The Global Educational Policy Environment in the Fourth Industrial Revolution

Teachers and the Global Educational Policy Field

Tore Bernt Sorensen

CHAPTER 3

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ABSTRACT

The first decades of the 21st century have witnessed unprecedented global political cooperation directed toward school teachers and the importance of quality education. This chapter discusses the current developments in the global educational policy field with a particular focus on teacher policy and the Organization for Economic Co-operation and Development's (OECD) program Teaching and Learning International Survey (TALIS). In adopting a critical realist approach and based on a literature review, this chapter provides a synthesis of the governance mechanisms, contexts, and outcomes of TALIS. TALIS is treated as an observable outcome resulting from the actions of an underlying mechanism – information-processing policy instruments – and two contextual conditions. The first contextual condition suggests that there is a predominance of the knowledge-based economy paradigm in the political discourse, linking school teachers to economic growth and competitiveness. The second condition is provided by the consensus that education, notwithstanding technological developments, in the foreseeable future will remain a labor-intensive sector requiring a teacher workforce, as reflected in the representation of diverse interests in the TALIS programme and their commitment to find compromises on

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teacher policy. We will be able to assess in future decades the extent to which the mechanism will be triggered with regard to TALIS. However, in giving voice to teachers working in different settings, TALIS findings are not easy to reconcile with human capital theory or translate into "best practice" recommendations for teacher policies that can help drive knowledge-based economies.

Keywords: Teachers; OECD; Teaching and Learning International Survey (TALIS); globalization; mechanisms

INTRODUCTION

The first decades of the 21st century have witnessed a surging political attention and unprecedented cooperation on a global scale directed toward school teachers and their importance for quality education. This is a remarkable development given that education systems nominally remain deeply embedded in distinctive institutional arrangements governed by national, federal, or state authorities. The political, economic, cultural, and pedagogical implications of this strong convergence in the interest for school teachers would appear to be wide-ranging (Connell, 2009; Robertson, 2000, 2012). From the perspective of teachers, the political attention and indeed recognition of the profession may be welcomed after decades of derision in many countries. However, making it to the upper part of the political agenda globally comes with a price as the full range of international agencies, national government authorities, unions, think tanks, private entrepreneurs, and consultancies crowd the policy space and seek to influence the governance, framing, and content of initiatives, as well as profile themselves in the process.

In this chapter, I discuss the current developments in teacher policy in what might be termed the global educational policy field (Lingard & Rawolle, 2011). The chapter adopts a critical realist perspective of one of the most prominent examples of international cooperation on teacher policy, the Organization for Economic Co-operation and Development's (OECD) program Teaching and Learning International Survey (TALIS). While Sorensen and Robertson (forthcoming, 2017) traces the globalizing processes surrounding TALIS, this chapter reflects on how we might understand TALIS theoretically. Based on literature review, the chapter provides a synthesis of the mechanisms, contexts, and outcomes of the political attention directed toward the teaching workforce on a global scale. TALIS

is treated as an observable and patterned outcome resulting from the action of underlying mechanisms in particular contextual conditions. The hypothesis put forward in this chapter is that the shift in statistical indicator development toward teacher quality and effectiveness constitutes a causal mechanism for the way TALIS has developed. The chapter highlights how new regulatory mechanisms, such as indicators development is an integral part of education governance and associated with the authoritative allocation of values through policy (Easton, 1953; Prunty, 1984). This chapter suggests that two contextual conditions have been conducive to the formation of TALIS. First, the contemporary global educational policy field is guided by a knowledge-based economy paradigm fueled by human capital theory which stipulates that the world needs more and better education to drive capitalist development. The second condition is provided by the consensus that education, notwithstanding technological developments, in the foreseeable future will remain a labor-intensive sector requiring teachers. This condition reflects the representation of diverse interests in the TALIS program and their commitment to cooperate. In this sense the program very much represents a compromise among policy actors. Without these two conditions, the TALIS program would not have engaged the same ensemble of policy actors and had its present form. There is a strong dimension of European regionalism in the case of TALIS, and overall, the case of TALIS is indicative of the ways the global education policy field is gated, regulated, and governed. The extent to which the mechanism will be triggered with regard to TALIS remains to be seen, and we will only be able to assess this in future decades. However, in giving voice to teachers working in different settings, TALIS findings are not easy to reconcile with human capital theory or translate into "best-practice" recommendations for teacher policies that can help drive knowledge-based economies.

The chapter first provides an overview of recent "problem-solving" initiatives on teachers from major policy actors, before introducing the theoretical and methodological approach. Subsequently, the core part of the chapter introduces TALIS as a distinctive outcome of globalizing processes in education policy, before discussing the mechanisms and contexts that enabled the program to have its current form. Finally, the concluding remarks reflect on what the synthesis tell us more generally about contemporary developments in the global educational policy field and whether the synthesis presented here might have some relevance in other aspects of education policy and broader public policy issues.

TEACHERS ON THE GLOBAL POLICY AGENDA

International political attention directed toward teachers as such is nothing new. International organizations of the post-World War II order like United Nations agencies, such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), the OECD, and the International Labor Organization (ILO) have engaged with teachers during the past 50 years (ILO and UNESCO, 1966; Joint ILO–UNESCO Committee of Experts on the Application of the Recommendations concerning Teaching Personnel, 2015). What is remarkable and arguably new is the distinctive emphasis in the last decade on teachers as the key workforce for driving quality education systems and effective learning (see also Steiner-Khamsi, 2016). Since the beginning of the 2000s, a wide range of international projects focusing on teachers have been launched that in various ways all invoke the key role of teachers for the quality and efficiency of education systems namely:

- The UNESCO Education For All goals and strategies sought to enhance the status, morale and professionalism of teachers (UNESCO, 2000) and teachers became directly linked to quality education (UNESCO, 2015a). Moreover, a Teachers Taskforce was established under Education For All (International Taskforce on Teachers for Education For All, 2015), and the *eAtlas* series, published by the UNESCO Institute for Statistics, entails the development of new survey instruments and data collections on teachers (UNESCO, 2015b). Against the backdrop of what has been presented as a "global learning crisis" (UNESCO, 2014), the Sustainable Development Goals (SDG) reinforce the emphasis on learning outcomes, and teachers are seen as instrumental to this. SDG Goal 4 on Quality Education includes an explicit target on the supply of teachers. More generally, teachers are also addressed by the SDG Goal 8 on Decent Work and Economic Growth (Barrett & Sorensen, 2015; UN, 2015).
- The OECD coordinated a major review of teacher policy in 25 countries and reported its findings in *Teachers Matter* (OECD, 2005). On this basis, the OECD launched the TALIS program (OECD, 2009, 2014a).
- Teachers feature prominently in the current World Bank *Strategies for Education* (World Bank, 2011) and the associated initiative *Systems Approach for Better Education Results* (SABER) (World Bank, 2013).
- The European Union has conducted extensive work on the teaching profession, driven by the executive arm the European Commission (EC) (Caena, 2014).

- Business and foundations have emerged in the global educational policy field emphasizing the key role of teachers for the quality and effectiveness of education systems (Ball, 2012; Robertson et al., 2012). This is evident in the often-cited reports from McKinsey & Company (Barber & Mourshed, 2007; Mourshed, Chijioke & Barber, 2010), the Learning Curve Project (Pearson, 2012, 2014) launched by Pearson, the largest education company in the world (Junemann & Ball, 2015), and the influential Measures of Effective Teaching (MET) project on identifying effective teaching, funded by the Gates Foundation (Bill and Melinda Gates Foundation, 2013).

These and other high-level initiatives address with various emphases a very wide range of dimensions related to teachers' work, qualifications, and education, such as, the labor process of teaching, the political order of the work place, and the legal constitution of the school in relation to the state, the character of the workforce as specified by job descriptions and required training, and the allocation of resources used in the work of teaching and the struggle for them (Connell, 1995). In many ways, the initiatives overlap in their shared emphasis on the role of education for economic growth in very different locations and the important role of teachers in this respect. In particular, the initiatives above embrace "problem-solving theory" and an associated knowledge interest of policy-relevant empirical generalization for the objective of efficiency maximization in education systems that are assumed to change toward equilibrium. Since problem-solving theory, as distinct from "critical theory," takes the world as it finds it without trying to explain or question the general pattern of institutions and relationships, this approach is haunted by methodological nationalism and embedded statism (Cox, 1996; Dale, 2005).

MECHANISMS, CONTEXTS, AND OUTCOMES IN THE GLOBAL EDUCATIONAL POLICY FIELD

Dale (2013) argues that the language of mechanisms, or "logics of intervention," could help us in explaining the associated events and processes in questions connected to globalization. Tracing out the pluri-scalar relationships between institutions provides us with an entry point for inquiry into the causal mechanisms that recognizes a wider range of facets of governance than is possible with a problem-solving theory-based approach that is

confined to searching for "effects" of the "higher" level "on" the "lower" level. Harnessing the notion of mechanism to explain the nature of developments in the global educational policy field, in a more critical manner, would appear to hold great theoretical promise. Mechanisms have been defined in so many ways in social science that the use of the term needs to be thoroughly accounted for (Mayntz, 2004). In their argument for theorizing mechanisms and causality in the social sciences, Dale (2013), Mayntz (2004), and Pawson (2000) advocate for causal reconstruction of processes that account for macro-phenomena. They suggest the identification of generative mechanisms as a distinctive alternative to the quantitative research tradition of correlational or multivariate analysis, in which causality is reduced to the identification of correlates, as well as "successionist" views of causation in which the goal is to establish those independent variables responsible for a dependent variable (cf. the shortcomings of problem-solving theory). Rather, the aim should be "to step away from the description of regularities to their explanation" (Pawson, 2000, p. 288) and to look for the causal relationships *underlying* statistical associations (Mayntz, 2004). The very term *underlying* captures the idea that the surface appearance of observable events can be explained by hypothesizing about the workings of social reality which might be hidden and not empirically observable (Pawson, 2000).

As a means to slice through this social complexity, Pawson (2000) argues for an explanatory apparatus of mechanisms, contexts, and outcomes, and a stratified ontology that sees not only events and what is empirically observable as real, but also structures, and powers. In other words, a mechanism is only identified when the process linking an outcome and specific initial conditions is spelled out (Mayntz, 2004). Moreover, whether the mechanism is triggered depends on its contexts. The relationship between generative mechanisms and outcomes is not fixed but is contingent upon those contextual conditions, shaped by culture, rules, norms, and power (Pawson, 2000). Pawson (2000) paraphrases the explanatory apparatus:

> Explanations focus on interesting, puzzling, socially significant outcome patterns (O). Explanation takes the form of positing some underlying mechanism (M) that generates the outcome, which will consist of propositions about how structural resources and agent's reasoning have constituted the regularity. The workings of such mechanisms are always contingent and conditional, and hypotheses will also be constructed in respect of which local, institutional and historical contexts (C) are conducive to the action of the mechanism. (p. 298)

Mayntz (2004) underlines that causal propositions of mechanisms are complex formulations. Indeed, with the emphasis on contingency, there is

an overlap between the way in which critical realism is viewed and the relative importance given to complexity theory, irreversibility, stochasticity, non-equilibrium systems, and an ontology of *becoming* rather than *being* (Prigogine, 1987, 2000). In other words, the "arrow of time" matters; causal mechanisms operate over long periods of time in the unfolding adaptation and change of institutions or whole societies (Streeck, 2014, p. xii). The search for mechanisms starts with the identification of an *explanandum* (Mayntz, 2004, p. 244). Accordingly, TALIS is treated as an observable and patterned empirical outcome – and thus an *explanandum* – resulting from the action of the underlying mechanisms in particular contextual conditions that together form the *explanans*. The relationship between *explanans* and *explanandum* can be expressed as *mechanism* + *context* → *outcome* (Pawson, 2000). Dale (2013) suggests that this reads as "*Outcomes are the result of Mechanisms in Contexts*." With a particular focus on policy issues, Dale (2013) elaborates along the same lines of Pawson's (2000) suggestions that mechanism involves a rationale for a political strategy designed to bring about particular ends. Dale (2013) further distinguishes between the logic of intervention driving a mechanism and the "program ontology" through which it is delivered; at the heart of any mechanism are theories about how it will bring about the intended changes, and this is the program ontology. The notion of program ontology would appear to correspond with Peters's (2015) argument that effective policy design requires a model of causation, that is, a clear conception of socio-economic dynamics that are producing the problem to be solved. This distinction is an important one, as the analysis below shows. To explain TALIS attention has to be given to the program's outcome and the mechanisms and contexts which sustain it. The approach taken here begins with a presentation of TALIS, including a review of the more critical literature on the survey program in the next section, followed by a discussion of mechanisms and contextual conditions in the subsequent sections.

THE OECD PROGRAM TALIS

The TALIS program was developed as part of the OECD's Indicators of Education Systems (INES) Project. Over the past 20 years, the INES project has developed a set of indicators meant to "provide a reliable basis for the quantitative comparison of the functioning and performance of education systems in OECD and partner countries" (OECD, 2009, p. 19).

A major OECD review (2002–2004) of teacher policy in 25 countries provided the immediate background for TALIS. The main outcome of this policy review, the report *Teachers Matter* (OECD, 2005), highlights two particular concerns: (i) the recruitment of large numbers of qualified teachers to replace the very large generation of teachers who had been recruited in the 1960s and 1970s; and (ii) concerns about teacher effectiveness. In other words, the issues concerned the *quantity* as well as *quality* of teachers. On this basis, *Teachers Matter* (OECD, 2005) argues that there was a once-in-a-generation opportunity in many countries to shape and benefit from substantial changes in the teacher workforce.

The main OECD reports on TALIS 2008 (OECD, 2009) and TALIS 2013 (OECD, 2014a) put that the overall objective of the program is to provide international indicators and policy-relevant analysis on teachers and teaching in a timely and cost-effective manner. Teachers are distinguished as "front-line workers" who play a crucial role in the modernization of education systems because, within schools, "teacher- and teaching-related factors are the most important factors that influence student learning" (OECD, 2014a, p. 32). Policy themes and indicators are selected on the basis of a priority-rating exercise among participating countries. The survey program (see Table 1 for basic features) is meant to help countries review and develop their policies for high-quality teaching and learning through the comparison of policy approaches and their impact on school learning environments in different countries viewed as facing similar challenges (OECD, 2009, 2014a). In short, the OECD presents the TALIS program as problem-solving theory and infers that self-contained national systems of education in their deployment of teachers can be optimized for economic growth and competitiveness.

Table 1 highlights two general points: (i) TALIS is an ongoing project conceived, promoted, and sold by the OECD to member countries and beyond; and (ii) for this objective, the project balances continuity of policy themes and indicators measurement with innovation and "international options" in survey packages. Existing critical policy research on TALIS makes a number of valuable points. First of all, the program is a major research effort as well as a concerted attempt to construct a global reality of teacher professionalism. TALIS has wide-ranging political implications in terms of the nature of teachers' working conditions, organization, knowledge-base, and pedagogical practices (Sobe, 2013). Constituting yet another expression of competitive comparison and globalizing processes in education policy, Rinne and Ozga (2013) suggest that TALIS acts as a "Knowledge-Based Regulation Tool." However, they are skeptical whether

Table 1. Facts about the TALIS Program.

- Two rounds of TALIS have been conducted, TALIS 2008 and 2013.
- TALIS consists of two questionnaires, to be filled in by teachers and school leaders.
- The primary sample group are teachers and school leaders working in International Standard Classification of Education (ISCED) level 2 schools (equivalent to middle education/grades 7–9 in the United States).
- TALIS is wide-ranging in its coverage of policy themes. The main policy themes include: (i) School leadership; (ii) Appraisal of and feedback to teachers; (iii) Teaching practices, beliefs, and attitudes; (iv) Professional development of teachers; and (v) School climate and job satisfaction.
- There is a large degree of continuity in terms of policy themes. For TALIS 2013, most of the origional themes were expanded: the first theme calls for new indicators on distributed/team leadership; and the latter three themes proposes the inclusion of indicators on student assessment practices, initial teacher training, and self-efficacy, respectively.
- Twenty-four countries or sub-national entities took part in TALIS 2008, and 34 in TALIS 2013. More than 40 countries are expected to sign up for TALIS 2018.
- The EU is well-represented, with 16 and 19 member states or sub-national entities taking part in the two rounds.
- TALIS also attracts non-OECD members. In 2008, seven non-OECD countries or sub-national entities took part. In TALIS 2013, that the number grew to 10.
- For TALIS 2013, participating countries or sub-national entities were offered three "international options"
  - (i) Six countries or sub-national entities chose to include teachers and school leaders working in ISCED level 1 schools (equivalent to primary education in the United States).
  - (ii) Ten countries or sub-national entities chose to include teachers and school leaders in ISCED level 3 schools (equivalent to secondary education in the United States).
  - (iii) Eight countries chose the option of a "TALIS-PISA link" which involved conducting TALIS in schools that participated in PISA 2012.
- Finland and Mexico were the only participants that chose all three international options.
- For TALIS 2018, international options include a video study of teaching practices in classrooms.

Sources: OECD (2009, 2014a, 2016).

OECD will prove successful in their promotion of TALIS because the survey gives voice to teachers working in very different contexts. The complexity of results is therefore hard to reconcile with the broader OECD efforts into codification, standardization, and identification of "best practices" in education that can be translated into general policy recommendations. In this respect, we might understand the introduction of

international options, as the TALIS-PISA link and the forthcoming video study of teaching practices, as a strategy to ensure more leverage for general policy recommendations.

Robertson (2012, 2013) locates TALIS in the broader recalibration of the global educational policy field during the 2000s as intergovernmental organizations as well as private consultancies, and corporate philanthropists operating beyond national spaces of representation and democratic accountability launched large-scale projects addressing the role of teachers for economic competitiveness. Robertson (2012) argues that the departure from the silencing, de-skilling, and derision of the teacher profession should be understood against this background. In this respect, Robertson (2012) views the engagement of the global teacher union, Education International, in TALIS as ambiguous since it might signal that those representing the teaching profession are adopting the dominant mindset in the global educational policy field. In one of the few empirical studies of TALIS, Sorensen and Robertson (forthcoming, 2017) argue that the program seeks to reframe teachers' work as a main policy issue in ensuring economic competitiveness and growth nationally and globally. In this respect, TALIS is somewhat subordinated the hugely influential Program for International Student Assessment (PISA) and its overarching aims of increasing student performance as assessed by standardized test measures. Moreover, Sorensen and Robertson (forthcoming, 2017) break open the "TALIS ensemble" and show that TALIS is driven by a dual de-nationalizing dynamic in education governance where international public organizations and private enterprises influence national policy-making, while state and sub-state authorities revise their traditional organizing logics and extend their horizons of action beyond the nation-state (see also Sassen, 2003). In this respect, there is a strong dimension of European regionalism to the program since the EU, and its executive arm the EC played a crucial role in getting TALIS off the ground. Finally, cooperation in the TALIS Board of Participating Countries between OECD, the EC, government representatives from participating countries, the Trade Union Advisory Committee (TUAC) to the OECD represented by the global teacher union Education International, and the Business and Industry Advisory Committee (BIAC), has from all sides been recognized as constructive and consensus-based.

The existing literature on TALIS offers critical insights on power dynamics in the TALIS ensemble and the wider global educational policy field, as well as the implications of TALIS as a policy tool. There is a focus on what TALIS might represent theoretically and politically, and, to a lesser extent, what the survey program does. Yet, there is not much

explanation of TALIS in terms of its underlying mechanisms that could help us understand why the program exists in the first place and the contextual conditions that have shaped it. As an attempt to synthesize the existing evidence, the following hypothesis is put forward and discussed in the next sections:

- *Information-processing as mechanism*: In recent decades, international comparative research programs have become very popular as policy instruments. TALIS is part of such efforts to create a common space of measurement.
- *Knowledge-based economy as contextual condition*: TALIS reflects a particular paradigm that links school teachers to economic growth and competitiveness. This paradigm might also be understood as the program ontology, or model of causation, underpinning the *information-processing* mechanism.
- *Education will remain a labor-intensive sector as contextual condition*: There is consensus that education, notwithstanding technological developments, in the foreseeable future will remain a labor-intensive sector requiring complex human capital embodied in teachers. This is reflected in the representation of diverse interests in the TALIS program and their commitment to cooperation.

NEW REGULATORY MECHANISMS: INFORMATION-PROCESSING

Dale (2013) argues that current mechanisms, or logics of intervention, in education policy tend to set conditions for change through "soft law." Soft law provides definitions of what counts as good practice and thereby frames, enables, and constrains educational interventions. This section elaborates on this point and suggests that the intensified adoption of information-processing policy instruments on an international scale is the underlying mechanism for the TALIS program. In the past decades, data, research, and information-processing has been widely adopted as policy instruments in the global educational policy field. National governments today look to international agencies for comparative data as means for a "global eye" on education systems to complement data from domestic databases (Nóvoa & Yariv-Mashal, 2003). A main reason for the popularity of these policy instruments among international organizations is that

they do not have the mandate, at least in the Global North, to intervene directly in the educational arrangements of countries, and it remains controversial when they do so in the Global South, for example, though lending conditionalities. In the EU, the constraints placed on international agencies are epitomized in the principle of subsidiarity which puts constraints on the sort of interventions that can be launched by the EC, the executive arm of the EU. Policy development has to be undertaken under the Open Method of Coordination, without any legal obligations for member states to comply with recommendations and to succumb to peer pressure. The same is the case with the OECD. Another appealing feature of international comparative research programs as policy instruments is that they stimulate debate in areas that might not otherwise be very much in the public eye. In this way, such information-processing policy instruments appear in line with the promises of "monitory democracy" (Keane, 2009) where decision makers in our era of "post-representative" democracy are subject to public and pragmatic scrutiny by citizens and extra-parliamentary power-monitoring institutions within and beyond state borders.

Following Peters (2015), we might label the information-processing category of policy instruments to which TALIS belongs as "persuasive." Policy recommendations from international organizations should signal objectivity, and policy instruments based on statistics have here proved particularly effective on every political scale (Desrosières, 2002; Porter, 1996). However, any policy instrument has a political impact on its own (Peters, 2015). Presenting research findings as objective and scientific, based on assessments and surveys, is thus not without difficulties, as the critique of PISA and the role of the OECD in the global educational policy field bears witness to (Goldstein, 2004; Hopmann, Brinek & Retzl, 2007; Meyer & Zahedi, 2014). The sociology of quantification drives home the point that information-processing policy instruments should not be seen as mere mechanical means of intervention. According to Desrosières (2002), statistics has historically been connected with the continuing process of state formation by enabling the unification and administration of political entities. In other words, the very creation of a space of common measurement within which things are to be compared have descriptive as well as prescriptive dimensions. In the creation of classes of equivalence and encoding procedures, the two dimensions of description and prescription are indispensable to each other. The descriptive task of objectification aspires to "make things that hold" in the capture of reality while the prescriptive dimension seeks to master the unpredictability of same reality through the calculation of probability.

Creating a space of common measurement as a basis for policy intervention involves an enormous amount of work. This work is greatly complicated by the fact that education, teaching and learning qualify as "wicked problems" in a public policy perspective (see Jules, 2016). The search for scientific bases in dealing with the wicked problems of education is greatly complicated due to their very nature: (i) educational issues are essentially unique, bound to specific locations and points in time; (ii) issues in education can often be considered as symptoms of wider issues in society, such as housing policies, labor market developments, and migration; and (iii) since educational issues cannot be definitively described in objective terms, "solutions" are not true-or-false, but good-or-bad, and the perception of data needs depends upon the understanding of the problem and its resolution at that time (Rittel & Webber, 1973; Jules, 2016). In an attempt to build on and synthesize the existing findings on TALIS accounted for in the previous section, we might identify the ongoing work of describing and creating a space of common measurement as the underlying mechanism for TALIS. The development of indicators on school teachers enables the incremental unification and administration of teacher policies on an expanding international scale. With its description and prescription of indicators-based solutions, TALIS is a large-scale international effort to control, and hence "tame," the decidedly wicked problem of teacher quality, including the students and staff that make up this field of social activity (Masschelein & Simons, 2013).

However, following Pawson (2000), we should remember that the workings of this mechanism underlying the TALIS program are contingent and conditional. In this sense, the mechanism cannot stand alone in explaining TALIS; it needs to be contextualized, so that we can assess the extent to which the mechanism is triggered and how information-processing more specifically generates the patterning of the "TALIS ensemble," including the particular outcome that the survey program has come to be. The next section focuses on the predominance of the knowledge-based economy paradigm in the global educational policy field as the first of those conditions.

THE KNOWLEDGE-BASED ECONOMY: THE LEARNING SHIFT AND THE RISE OF THE OECD

The arrow of time (Prigogine, 2000) is clearly important for explaining TALIS. Within the OECD, TALIS is part of an institutional trajectory of policy reviews and indicator development that goes back at least to the 1990s.

This coincides with the incremental rise of the OECD in the global educational policy field, where the OECD has been successful in promoting ideas and products by turning vague concepts like "knowledge-based economy" (OECD, 1996) into buzzwords, underpinned with empirical content in the form of educational statistics and indicators partly generated through the OECD's own programs. Today, the OECD's notion of knowledge-based economies has evolved into a paradigm prevalent in the global educational policy field (Godin, 2006; Henry, Lingard, Taylor & Rizvi, 2001; Hopmann et al., 2007; Lawn & Grek, 2012; Martens, 2007; Papadopoulos, 1994; Rizvi & Lingard, 2010; Valiente, 2014). The concept of knowledge-based economies has become key in the contemporary "cultural circuit" of capitalism that perpetually provides a self-conscious critique, or feedback loop, with a distinctive emphasis on harnessing bodies and minds "to keep capitalism surfing along the edge of its own contradictions" (Thrift, 2005, p. 6).

Two dimensions to the rise of the OECD in global educational governance should be clarified here: (i) the internal dimensions of the organization and (ii) the position of the organization in the wider policy space. Both dimensions highlight that the adoption of human capital theory and an associated shift toward learning assessment based on standardized performance measures is fundamental in understanding the rise of OECD. First, education was not a central area of interest for the OECD until the 1990s. However, along with the organization's promotion of the notion of the knowledge-based economy, OECD activities came to stress the economic significance of education, and the rise of the organization's work in education is accompanied by the gradual reduction of this sector to its economic dimension. In this respect, human capital theory is used in articulating an economistic discourse in education while defending high levels of spending on education and skills for economic development. This has proven an effective strategy for profiling the organization externally as well as positioning education at the very center of the organization's policy agenda. PISA was launched in 2000, and a separate Directorate for Education and Skills was established in 2002. On this basis, the predominance of the human capital approach in the work of the OECD Directorate for Education and Skills might said to be strategically as well as ideologically motivated (Henry et al., 2001; Valiente, 2014).

It would be misleading to present the OECD as a completely unified and streamlined organization, and, even worse, as operating wholly as a supranational organization. Ultimately, the OECD continues to be piloted by its member states. National governments are the gatekeepers of the issues that enter the organization, they finance the activities, and in meetings their

representatives far outnumber those of the OECD (Carroll & Kellow, 2011; Woodward, 2009). This is largely true also in the case of TALIS. However, we should note that the EC, on the basis of EU Council Conclusions, with financial means prompted EU member states to take part in TALIS on the condition that they would prioritize teachers' professional development as a policy theme (Sorensen & Robertson, forthcoming, 2017). Another important point for explaining the current position of OECD is that some larger states, from the 1990s – in the wake of the collapse of state socialism and the end of the Cold War – appear to have prioritized other fora for high-level international cooperation over those of the OECD (Carroll & Kellow, 2011; Tröhler, 2013; Woodward, 2009). This sheds new light on the extraordinary rise of the organization in the global educational policy field, suggesting that OECD has cultivated new ideas and projects that could help revitalize the organization and ensure its survival by attracting the commitment and funding of member countries and beyond.

OECD pursued this by developing indicators targeting the comparability of education outputs, or student performance, and the effects of the underlying political decisions. While this shift in the orientation of quantification is less robust from a methodological point of view, the shift enabled OECD to overtake UNESCO – which throughout the 1990s continued to focus its activities on the development of mass education – as the main agency for indicators and statistics in education (Cusso & D'Amico, 2005; Gustafsson, 2008; Mundy, 2007). The "learning shift" required the development of indicators and performance criteria to be applied in external assessments. This mode of comparability supports more normative assessments of education systems and policy recommendations of "best practices," and a modeling of social reality that might also reconstruct it according to that very model. Today, we can see that this "learning shift" has proved hugely influential globally since it appears that there is a global alignment and increasing consensus at the international level that education first of all serves to sustain economic growth and competitiveness in the global marketplace (Cusso & D'Amico, 2005). In this sense, the shift in educational indicators toward the measurement of learning outputs acts as a mechanism for the patterning of the global educational policy field.

More recently, in the post-2015 Sustainability Development Goals (SDG) we recognize that "competitive comparison" (Martens, 2007) in the Global North is likely to be extended to the Global South, epitomized by the shift from "access" toward "learning" and "quality education." The "global learning crisis" thus legitimates the diffusion of a specific technology of quantification to developing countries (Languille, 2014). This has allowed

OECD to build on its momentum and begin targeting the Global South with the program PISA for Development and a global Skills Strategy based on similar one-size-fits-all productivist models of development (Languille, 2014; OECD, 2015; Valiente, 2014). Desrosières (2010) argues that shifts in modes of quantifying the social order tend to take place during a socio-economic crisis. Crises are thus both represented by statistical indicators as well as a catalyst for major changes in indicators and systems of observation. In this respect, the crisis underpinning the learning shift in the OECD orientation of quantification can be traced to the United States and the National Commission on Excellence in Education (NCEE, 1983), which stressed the need to develop international comparisons of students' learning achievement and the efficiency of education systems in order to assess the US position on the international market and as a basis for reform of the curriculum, evaluation of students' learning achievements, and teacher training and productivity (Cusso & D'Amico, 2005). Subsequently, the OECD launched an initiative in the area after pressure from the US Department of Education which made a financial contribution to help get it started (Papadopoulos, 1994). The ultimate result of this pressure was that the methodology developed for the National Assessment of Educational Progress (NAEP) in the United States during the 1980s – also adopted for the International Association for the Evaluation of Educational Achievement's Trends in International Mathematics and Science Study (TIMSS) 1995 study – provides the basis for OECD's PISA program (Gustafsson, 2008).

Considering that the United States is a main funder of the OECD overall, and that the organization itself can be traced back to the US-financed Marshall Plan for post-World War II Europe, the influence of developments in the United States should not come as a surprise. After all, the United States has a leading role in the major economic, social, and cultural developments after World War II (Gindin & Panitch, 2012; Streeck, 2014, p. xii). Symptomatically, the annual flagship publication of the OECD, *Education at a Glance*, uses the US Dollar as reference in its presentation of data, also in the French version (see, e.g., OECD, 2014b). In TALIS, US influence on the basis of direct interference is harder to discern. The United States did not participate in TALIS 2008 and did not meet the required response rates in TALIS 2013. Rather, it is the strong dimension of European regionalism in TALIS and close working partnership between OECD and the EC that stands out (European Commission, 2012). However, TALIS provides the backdrop for the launch of the annual International Summits on the Teaching Profession. The first two summits

were convened in New York in 2011 by the United States Department of Education, the OECD, and the global teacher union Education International (Sorensen & Robertson, forthcoming, 2017).

TALIS remains a survey program based on school teachers' and leaders' self-reported experiences, attitudes, and practices, and the main OECD reports do not offer very strong policy recommendations (Rinne & Ozga, 2013). Still, I advance that the paradigm of knowledge-based economies perpetually competing in terms of developing and deploying human capital constitutes the program ontology, or model of causation, underlying TALIS. Underpinned by human capital theory and the "learning shift" in the orientation of indicators development, the notion provides the basic theory for how the mechanism of information-processing through programs of TALIS, PISA, and the Program for the International Assessment of Adult Competencies (PIAAC), etc. will help maximize education outputs. As such, it constitutes a crucial contextual condition for the outcomes of the TALIS program and the workings of the mechanism of information-processing policy instruments more generally.

As the account above shows, the entrenchment of this paradigm has a history. In the explanation of TALIS as an outcome, the generic mechanism of information-processing is contextually conditioned by the institutional trajectory of the OECD as a strategic intergovernmental organization dependent on funding and hence subject to pressures from its members. In education, the United States and developments in that country has profoundly influenced the research and ideological orientation of the OECD, historically. In TALIS, the EC stands out as the cooperating organization that through its coordination of EU members helped lifting the program off the ground in the first place. These relations help to explain what made TALIS possible and the particular pluri-scalar, de-nationalizing features of the program. However, in order to explain the policy contents of TALIS more specifically, that is, the selected policy themes and recommendations with regard to the nature, organization, and practices of teachers' work, we need to go further.

EDUCATION AS A LABOR-INTENSIVE SECTOR: THE POLITICAL COMPROMISE ON TEACHERS

This section suggests that the recognition of teachers in TALIS – which goes rather uneasily with the program being framed by the higher-profiled

PISA program – should be understood against the background that school teachers are part what continues to be a growing education sector in most countries. In other words, contemporary labor market developments form a contextual condition that helps to explain the patterning of TALIS. Unlike those engaged with production, the education sector is part of those belonging to the sphere of reproduction "engaged with the maintenance of the physical and social infrastructure necessary to support the further development of capital accumulation and to guarantee the next generation of labour" (Doogan, 2009, p. 98). In this respect, two trends should be singled out:

- Globally, the education sector currently accounts for 4.4 percent of total employment, and the sector is projected to continue its creation of jobs with around 1.8 percent over 2015–2020. Also in the United States, the education sector is fast-growing in terms of job-creation (ILO, 2013, 2015b).
- Overall, there will be a hollowing out of jobs needing medium levels of skill for routine tasks that can be automated. Global trends show significant regional variations, with medium-skilled jobs disappearing in advanced economies at a faster pace than is the case in emerging and developing countries (ILO, 2015a).

Teacher salaries are the main post on education budgets. For OECD countries on average, teacher salaries currently account for around 62 percent of expenditure by educational institutions (OECD, 2014b). Education is thus one of the most labor-intensive sectors and it seems that it will continue to be so also for the foreseeable future. In production and labor markets, human-to-human interaction requiring social intelligence and judgment remains in demand, while routine tasks are not. There are not any strong indications that teaching in schools is about to be automated, and that the teaching profession is about to be replaced by robots or other devices. Frey and Osborne (2013) argue that most professions in the education sector in the United States and advanced economies in general are not susceptible to job automation by means of computer-controlled equipment. However, the nature of teachers' work is likely to change due to technological developments as improved user interfaces and algorithms building upon big data are transforming the education sector (Frey & Osborne, 2013). While teaching and learning processes are still considered too complex to be automated, big data serve to codify basic standards for teaching and assessment that can be translated into performance and evaluation frameworks for schools and teachers, as reflected in the debates on "value-added

modeling" and school league tables in the United States and England (AERA, 2015; Leckie & Goldstein, forthcoming).

In other words, we recognize the emergence of "digital Taylorism" in education. Industrial revolutions are about standardization, control, and predictability through the codification of knowledge in the mode of production. Digital Taylorism is the contemporary variation:

> This involves translating the knowledge work of managers, professionals, and technicians into working knowledge by capturing, codifying, and digitalizing their work in software packages, templates, and prescripts that can be transferred and manipulated by others regardless of location. […] Unlike mechanical Taylorism, which required the concentration of labor in factories, digital Taylorism enables work activities to be dispersed and recombined from anywhere around the world in less than the time it takes to read this sentence. (Brown, Lauder & Ashton, et al., 2011, p. 72)

However, the current form of TALIS suggests a concept of *teaching* that is not automated or boiled down to scripts and procedures. Considering OECD's endorsement of human capital theory and associated policy preferences for standardization, flexible employment, and performance-based pay, and that influential economists of education often cited in OECD reports call for "disciplining" teachers and their unions (see, Hanushek, 2011), it is striking that the policy themes and indicators for TALIS 2013 expanded the coverage of "softer," psychologically complex issues such as self-efficacy and job satisfaction, including their sense of status in the societies where they work.

In this respect, it should be noted that OECD is a diverse institution also in terms of modes of cooperation. Some OECD bodies are gregarious and invite civil society and non-members to meetings, others are introvert (Valiente, 2014; Woodward, 2009). The main OECD body of the TALIS program, the TALIS Board of Participating Countries, appears open since the body successfully assembled civil society representatives from teacher unions and private enterprises, such as Microsoft. While these TUAC and BIAC representatives are not allowed to take part in the priority-rating exercise that determines the policy themes and indicators, they express that there are valuable outcomes from TALIS to be applied in their further work (Sorensen & Robertson, forthcoming, 2017). In this sense, TALIS represents a political compromise where everybody at the table subscribes to the view that teachers should be recognized and valued as professionals. However, in their efforts to shape the agenda the various policy actors in the cultural circuit of capitalism (Thrift, 2005) might have very different understandings of how teachers and their work should be organized in the future. While teachers are envisaged to enjoy some scope of "permission to

think" (Brown et al., 2011) also in the years to come, the strong drive toward data-driven teaching and learning may radically alter education and the kind of issues that teachers are meant to be thinking about. In the process, the gradual change toward digital Taylorism creates new markets for "edu-tech" firms engaged in data analysis and production of hardware and software (Ball, 2012; Hogan, Sellar & Lingard, 2015; Lanchester, 2015).

CONCLUSION

As Bell (1974) forecasted, our contemporary era "is organized around knowledge, for the purpose of social control and the directing of innovation and change" (p. 20). The OECD's TALIS program reflects a new form of education governance that has legitimacy through the gathering international agencies, teacher unions, business, and state authorities for the negotiation and sharing of knowledge on school teachers and leaders, with all of them universally recognizing teachers as key workers in the production, transmission, and the exchange of knowledge. The unprecedented interest directed toward teachers globally illuminates the expression of an ever expanding "cultural circuit of capitalism" attempting to govern and assert control over their labor. In the quest for efficiency maximization of teaching and learning, the *information-processing* governing mechanism underlying TALIS involves the technocratic and depoliticizing *social* and *moral* engineering of teachers and school leaders (Crick, 2013; Masschelein & Simons, 2013; Rittel & Webber, 1973; Thrift, 2005).

First, the chapter argues that TALIS has descriptive as well as prescriptive dimensions and helps the further creation of a common space of measurement for the purpose of unifying and administering education governance systems on a global scale. In this sense, the program reminds us that capitalism is performative and highly adaptive, yet at the same time only possible due to its routine base of countless means of producing stable repetition (Thrift, 2005). These two qualities are encapsulated in the paradigm of the knowledge-based economy which constitutes the program ontology of TALIS. Second, the chapter suggests that the current entrenchment of the knowledge-based economy in the global educational policy field along with the consensus that education will remain a labor-intensive sector in the foreseeable future were conducive as contextual conditions to the workings of the mechanism.

Time will show the extent to which the mechanism of information-processing policy instruments that is underlying TALIS is really triggered. The current interest from national governments for taking part in TALIS suggests that it will. However, the array of international options promoted and sold by the OECD, including links with PISA and the forthcoming video study, might indicate that the TALIS program has not yet found a stable format that is attractive to national governments. This might be due to the fact that the survey findings are not easily reconciled with human capital theory and the knowledge-based economy paradigm. In other words, the program ontology of TALIS appears incompatible with the survey format. In this sense, TALIS highlights that education, teaching, and learning indeed are "wicked problems." However, with a global alignment having formed around the "learning shift" and data-driven teaching and learning, teachers are likely to find themselves under massive pressure to comply with the requirements of digital Taylorism as new forms of educational governance evolve.

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