidence-based policy and the politics of knowledge mobilisation. In the second part of the paper, we describe our data gathering and data analysis methods, which combine bibliometric and social network analysis techniques. In the third part we present our primary results, according to the three objectives mentioned above: (1) state of the art of research on PPPs/privatisation in education in the last two decades; (2) identification of epistemic communities within the academic debate; (3) the role of global knowledge brokers in the mobilization of knowledge products on education privatisation, and their engagement with the academic debate. In the discussion section, we elaborate on the economic, ideological and institutional underpinnings of the knowledge instrumentalization processes identified on behalf of these organisations. Finally, we conclude by reflecting on the usefulness of bibliometric tools for holding different actors intervening in complex education policy debates to account.

2. Evidence-based policy, knowledge mobilisation and the uses of research

In this conceptual section we first outline the emergence of the evidence-based paradigm and reflect on its challenging implementation in the education field and, secondly, discuss the case for knowledge-brokering and knowledge-instrumentalization as dynamics significantly stimulated by on-going transformations in the education research-policy nexus.

2.1. The rise and limits of the evidence-based policy approach in education

Policy-makers are increasingly expected to rely on what data, experts, and scientific evidence say before taking important policy decisions. The evidence-based policy (EBP) approach to policy-making represents an allegedly rationalistic understanding of policy-making that finds its origins in the field of medicine where, for a long time, empirically tested treatments, usually identified through experimental research, are those selected by regulatory agencies and practitioners when it comes to addressing health issues (Biesta, 2007). With the passage of time, however, the evidence-based policy approach has also penetrated in other areas such as education policy.

At the end of the nineties, educational research faced a crisis of legitimacy and governmental agencies recommended that research in experimental sciences, which is usually based on quantitative approaches and promotes a more cumulative type of knowledge, should be the model for educational research (Head, 2008; Pirrie, 2001).[2] At the same time, more and more funding agencies promoted, through their financing criteria, more applied research with more explicit commercial and policy relevance (Benner and Sandström, 2000). Many education researchers have reacted to these dynamics by focusing their work on trying to unravel "what works" in a range of educational areas including curriculum, pedagogy, school governance, leadership and so on (Lubienski et al., 2014). In parallel, a range of websites, blogs, resources, journals and knowledge-brokering organisations have emerged as a way to give a response to the increasing demand for better evidence and more accessible data for policy purposes.

Despite the potential of research in improving education systems, putting into practice the EBP approach into the educational field is challenging for different reasons. *First*, there are many educational research areas where there is not sufficient evidence to guide practice (Levin, 2011). As we argue in this paper, education privatisation is one of these areas where, despite an increase in the volume of research, there is a no consensus about aspects such as educational learning or educational opportunities.

Secondly, causality in education research works differently than in medicine or than in more experimental research areas. The application of randomised control trial methods, which is the research gold standard in medicine, is challenging in the educational field. Experimental methods have the capacity to control a broad range of variables in laboratory situations, but, in open social systems, these methods cannot control the vast number of individual characteristics and contextual factors that affect the implementation of a policy intervention and its outputs. In education, the effect of policy interventions is strategically mediated, not only by physical factors, but also by semiotic and reflexivity factors – for instance, by how teachers and principals make sense of the policy interventions in question, and by how students interpret what they are being taught. According to Biesta (2007, 8):

> Apart from the obvious fact that the condition of being a student is quite different from that of being a patient – being a student is not an illness, just as teaching is not a cure – the most important argument against the idea that education is a causal process lies in the fact that education is not a process of physical interaction but a process of symbolic or symbolically mediated interaction.

In a similar line of reasoning, Lubienski et al. (2014, 135) observe that one of the limits to the EBP idea in education is that "there are unclear or indirect causal relationships between policy inputs and consequences for the wider community, thus leaving substantial uncertainty around research claims about specific interventions."

Thirdly, education policy constitutes the object of contentious ideological struggles – so that policy decisions about particular education policy issues (such as privatisation and marketization) are inevitably framed by political ideologies, institutional legacies and social norms. Education policy research is also inevitable framed by the predominant paradigms prevailing in different disciplines. Paradigms include strong assumptions about the social world, which condition our perspective of main educational problems and how to study them. For instance, neoclassic economists are inclined to assume that people are benefit maximizers looking for private returns in all kinds of policy systems and, accordingly, are more inclined to hypothesize that market solutions and incentivist policies work (Lauglo, 1992; Allais, 2012). Similarly, methodological and ontological decisions have important policy implications since they may obscure (or bring to the fore) different areas and possibilities of public intervention (Best and Widmaier, 2006).[3] Consequently, the idea of "neutral" or value-free research being able to frame policy decisions in an objective manner and by itself is essentially unrealizable (Young et al., 2002). Education policy-making cannot be understood as an aseptic exercise. As advanced by Lingard (2013), in real situations, education policies are, at most, informed by (instead of based on) evidence.

2.2. The emergence of knowledge-brokers and the politics of research use

The high level of uncertainty surrounding many education policy debates, together with increasing pressures for finding out "what works" in education, has opened the door to a well-resourced industry of knowledge-brokering organisations seeking to advise policy-makers and practitioners overwhelmed by the burgeoning amount of existing non-conclusive research. Many of these organisations try to behave as

[2] See also the Evidence Based Education Manifesto http://www.cemcentre.org/renderpage.asp?linkID.30317000

[3] For instance, an emphasis on the micro-foundations of economic life might contribute to legitimize austerity policies since the emphasis on individual responsibility and preferences translates into a certain disregard of State intervention in the economy (Best and Widmaier, 2006).

neutral knowledge intermediaries, but there are also many of them with their own education policy agenda. Knowledge brokering organisations might be linked to but usually, go beyond traditional knowledge producers such as universities or academic centres. They include private foundations, advocacy groups, think tanks, philanthropic organisations and so on (Scott and Jabbar, 2014). Some of them play a dual role in the sense that both produce knowledge and mobilise it for advocacy purposes. This duality of roles certainly raises the question of potentially conflicting interests and casts a spectre of doubt over truly 'evidence-based policy' (Junemann and Ball, 2015).

The methodologist Ray Pawson is rather sceptical of the way in which the EBP approach is being deployed in many policy domains. He detects that, especially in relation to contentious areas of research, knowledge brokers, as well as other types of policy actors, can sum up helpful information, sympathetic data, and subsidiary arguments in support of their pre-established policy preferences. Such "cherry-picking" of data means that research travels straight from ideology to policy recommendations, and uses science or evidence-based policy simply as a legitimating frame. Hence, according to Pawson (2006, 2013), "policy-based evidence" is more common than evidence-based policy in many policy circles. Similarly, Lubienski et al. criticize that many advocacy groups and (agenda-driven) research organisations in the US tend to produce a sort of "echo chamber effect" as a way to advocate for education privatisation reforms – i.e. they repeatedly cite a limited and usually low-quality (i.e. non-peer-reviewed) number of like-minded studies as a way to create an illusion of a consensus around pro-private sector reforms (Lubienski et al., 2009; see also DeBray et al., 2014).

In the US context, this research use or knowledge instrumentalization dynamic has been observed in the specific context of market-based reforms (Scott and Jabbar, 2014), school choice reforms (Lubienski et al., 2009), charter schools (Henig, 2013) or test-based accountability reforms (Reckhow et al., 2016). Many of these pieces of research identify different organisations enacting the mechanisms of research instrumentalization mentioned above, such as cherry picking and echo chamber effects. However, the role of knowledge brokers in processes of knowledge instrumentalization and advocacy is a line of inquiry that is underdeveloped out of the US education research field, and especially in relation to middle- and low-income countries. Hence, in spite of the policy influence exerted by developing agencies in these contexts, their role as knowledge brokers remains under-researched.

To the date, most of the existing work on this area has focused on the World Bank – specifically, on the ideological bias of this institution towards market solutions (see Broad, 2006). However, there is a lack of *empirical* research demonstrating how and why this knowledge selectivity happens in a more systematic way, and through which particular mechanisms other than ideology. In addition, it remains unclear whether (or to what extent) this selectivity bias affects other relevant agencies within the development field. Our paper, among other objectives, aims at filling these gaps.

3. Data and methods

This research combines bibliometric and social network analysis to explore the bibliographic coupling structure across academic and international agency's literature on PPPs and other forms of privatisation in education. We have collected data through two separate processes – one directed to identify the main body of academic papers discussing the impact of different privatisation policies, and a second one aimed at identifying the main sources and references mobilised by prominent international agencies when dealing with role of the private sector in education provision. Each one of them is described in the following sections.

3.1. Data selection

The identification of relevant literature was conducted through a search in the electronic database Scopus. The search established no temporal or linguistic restriction but was conducted by key terms contained in the title, abstract or keywords.[4] The initial corpus of 1332 papers retrieved from the database was refined through two screening sequences – one on the basis of titles, which reduced the corpus to 969 papers; and a second one on the basis of the abstract, which resulted in a body of 318 papers directly related to the impact of different privatisation or pro-market policies.

Concerning the identification of international agencies' literature, we focused on the most highly circulated literature reviews on education privatisation/PPPs done by key organisations in the education for development field. Specifically, we focused on the following publications:

- The role and impact of PPPs in education (2009), authored by the World Bank officials H. Patrinos, F. Barrera-Osorio and J. Guáqueta, and published by the World Bank, the largest multilateral development bank (Patrinos et al., 2009),
- Public-Private Partnerships in Basic Education: An International Review (2008), authored by N. LaRocque (public policy consultant, currently Principal Education Specialist in the Asian Development Bank) and published by the CfBT, an organisation offering international consultancy services (LaRocque, 2008).
- A systematic review of the evidence of the impact of school voucher programmes in developing countries (2013), authored by C. Morgan, A. Petrosino and T. Fronius; and *The role and impact of private schools in developing countries* (2014), authored by L. Day Ashley, C. McLoughlin, M. Aslam et al. – both funded by the DfID (the British bilateral aid agency) and supported by the Evidence for Policy and Practice Information and Coordinating Centre (EPPI-Centre) (Morgan et al., 2013; Day Ashley et al., 2014).
- Public-Private Partnerships in Education in Developing Countries: A Rigorous Review of the Evidence (2017), authored by M. Aslam, S. Rawal, and S. Saeed, and commissioned by the school operator Ark through its Education Partnerships Group – a team specifically set up to offer guidance to developing countries on the design and development of PPP arrangements (Aslam et al., 2017).

For comparison purposes, only those references indexed in the Scopus database – which we consider is comprehensive enough and represents well the academic research production field – could be finally considered.[5] Thus, excluding duplicates and papers mentioned only as *screened out* studies,[6] a total of 92 references were identified and incorporated as nodes to the network.

3.2. Data analysis

For both the academic and international agency's literature (*research objective 1*), we classified the selected papers according to different attributes, including publication year, source, researched policy, researched effect, journal field, employed methodology and main direction of the impact of privatisation policies in the researched dimensions (positive, negative or undetermined).[7] While most of the attributes were only considered in this first exploratory stage, the last

[4] The search terms and criteria can be consulted in the *Appendices*.

[5] We elaborate on the rationale and consequences of the decision of focusing on Scopus, among other possible databases, in the *4. Results* section.

[6] This is particularly relevant in relation to the reviews commissioned by DfID and Ark. Regarding the first, references mentioned only as *excluded* studies were not included in the corpus; and in relation to the second, only those references included as *forming part of the in-depth review* were considered.

[7] The coding categories and criteria can be consulted in the *Appendices*.

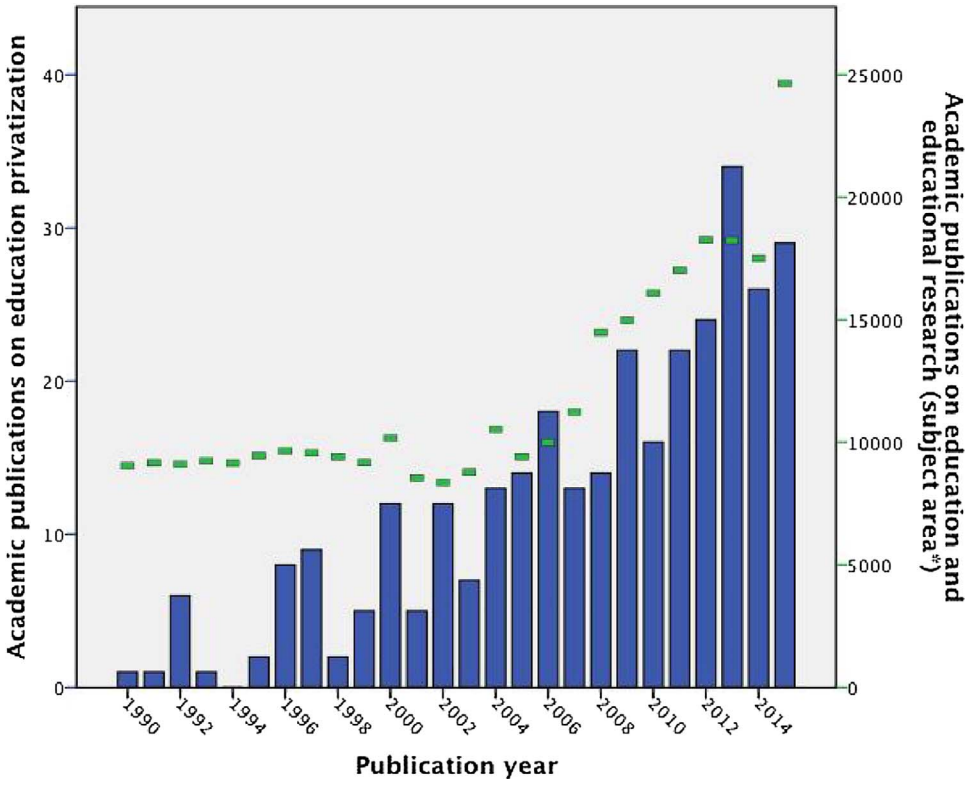


Fig. 1. Evolution of academic publications on education privatisation.
*Publications indexed in Web of Science and classified as Education and educational research (social sciences subject area).
Source: Authors

three attributes were also considered in the mapping process, as a proxy of methodological, disciplinary and ideological divides.

To identify the different epistemic communities structured around the education privatisation debate and the role of global knowledge brokers within such a debate (*research objectives 2 and 3*), we relied on the citation practices exhibited by the researchers, advisers and consultants in their publications on education privatization and PPPs. Citation (or referencing) practices are conventionally regarded as indicative of the cognitive or intellectual structure of a field or scientific community (Bazerman, 1988; McCain et al., 2005).[8] Thus, and for the purposes of this research, referencing patterns were deemed a reliable marker of ideational connectivity. In order to capture and systematize citation practices, we resorted to a bibliometric analysis technique based on similarity, commonly known as bibliographic coupling.[9] More specifically, we relied on a cross-citation approach to build a network of papers by bibliographic coupling similarities.

In order to construct the network, data on selected papers was imported and processed using the SAINT software (Somers et al., 2009). The resulting raw dataset was subsequently cleaned and complemented with attribute data, and analysis and visualisation were run with the visualisation software package Gephi (Bastian et al., 2009) using Atlas Force 2 layout.

The presence and strength of the link or tie between two papers was determined following a weighted approach – and more specifically, the similarity was calculated on the basis of the Jaccard coefficient or index for shared citations. This measure expresses the number of shared references in relation to the total number of documents in both reference lists, thus expressing the *relative* overlap between two reference lists (Havemann and Scharnhorst, 2012). On the basis of that index, different global and local measures were calculated, considering differences for the groups formed on the basis of different attributes. The combination of statistics and maps allowed for the identification of epistemic communities (*research objective 2*) and the exploration of the correspondence and fit between academic sources and international agencies (*research objective 3*).

4. Results

In this section, we focus first on the state of the art of research on PPPs/privatisation in education in the last two decades (*research objective 1*), with a focus on the main characteristics of and effects identified by this research. Next, we analyse the network of academic literature (i.e. the network resulting from the bibliographic coupling of the different Scopus papers) to make sense of its underlying structure and to identify possible clusters of epistemic communities by shared attributes (*research objective 2*). Finally, we incorporate this main network with the different papers referred by the WB, the CfBT, Ark and DfID in their seminal works on the issue of privatisation and PPPs, to understand how they fit in the broader corpus of academic literature (*research objective 3*).

4.1. State of the art of the privatisation debate

Research on the effects of education privatisation has increased progressively in the last decades. This increase is probably related to the centrality that education privatisation has acquired in the global education policy field in the analysed period. When we organise our complete corpus of papers (n = 318) according to publication date, this rise in interest is evident. This increase cannot be (completely) explained by the exponential growth of indexed literature in the education research field since, as Fig. 1 shows, the rise in publications on privatisation outpaces the increase of literature on general education

[8] To be sure, some authors have argued that this intellectual structure is in fact heavily influenced by social structure – i.e. the proximity of researchers in terms of collaboration, collegiality, friendship or institutional affiliation (see White et al., 2004). However, for the purposes of this research, we assume that citations are reliable markers of some degree of affinity – whether encouraged by social ties or by genuine intellectual closeness.

[9] Bibliographic coupling strength is calculated on the basis the amount of shared references between two papers. While other indicators of subject similarity have been developed, this approach presents two main advantages: first, it offers stability over time (in that the link between two documents remain constant) and, secondly, it expresses solely the choices made by the authors (Biscaro and Giupponi, 2014; Gipp, 2014).

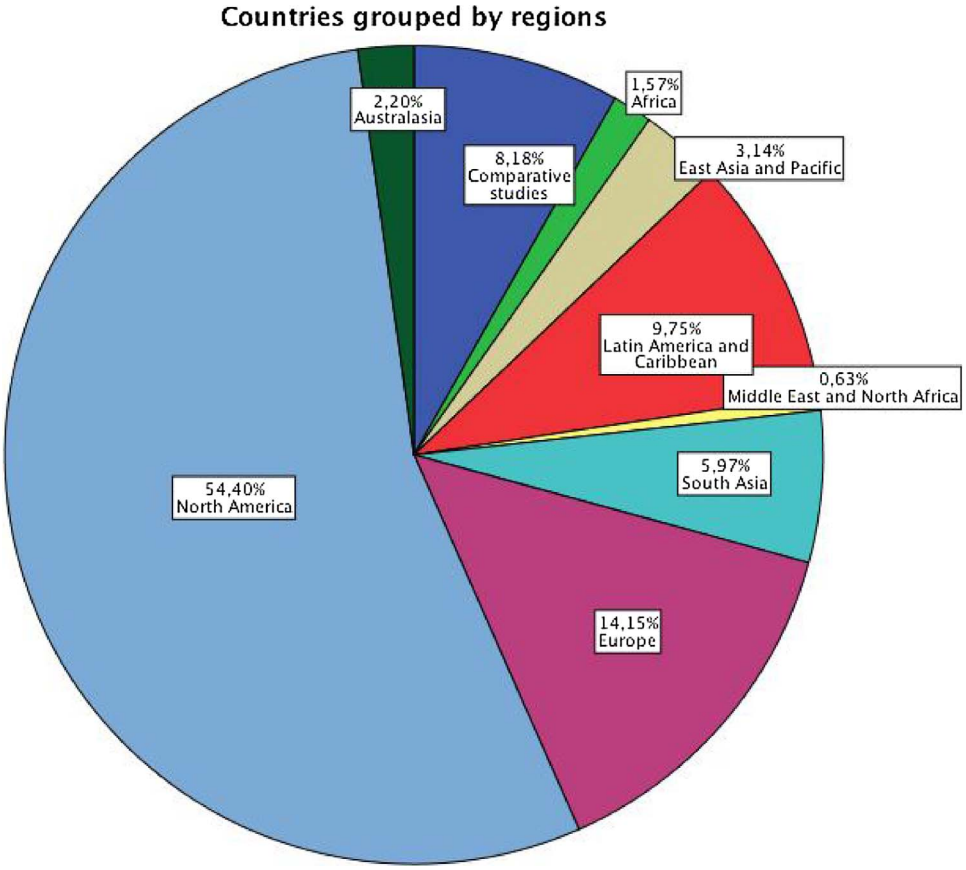


Fig. 2. Academic publications on education privatisation according to territory.
Source: Authors

research.

However, not all world regions are equally represented in this research field. As Fig. 2 shows, a majority of research on the theme has been produced in North America (mainly in the US). Europe and Latin America are also well-represented regions in the corpus of literature, although it needs to be noticed that there are two countries in each of these regions (the UK and Chile respectively) that account for most research on the matter.

Studies on education privatisation mostly adopt quantitative approaches (59.1% of the total). They are followed by qualitative research (18.2%), reviews (15.4%) and mixed methods (7.2%).

Thematically speaking, an important part of published research focuses on the educational effects of specific privatisation/PPP programs such as charter schools (25.2%) and voucher schemes (21.7%). Nonetheless, a bigger portion of research focuses on the effects of, more, generally speaking, school choice and school competition dynamics (42.1%). There is a final group of studies focusing on the presence of private provision in education systems (21.4%) that usually compares the performance of private and public provision, and does not necessarily focus on the effects of a specific policy or PPP program.

In terms of the effects of privatisation, the results tend to be more negative than positive in relation to all the different education privatisation approaches systematised (namely, vouchers, charter schools, school competition or presence of private providers) (see Fig. 3). Similarly, negative effects outweigh positive ones regardless of the field or discipline of the study, as can be observed in Fig. 4. Both in relation to the investigated policy approach and the disciplinary orientation, mixed and neutral effects[10] are very present in academic research on education privatisation.

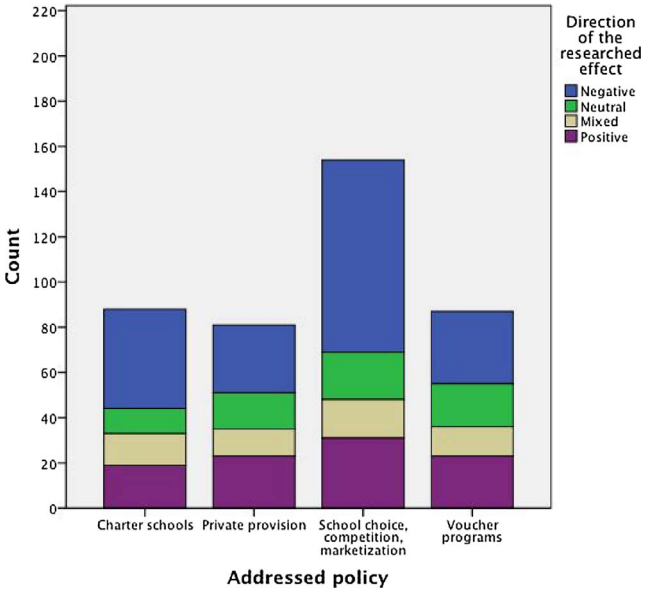


Fig. 3. Direction of the effects according to policy approach.
Source: Authors

Existing research on education privatisation covers a broad range of dimensions, including effects on teachers' work and satisfaction, students' learning outcomes, education inequalities, efficiency, parental satisfaction, innovation and so on. A complete list of impact

[10] Fixed results refer to studies that identify that the effects of privatization are good for one social group, but bad for the other, or that generate improvement, for instance, in Mathematics, but a deterioration of results in Language. Neutral effects mean that the studies have not identified any clear effect as a result of the policy intervention in question.

(footnote continued)

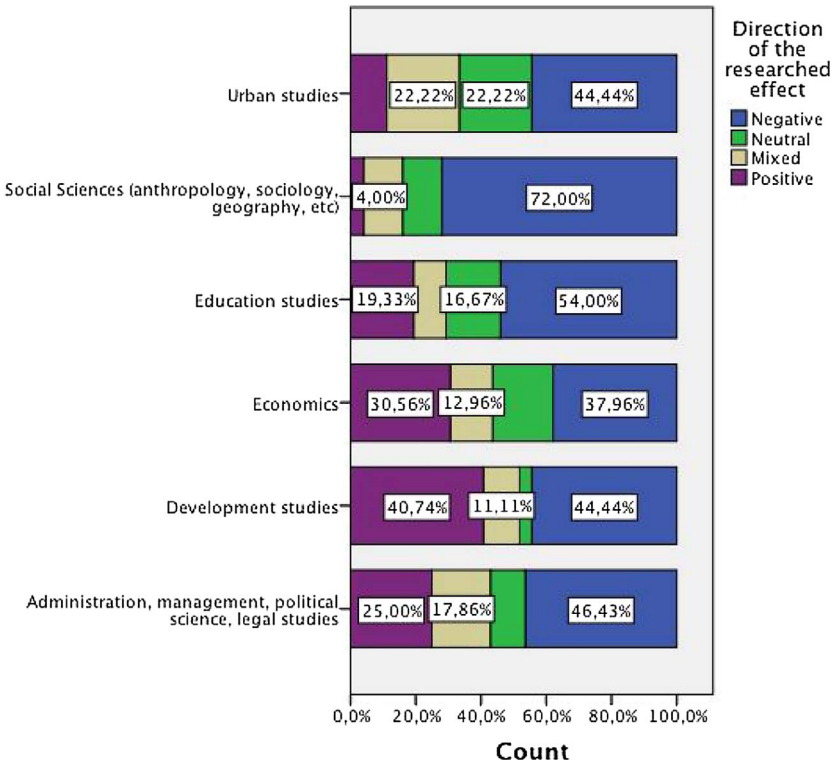


Fig. 4. Direction of the effects according to discipline/knowledge area. Source: Authors

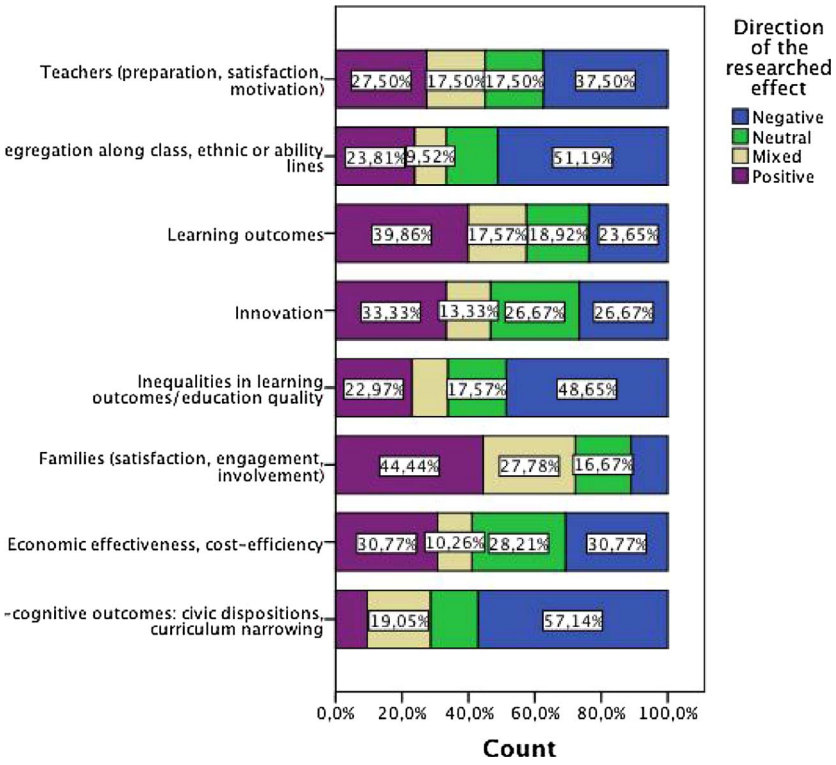


Fig. 5. Direction of the effects according to impact dimension. Source: Authors

dimensions, together with the direction of the effect reported in the studies, can be observed in Fig. 5. As the chart shows, existing research on education privatisation reports more negative than positive results in relation to most impact dimensions. Education privatisation seems to be especially problematic in terms of education inequalities and school segregation. This is due to the fact that the competitive environment generated by many privatisation dynamics incentivizes schools to select the best students, as well as to discriminate against those students less academically skilled, with special needs, or with behavioral problems. Results are also generally negative in terms of accountability, teachers' satisfaction and non-cognitive outcomes. Negative effects on teachers' satisfaction are the logical consequence of most PPP frameworks in education implying worse working conditions for teachers. Negative effects on non-cognitive outcomes is related to the fact that, again, the competitive environment generated by pro-private sector measures, especially when they are combined with standardized evaluations,

provides schools with the incentive to narrow the curriculum and focus on those areas that will be evaluated (among which, civic education and related non-cognitive skills are usually neglected).

Aggregated results on learning outcomes, efficiency and innovation, are, in contrast, more balanced, with a similar amount of research products that points to negative and positive effects. The number of studies reporting mixed results regarding learning outcomes is relatively high due to the fact that many of these studies find positive results in relation to a particular subject, but not in relation to other subjects; or find positive/neutral results for some groups of student population, but neutral/negative results for other groups – with the latter being related to the above mentioned school segmentation dynamics that education privatization processes tend to generate. The dimension in which the private sector and different pro-privatisation policies seem to perform better is in terms of household or families satisfaction since the private sector tends to be more receptive to families' demands than the conventional public sector.

4.2. The academic conversation on education privatisation

The main corpus of academic literature is composed of up to 306 nodes[11] and 9718 edges and appears to conform a relatively well-connected community. While this issue network does not present high levels of density, the network diameter and eccentricity values show that the network is evenly distributed – i.e. few steps are required in order to traverse the network from its two more distant points, and there is a limited share of outliers (i.e., nodes at the fringes of the network requiring many steps to traverse them). In other words, these general metrics suggest a small-world effect – a relatively efficient network where, although most of the nodes are not directly tied, the nodes can reach each other with a limited number of steps (see Table 1 below and Table A1 in the Appendix).

Also, the network presents a relatively moderate clustering coefficient, which suggests that homophily (understood as an *extreme* form of the cluster) is not very strong in this case. The distribution of the network in relation to different attributes is indicative of the existence of some distinguishable (although loosely connected) epistemic communities. More specifically, and as Maps 1–3[12] illustrate, most of the nodes tend to be closely connected with similar nodes regarding methodology, direction of privatisation effects (judged as positive, negative or undetermined), and disciplinary field.

However, these methodological, disciplinary, and results divides are a far cry from giving rise to compact and poorly connected communities, and there are an important number of papers freely associating with articles in other clusters.[13] In essence, density metrics suggest that differences in orientation do not preclude research papers from sharing a common background – materialised in form of shared references. Furthermore, while it is not possible to ascertain the exact use given to citations, this pattern indicates that the academic field is not organized in self-referential communities or autarkic realms – in other words, the selection of sources is not entirely driven by some form of like-mindedness.

Importantly, the most determining attribute affecting the closeness between papers does not have an ideological nature (a paper's "leaning" towards privatisation) but a methodological character – which points to the influence exerted by procedural qualities in the dissemination of research in social sciences. In other words, if epistemic communities are somewhat "blind" to the results obtained by other communities, such a bias is explained by different publication tracks fostered by methodological options and disciplinary fields rather than by ideological reasons.

However, and while the ideological breach does not seem to play a key role in general terms, it is interesting to note how this level of interconnectivity does not apply equally to the different groups of papers. More specifically, an inter-edge density between papers with an undetermined view on privatisation and papers showing a positive or a negative stance (112 and 0,117, respectively) contrast with the (much lower) inter-edge density between papers finding positive effects and papers finding negative effects (0,060). In other words, papers finding positive effects and papers finding negative effects share a relatively small proportion of references – when compared to the overlap between any of these groups and papers finding mixed or inconclusive evidence on the effects of privatisation. Hence, in spite of the general levels of cohesiveness about the results direction, connectivity between opposed or extreme stances is relatively less probable – which suggests that these positions draw on distinctively different corpuses of literature.

4.3. International organisations and knowledge mobilisation

A very different picture emerges when we look at the references used by some of the analysed international agencies when operating as knowledge brokers. As Map 4 shows, the references considered by the WB and the CfBT publications are, for the most part, located at the periphery of the graph, and hardly ever part of the academic literature retrieved from the search in the Scopus database. Conversely, the sources mobilised by the DfID and Ark publications are relatively better-integrated into the peer-reviewed literature network – in fact, some of them are Scopus-indexed papers.

Moreover, most of the WB and CfBT references are connected to DfID sources, but poorly embedded within the *academic* literature network. This is why, although when adding international agencies' papers to the academic literature network, the number of isolated components increases only from 14 to 20, the figure rises to 46 when excluding DfID and Ark references. The shift must consequently be credited to the specificities of the WB and CfBT. In addition, centrality metrics are also telling of these disparate levels of integration or interconnectedness. Hence, average weighted degree figures of peer-reviewed literature (11,740) and DfID and Ark references (14.692) contrast strikingly with those of WB and CfBT sources (2955).

To be sure, the nodes incorporated to the network represent only a reduced part of the whole list of references contained in the WB, the CfBT, the DfID and Ark seminal publications – since, only a limited share of them is indexed in the Scopus baseline[14] and could consequently be processed and integrated into the broader matrix. As showed in Table 2, such a pattern is far more acute for the WB and CfBT references and is again indicative of the low level of connection of these two organisations "preferred literature" with the body of the most rigorously reviewed products of the scientific literature.

While it can be argued that the rest of non-indexed literature referred by the WB and the CfBT would show high levels of embededness with the academic literature, this seems unlikely given the nature of their sources. These are, for the most part, policy briefs, reports from private foundations and research institutes and policy research working papers. In fact, both the WB and the CfBT reviews refer to a significant share of professional publications coming also from the practitioner world, including aid agencies, ministries of education, think tanks,

[11] While the original body of academic research was composed by 318 papers, only papers published after 1995 (n = 306) could be finally incorporated in the networks, due to technical limitations related to data extraction.

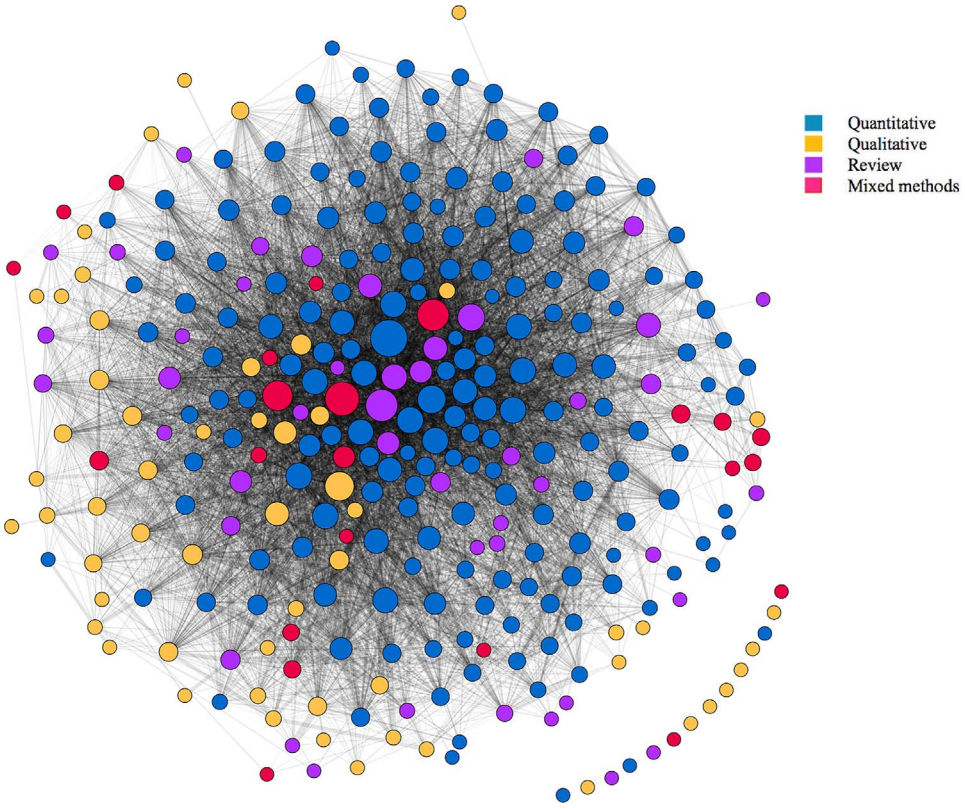
[12] In this and the following maps, nodes are sized according to the weighted degree – bigger nodes are those exhibiting higher levels of connectivity with the rest of papers. The strength of the tie between two papers represents the number of shared references in relation to the total number of documents in both reference lists, i.e. the *relative* overlap between them.

[13] Consult Table A2 in the Appendix for a comparison of the intra and inter-edge densities of the groups formed on the basis of different attributes.

[14] These figures are, if anything, an over-estimate: non-indexed publications were substituted by the indexed version of the paper when this was available and shared with the original publication at least a 75% of the references.

Table 1
Global level measures by attribute.

	Nodes	Isolated nodes	Average degree	Average weighted degree	Average eccentricity (exc. isolated nodes)	Average clustering coefficient
Methodology						
Quantitative	180	4	74.25	11.8675	3.08	0.5790
Qualitative	57	7	40.66	5.8873	3.36	0.4724
Mixed methods	23	2	46.09	8.8868	3.38	0.5510
Review	46	2	58.54	8.7027	3.20	0.5289
Direction						
Positive	66	8	55.85	9.4770	3.17	0.5212
Negative	131	5	54.82	8.1526	3.24	0.5288
Undetermined	109	2	78.60	12.6977	3.08	0.5917
Field						
Administration	23	5	46.82	7.3999	3.33	0.4491
Book/chapter	15	2	83.60	16.6478	3.15	0.4484
Development	23	0	44.04	7.2516	3.45	0.5296
Economics	77	1	71.58	12.2196	3.05	0.6050
Education	132	6	59.72	8.4397	3.20	0.5458
Social sciences	20	0	85.05	13.4839	3.15	0.5314
Urban studies	16	1	62.25	10.3870	3.13	0.6039

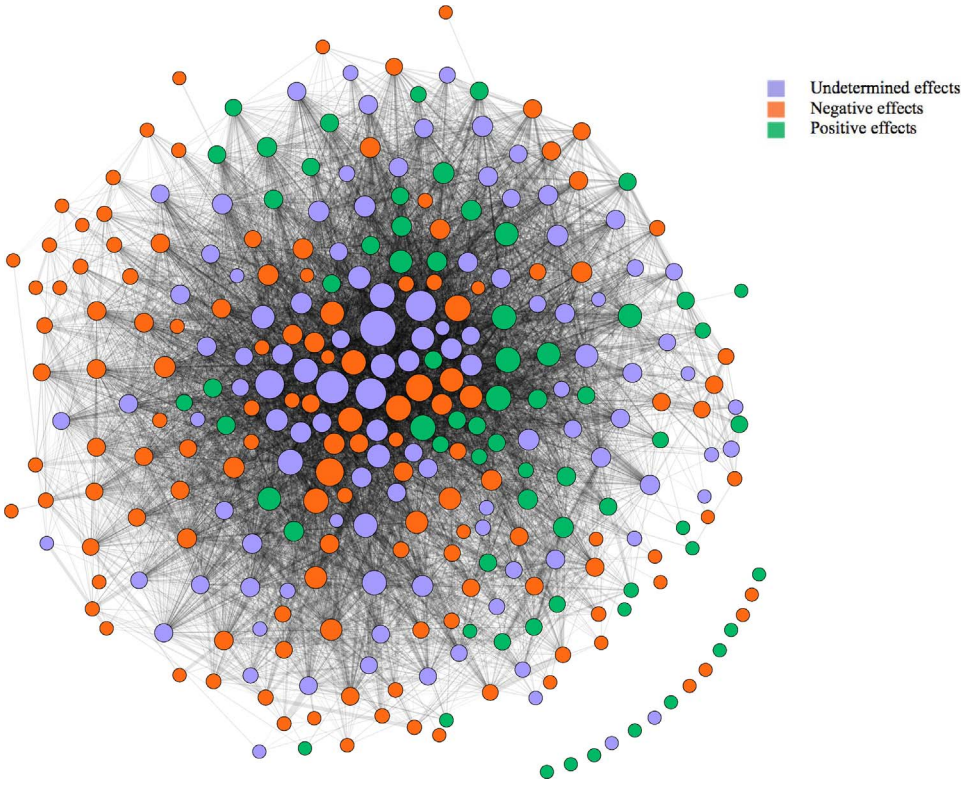


Map 1. Bibliometric network for academic publications- nodes coded by methodology.

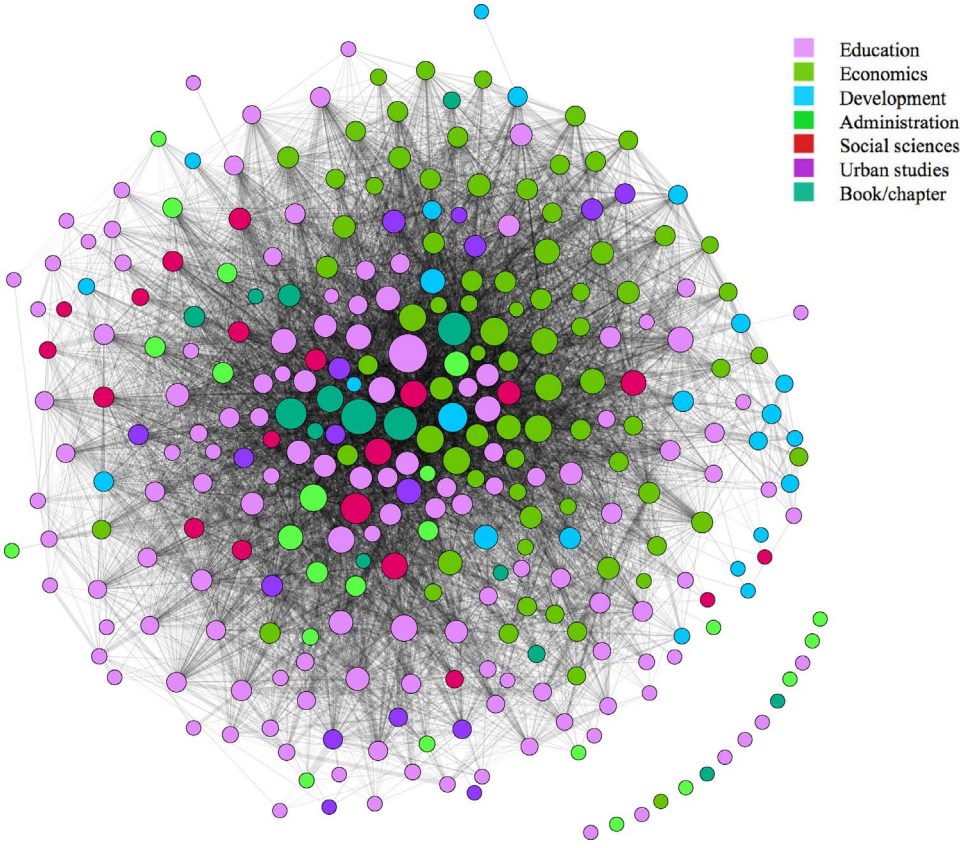
etc.[15] In addition, the reference list in both publications reveals a highly pronounced instance of self-referentiality. Thus, almost half of the publications quoted by the World Bank (43%) are publications by members within their particular network of like-minded organisations – including publications authored by scholars and staff working for the World Bank, IFC, ADB, and the CfBT (see Verger, 2012 for a description and demarcation of this policy network), and/or papers coming out of conference proceedings organized by these agencies. Similarly, the CfBT report also scores high on self-referentiality, with 45,3% of its references coming from the same network of organisations.

It is also possible to venture that the relatively early date of publication of these reports and their emphasis on developing countries might partially explain the low levels of embededness of these publications. Presumably, the lack of consolidation the privatisation theme in the education for development field at the time of publication of the WB and CfBT reports, published in 2009 and 2008 respectively, as well as the evolution in more systematic methods of literature review, could contribute to explaining the lack of connection of their references with the main corpus of academic literature, and the need for refer to non-academic sources. However, and as reflected in Fig. A1 in the Appendix,

[15] Thus increasing the risk of a *grey literature bias* if the studies contain interim findings, have not been subject to peer review, or engage in selective reporting (Booth et al., 2016).

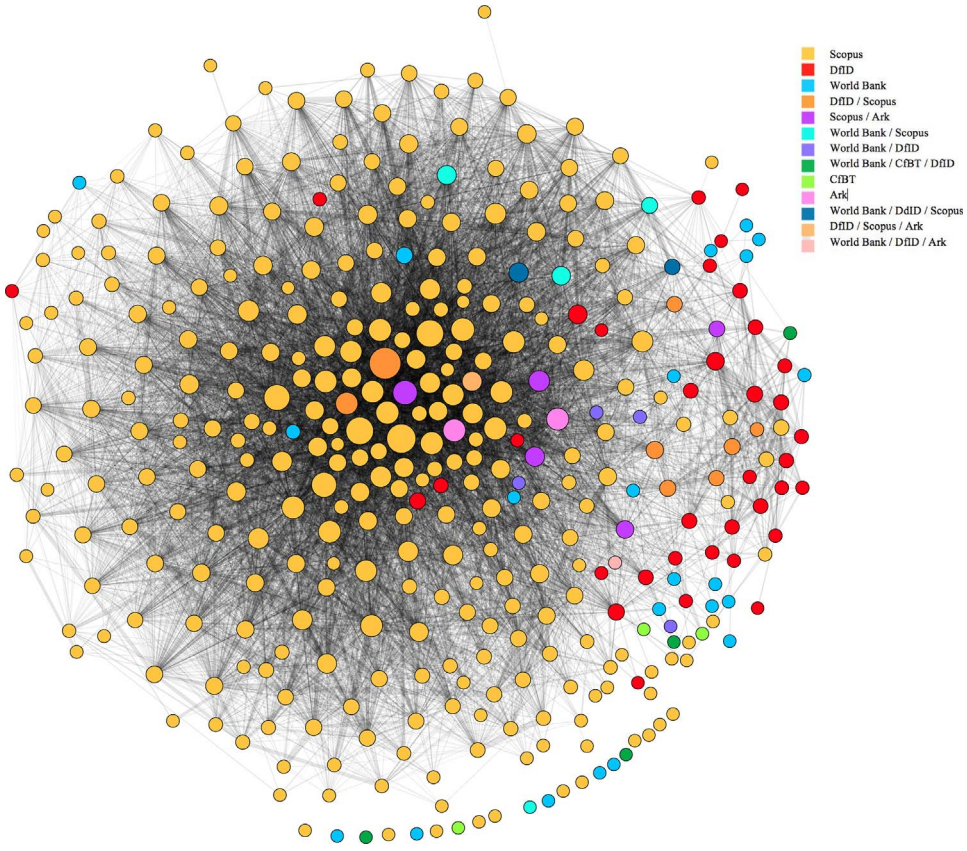


Map 2. Bibliometric network for academic publications - nodes coded by direction of privatisation effects.



Map 3. Bibliometric network for academic publications - nodes coded by disciplinary field.

the presence of some age-old sources (with a focus on non-OECD countries), both in the DfID and Ark reference lists and as within the selection of academic literature, suggests that the relative scarcity of literature on developing countries is unlikely to be the main explanation for other international agencies low levels of integration into the peer-reviewed network.



Map 4. Bibliometric network for academic and non-academic publications - nodes coded by source.

Table 2
International agencies' knowledge products references.

	References: total	Indexed references	Percentage
WB – *The role and impact of PPPs in education*	158	30	18.99
CfBT – *Public-Private Partnerships in Basic Education: An International Review*	55	7	12.73
DfID – *A systematic review of the evidence of the impact of school voucher programmes in developing countries + The role and impact of private schools in developing countries*	187	70	37.43
Ark – Public-Private Partnerships in Education in Developing Countries: A Rigorous Review of the Evidence	26	9	34.61

Hence, while the sources mobilised by Ark and the DfID are fairly integrated into the main corpus of academic literature, the works published by the WB and CfBT hardly resort to peer-reviewed literature and, when they do so, their references are more poorly connected with the main conversation. As discussed in the following section, these results suggest that the WB and CfBT reviews tend to address the education privatisation topic in its own terms and more rarely speak to the rest of academic papers dealing with the issue. Such a pattern is particularly noteworthy given the variety of approaches of the main corpus of academic literature – definitely a "broad church" and by any means restricted to a narrow group of perspectives.

Finally, it is interesting to note that, while most of the literature referred by these organisations corresponds to papers finding undetermined (mixed, inconclusive or irrelevant) effects (see Table A3 in the Appendix), these organisations differ notably in the policy guidance or recommendations arising from their reviews. On the one hand, the conclusions advanced in the DfID reviews emphasise the lack of conclusive evidence on the potential positive contributions of PPP and related market schemes in education. Conversely, and when it comes to policy guidance, the WB and the CfBT reports typically emphasise the benefits of PPPs in education despite the fact that the evidence these reports review is not clearly positive. The policy recommendations resulting from the Ark review, in turn, appear to bear little relation to the argument made by the rest of the report. Although the review notes in multiple occasions that existing evidence on PPPs is still insufficient and inconclusive, the last section of the document is devoted to provide guidance on the design and implementation of such programmes. Ultimately, the contrast between the mobilised evidence and the policy recommendations inferred from these reports raises some questions on the "room for interpretation" that the absence of concluding evidence allows, as well as on the possibility of framing mixed evidence in a tactical way.

5. Discussion: understanding the tactical use of policy knowledge

The effects of education privatisation trends and policies have generated one of the most contentious debates in educational research (Klees, 2008). There is an increasing volume of research published

about the topic of private involvement in education that reaches conflicting conclusions in relation to education systems of different countries, independently of their level of economic and social development, and about several dimensions such as learning outcomes, pedagogic innovation and economic efficiency. Nonetheless, most research reports that education privatisation is having negative implications regarding educational inequalities and school segregation.

Academic publications on education privatisation tend to cluster themselves according to discipline and the methodology used. There is also a tendency of disciplines such as economics of education to focus on quantitative approaches and/or to privilege "learning outcomes" instead of other types of impact dimensions. However, this type of clustering does not condition what the overall direction of the findings is. In other words, there is not a discipline or a particular methodological approach more conducive to conclude that education privatisation has positive or negative effects.

The interaction of global knowledge brokers with the academic conversation on education privatisation is, however, more problematic. While the sources used by Ark and DfID products are relatively well-connected with the peer-reviewed literature, this is not the case of those sources mobilised by other organisations which, non-coincidentally, make a clearer case for a privatisation agenda – as in the case of the WB and CfBT. Despite basing an important part of their arguments for private solutions and PPPs on empirical evidence, the relative lack of references to and dialogue with peer-reviewed publications suggest that these two organisations are actively engaged in a tactical use of evidence. Hence, those sources likely to confer legitimacy to their agendas are amplified, while less fitting evidence (or not-so-readily instrumentalized for political purposes) is disregarded.

As knowledge brokers, both the WB and CfBT take advantage of their strategic position at the interface between scholar and policy communities to make the case for pre-established policy solutions – crucially, under an appearance of neutrality and objectivity. In other words, these organisations make use of a careful choice of the available evidence as a legitimating frame to advance their own advocacy agenda. The high degree of knowledge selectivity shown by these institutions is ultimately supportive of the cherry-picking hypothesis as advanced by Pawson (2006), making the case for policy-based evidence rather than for evidence-based policy.

Also, and given the wide circulation that both the WB and the CfBT have given to these two reference papers, this pattern could be indicative of an echo-chamber effect around a small number of studies that is unrepresentative of the broader and more complex debate around privatisation and education. However, such a claim requires also an examination of the dissemination work carried out by both organisations (i.e., exploring how and which frame terms their publications are publicized) – something that lies beyond the scope of this paper.

In any case, the citation patterns exhibited by the WB and CfBT publications contrast sharply with those of the reports commissioned by Ark and DfID – which show high levels of embededness with the academic literature. Given the striking differences in the use of the research displayed by these knowledge brokers, in the following section we reflect on the main factors that could explain, according to our conceptual framework, the presence or absence of this selection bias in the context of the education privatisation debate. There are, at least, three general arguments that can be drawn in this respect.

The *first argument* relates to disciplinary issues. In the WB, but also in many international consultancy firms, there is a clear predominance of a disciplinary background in economics and business among the staff. In education, the WB mobilizes research production with a disproportionate economic disciplinary focus (Menashy and Read, 2016). Such disciplinary bias has been criticized in the past for contributing to a sort of intellectual immobilism within the organisation (Nielson et al., 2006; Wade, 1996), and restricting the selection of problems to be addressed and the related policy solutions (Broad, 2006; Rao and Woolcock, 2007). The current emphasis on PPPs for education and competitive funding formulas in education, *a la* vouchers, could be understood within an epistemological predisposition of neoclassic economics in believing in market solutions. However, this disciplinary focus represents only a partial explanation since, according to the bibliometric analysis of the peer-reviewed literature, economics research on education privatisation in the academic domain is much more balanced (see Fig. 4). In other words, discipline might condition but does not determine the political support to private education solutions.

A *second argument* is related to the ideological preferences of the analysed agencies. Some of the reviewed organisations, despite their formal commitment with evidence-based-policy, have a longstanding tradition of advocating neoliberal policies. In the case of the World Bank, the emergence of neoliberalism dates back to the beginning of the 1980s, when the Reagan administration appointed Anne Krueger as the World Bank's chief economist (Miller-Adams, 2002). From then onward, the World Bank has tended to support cost-recovery policies in social sectors and private provision in public services. In a way, promoting *partnerships* with the private sector is a way for the World Bank to continue giving loans to countries in social sectors, without necessarily making states and bureaucracies bigger (since, by enacting PPPs, part of the loan will transfer from public to private hands). However, it is also true that the World Bank is not a monolithic organisation and its operational staff working on the terrain usually bases its policy preferences and decisions more on pragmatic than on ideological reasons (Fontdevila and Verger, 2016). In fact, the percentage of World Bank projects supporting private provision has (slightly) decreased in the last two decades (Mundy and Verger, 2015). Thus, again, ideological factors represent a plausible, but only partial explanation to the misrepresentation of evidence.

Finally, we find a *third group of arguments* that are more pragmatic in nature – that is, less clearly driven or affected by ideology or principled beliefs. To start with, this is the case of explanations focusing on institutional and economic incentives. In an increasingly globalised education reform field, international organisations and international consultancy firms have an incentive to promote its programmatic ideas as both a market and a promotional strategy. In the case of the World Bank, research staff is expected to promote policy solutions that are related to their areas of expertise among the operational staff working in different lending operations at the country level. For the researchers of the World Bank, professional recognition and promotion are attached to the extent that their policy solutions are adopted at the operational level (IEG, 2012). So, to them, there is a clear incentive to sell their policy ideas both internally and externally, and to emphasise that these ideas "work". This type of incentive is even more evident and direct for consultancy firms such as CfBT or Ark, whose future contracts with governments and aid agencies depend on how convincing are their causal stories on educational problems and their favoured solutions. Individuals contracted by these agencies (as employees or freelancers) may face a powerful incentive to ensure their policy ideas gain traction – in that their professional careers are significantly impacted by their success in advancing these proposals. Thus, in many cases, evidence-based policy becomes a good way to package policy solutions, despite it rather means resorting to evidence cherry-picking practices. Conversely, in the case of Ark and DfID, the outsourcing of the review work to an external team of scholars and/or researchers supported by a university-based research centre could have weakened the effect of institutional and economic incentives.

In a similar vein, evidence pointing out to the positive outcomes of privatization is being selected because it is sound with what international agencies perceive as core problems with prevailing forms of educational provision. The practical experience of many international

agencies with working with the public sector in several developing countries usually reinforces the common perception that the State sector in these contexts is highly dysfunctional and inoperative. Hence, in the absence of conclusive evidence on private solutions in education, the preference for privatization and PPPs is explained by the agencies' need to identify alternatives to educational delivery in the short term that resonate well with their diagnosis of the problems. Thus, in these cases, knowledge selectivity would not be motivated by an *a priori* ideologically driven commitment to the privatization agenda, but by "evidence about the problems", and by the need to identify both institutionally feasible and discursively sound policy solutions.

Previous research on knowledge mobilisation in the US has illustrated what are the implicit problems with knowledge-brokering organisations that produce (or fund) educational research and, at the same time, have an interest in advocating particular policy solutions (see Lubienski and Brewer, 2016). However, in the cases analysed in this paper, the conflict of interest is even more evident in the sense that the international agencies that are involved in the production, review and mobilisation of knowledge, might also be directly involved in education policy decision making and implementation processes or be materially interested in selling a particular education reform package. Thus, the lack of separation between those actors promoting, designing, and implementing PPP's, and those that then carry out evaluations and policy reviews leads to a situation where the critical distance needed for impartial research does not exist. In a nutshell, the idea of evidence-based policy gets even more distorted in relation to policy areas where material and economic incentives are involved, as is clearly the case of education privatisation.

6. Conclusion: holding knowledge brokers accountable?

Daniel Bell, in the 1970s, envisioned that in modern societies academic knowledge would become the dominant type of knowledge, and information and technology would drive the way our societies – including our educational systems – are governed (Bell, 1976). More recently, the evidence-based-policy approach reproduces such an optimistic belief in the role of science in different social and policy domains. However, there are fields such as education where the major transformations in the evidence-based policy terrain are still more rhetorical than practical.

In the current global education policy scenario, the policy space resembles a marketplace for ideas, complete with policy entrepreneurs, knowledge brokers and policy borrowers (Mundy et al., 2016). While the marketplace of education policy ideas includes an increasing number of actors, interests and processes of exchange, this is still a largely unregulated marketplace, quite unlike any modern marketplace. In education, policies can be transported from one context into another, often without all the required information about what the possible effects may be. There is no standard method for reporting policy effectiveness, which makes many country level reports subjective.

A broad range of knowledge brokers, including education reform advocates, international organisations or consultants may put together policy briefings, white papers or literature reviews that provide summaries of how certain policies have worked in other contexts. However, there are few requirements regarding drafting such reports, which gives their authors a lot of liberty in terms of what is included or what is excluded. As a result, the average practitioner, who is limited in terms of time and resources, is subject to the principle of caveat emptor in this marketplace. If the ideas that they are given prove to not work in the way that they have been told they would, there is no recourse. Education policy is largely unique in these respects, in that the protections from outside influence is relatively low, and new policies can be introduced in the matter of an election cycle, which puts education systems at risk.

In education policy, there is no equivalent to engineering's international standards organisation; or to bodies like the United States Food and Drug Administration that regulate new pharmaceuticals and medical devices as part of public health policy. Public health policy has given external regulatory agencies the power to enforce standards of vigilance. Companies are required to monitor and maintain product literature databases that keep track of, monitor, and report on all adverse events related to any drug or medical device after its release into the market. The manufacturer is responsible for the entire lifecycle of a released product – and should serious deficiency be found, they can be made to issue a total recall to minimise further events.

In this regard, the education policy marketplace is quite unlike other evidence-based domains. In education, there are few requirements for vigilance, and there is no accountability for adverse events. The merchant is responsible only for the promotion of the idea – and is not held into account after that. If an agency is updating a report on a policy solution such as PPPs in education, there is no requirement to include negative or critical reports. This phenomenon of filtering out negative effects has been documented in the academic literature, including our case study presented here, and termed as "policy-based evidence" or as "the echo chamber" effect, where literature reviews and agency reports include concurring ideas and select out dissent. The impact of such echo chambers carries serious risk, in that it distorts reality to create an uncharacteristically favourable outlook.

Our paper has reflected on the potential usefulness of bibliometric network analysis as a suitable method of analysing policy reports and analysing the degree and level of inclusiveness in its ideas, as well as providing the capability to identify echo chambers where they exist. Similarly, the adoption of more explicit and accountable methods in the elaboration of literature reviews, such as systematic literature reviews (Oakley et al., 2005; Petticrew and Roberts, 2006), may help prevent an agenda-driven use of such digests when in comes to inform policy decisions. If effective, such methods could provide policymakers and other education stakeholders with a toolkit for assessing the quality of policy ideas and holding knowledge brokers, especially those with their own policy agenda, more accountable.

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Appendix

A. Search terms

TITLE-ABS-KEY (education AND schools AND (public OR privat*)) AND TITLE-ABS-KEY (voucher* OR ppp* OR market* OR "school choice" OR contracting OR charter OR quasi-markets OR "school competition" OR "commodification" OR "liberali¿ation" OR ("academ*" AND ('england' OR "UK"))) AND NOT TITLE-ABS-KEY (health OR adult OR obesity) AND SUBJAREA ("SOCI" OR "ECON") AND NOT SUBJAREA ("AGRI" OR "BIOC" OR "BUSI" OR "CENG" OR "CHEM" OR "COMP" OR "DECI" OR "DENT" OR "EART" OR "ENER" OR "ENGI" OR "ENVI" OR "HEAL" OR "IMMU" OR "MATE" OR "MATH" OR "MEDI" OR "NEUR" OR "NURS" OR "PHAR" OR "PHYS" OR "VETE")

17. B. Coding categories and criteria

Methods

QT	Quantitative approach: descriptive and inferential statistics, econometric approaches, etc.
QL	Qualitative approach: interviews, observations, focus groups, discourse analysis, document analysis, ethnographic research, etc.).
MM	Mixed methods
REV	Literature review

Field

ECON	Economics.
SSCC	Social sciences: sociology, anthropology, ethnography, (inter)cultural studies etc.
URB	Urban studies
ADM	Management, legal studies, political science, administration, etc.
EDU	Education (generalist): school improvement, leadership, special education, pedagogy. Education policy
DEV	Development studies

17. Main direction of privatisation effects

POS		Positive effects: improvement of learning outcomes (considering spillover effects and labor market outcomes), advances in equity regarding learning outcomes, decrease in school segregation, increases in teachers' quality or satisfaction, progress in the inclusion of special need students, increase in families' participation or satisfaction, improvement in community satisfaction or local control, increase in cost-effectiveness or economic efficiency, innovation o curriculum diversification, improvement in student behavior and reduction of criminal activity.
NEG		Negative effects: decline in learning outcomes, increase in inequality regarding learning outcomes, increase in school stratification, exclusion or segregation of special needs students, losses in teacher quality, motivation or autonomy, decrease in families' satisfaction, drop in families or community engagement, losses in economic efficiency or cost-effectiveness, curriculum narrowing or teaching-to-the-test practices, increases in students' anti-social or risk behavior, grade inflation.
UND[16]	NTR	Neutral effects: lack of impact or irrelevant impact; evidence judged as insufficient, inconclusive or ambiguous.
	MIX	Different effects (positive vs. negative) for different dimensions or policies or for different social groups.

C. Results: tables

See Table A1

Table A1
Academic literature – global level statistics.

Average degree	63.516
Average weighted degree	10.059
Network diameter	4
Eccentricity: mode	3
Average path length	1.872
Density	0.208
Modularity	0.246
Isolated nodes	15
Average clustering coefficient	0.61
Nodes	306
Edges	9718

Table A2
Academic literature – intra vs. inter group edge density.

	Intra-group edge density	Inter-group edge density
Attribute: methodology	0.113	0.095
Attribute: direction	0.081	0.127
Attribute: field	0.064	0.144

[16] *Undetermined* effects: for comparative purposes, *Neutral* and *Mixed* effects were grouped under this broader category in the network analysis and mapping stages.

Table A3
WB and DfIDs references – by attribute.

WB	%	DfID	%
Methodology		*Methodology*	
Quantitative	64.86	Quantitative	62.5
Qualitative	5.41	Qualitative	9.37
Mixed methods	2.70	Mixed methods	4.68
Review	27.02	Review	23.44
Direction		*Direction*	
Positive	27.02	Positive	22.39
Negative	10.81	Negative	28.35
Undetermined	62,16	Undetermined	49.25
Field		*Field*	
Administration	8.11	Administration	7.69
Book/chapter	5.41	Book/chapter	9.23
Development	13.51	Development	29.23
Economics	48.64	Economics	27.69
Education	16.22	Education	20.0
Social sciences	2.70	Social sciences	6.15
Urban studies	5.41	Urban studies	–

D. Results: figures

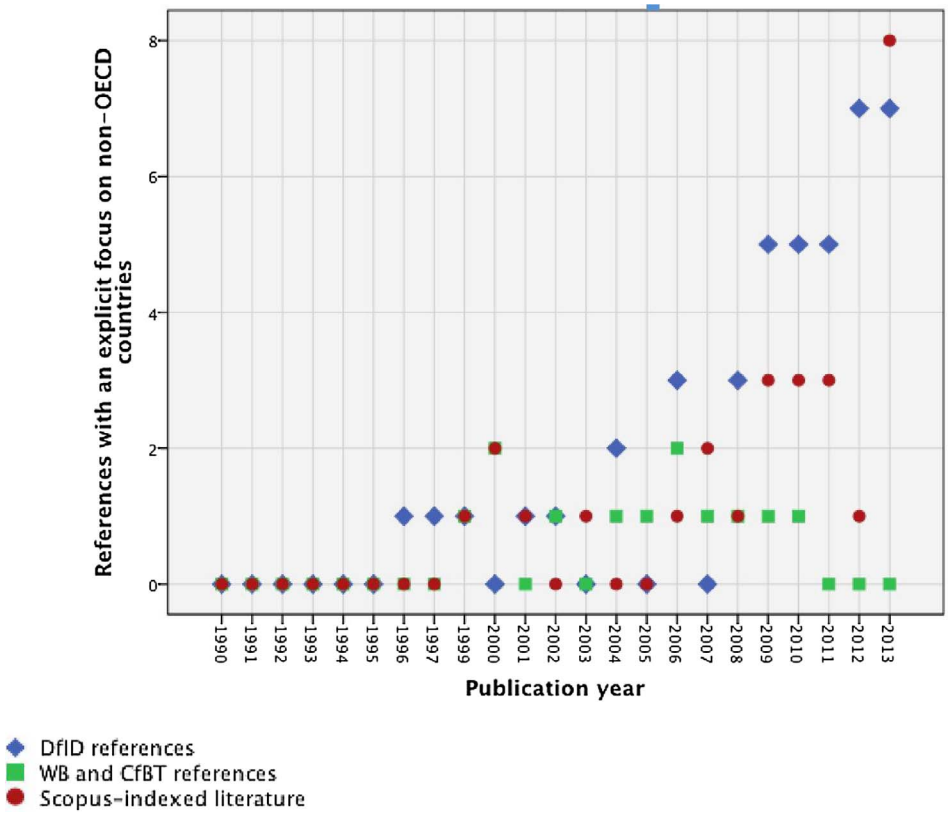

Fig. A1. Evolution of references with an explicit focus on non-OECD countries.
Source: Authors

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