

Teacher motivation in economic crises¹

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Question

What strategies and activities have worked to motivate teachers (beyond financial top-ups) to continue to work in the sudden shock of an economic crisis?

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¹ This is one of two reports on education and economic crises.

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1. Summary

This helpdesk review presents evidence of strategies and approaches that have worked to motivate teachers, with a focus on applications to contexts facing the sudden shock of economic crisis. It begins by presenting an overview of the ways in which economic crisis can impact education systems, drawing on recent relevant examples and presenting a detailed case study of Greece. It then moves on to review frameworks to understand teacher motivation, identifying the different factors that may be important in improving teacher motivation. Finally it presents evidence of strategies and approaches to improve teacher motivation.

Evidence of strategies and approaches taken to explicitly improve teacher motivation in the context of the sudden shock of economic crisis is minimal. The examples of Greece, Indonesia, Venezuela, Argentina, Russia and beyond were consulted, and whilst there was some documentation of the impact of economic crisis in these contexts, there was very limited documentation of strategies and approaches taken to mitigate the effects of crisis on teachers. Evidence of strategies and approaches beyond financial incentives was also limited, even when considering a broader set of contexts. The focus of this review is therefore on strategies and approaches that have worked in resource-constrained LMIC contexts, whilst situating the discussion in the context of the ways in which economic crisis can (and has) impacted on education systems.

The main findings are set out below:

- Large-scale economic crisis can reduce the ability of both governments and households to invest in education, with powerful effects on both the supply and demand side (World Bank, 2009).
- On the supply side, rapid spending cuts may constrain educational expenditure, including for teacher salaries, school grants and other associated costs (OECD, 2013). Constrained household budgets will also impact the revenue that schools receive from fees or community contributions, increasing reliance on government transfers (World Bank, 2009).
- Also on the supply side, teachers themselves may face declining household income, increasing rates of ‘moonlighting and absenteeism’ (World Bank, 2009).
- On the demand side, declining household incomes increase both the direct and indirect costs of schooling. This can work to either push children and young people out of school and into employment or, where there are fewer opportunities for work, it may decrease the opportunity cost of schooling (World Bank, 2009).
- Evidence points to the importance of having appropriate data from which to monitor rapid changes in relevant indicators in the context of economic crises, enabling policy responses to be prioritised and effectively targeted (World Bank, 2009; OECD, 2018).
- Teachers are one of the most important factors influencing student learning and achievement (Mourshed et al., 2011), and there is increasing interest in the role and importance of strategies to target teacher motivation (Edge et al., 2017).
- Even outside of contexts of economic crisis, evidence points to serious crises of teacher motivation in many LMICs linked to limited, inefficient teacher training; high absence and attrition rates; poor working and living conditions; minimal professional development opportunities; and often weak appraisal and supervision structures (UNESCO-IICBA, 2017).

- Several frameworks have been put forward to understand teacher motivation, including linked to the distinction between ‘intrinsic’ and ‘extrinsic’ factors, where the former are characteristics and behaviours that occur without external contingency, whilst ‘extrinsic’ factors relate to the performance of a task to achieve external outcomes (UNESCO-IICBA, 2017).
- Whilst teacher-focused reform has tended to focus on strategies to target extrinsic factors such as pay, incentives and career-structure reforms “increasingly, research evidence points to powerful factors that may be more intrinsic in nature and those that increase teachers’ feelings of efficacy and satisfaction with their practice” (Edge et al. 2017).
- In general, the literature calls for ‘comprehensive and holistic’ approaches to addressing teacher motivation (UNESCO-IICBA, 2017) which align different types of incentives, take account of context (Bruns & Luque, 2015), and acknowledge that different types of strategy might work for different types of teacher (Edge et al, 2017).
- The evidence on specific strategies and approaches to improve teacher motivation is weighted strongly toward financial incentive programmes, whilst there is very limited evidence of the effectiveness of alternative strategies and approaches (Bruns & Luque, 2015).
- Financial remuneration in the form of regular salary payments is a central factor determining teacher motivation in many LMIC contexts, and alternatives to such remuneration cannot serve as a direct substitute in the long term (Bennell & Akyeampong, 2007; Bruns et al., 2011).
- Financial incentives (beyond regular salary payments) - in the form of bonus pay or performance pay initiatives - are the most commonly implemented and evaluated policy response to improve teacher motivation in resource-constrained LMIC contexts, benefiting from being politically and technically relatively easy to implement, with limited long term fiscal or pension implications (Bruns & Luque 2015).
- Evidence on the effectiveness of financial incentives in LMICs suggests positive impacts for teacher attendance in India (Duflo et al., 2012) and Peru (Cueto et al., 2008), and for student outcomes in India (suggesting improvements to teaching intensity/effort) (Muralidharan & Sundararaman, 2011) and Tanzania (Twaweza, 2018). In contexts where financial incentives have been tailored to motivate teachers to teach in particular schools, evidence of positive effects have been found in The Gambia (Mulkeen, 2010), whilst a similar policy in Bolivia (Urquiola & Vegas, 2005) had limited impact on teacher performance.
- Non-financial incentives have also been found to be effective at motivating teachers in Kenya, where ‘in-kind’ prizes such as bicycles were linked to pupil performance (Glewwe et al., 2010). Strategies aimed at providing other incentives or benefits, such as transportation or housing have been widely adopted but scarcely reviewed or evaluated (McEwan, 1999 in Rogers & Vegas, 2013). One exception is Mulkeen’s (2010) study, which found that offering a housing incentive in poor and rural areas attracted more teachers to posts.
- Accountability-oriented strategies and approaches, including community-based monitoring and school-based management, have also been effective at reducing teacher absence, increasing teacher work hours, and improving parent-teacher relationships in El Salvador, Honduras, Mexico and Nicaragua (Rogers & Vegas, 2013). Similarly positive results have been found in Uganda (Mulkeen, 2010) and The Gambia (Mulkeen, 2010; Snilstveit, 2016) in relation to teacher absenteeism.

- Evidence of the effectiveness of strategies and approaches aimed at professional rewards and career-path reforms is much more limited in LMIC settings. However, these are common areas of focus for teacher motivation reform in many high performing education systems (Bruns & Luque, 2015).
- Very few strategies and approaches explicitly focus on intrinsic motivation factors, whilst the conceptual literature emphasises the potential importance of these factors. One exception is the STIR programme, currently being implemented at scale in Uganda and India, and focused on building teacher networks to improve teacher practice and student learning. Emerging evidence from this programme suggests positive results for teacher practice and motivation and student outcomes (Edge et al., 2017; Jeevan, 2017).

2. Education systems in economic crises

Impacts on supply and demand

Large-scale economic crises can reduce the ability of both governments and households to invest in education. Effects on both the supply and demand side can have severely detrimental implications for the health of an education system in both the short- and long-term (World Bank, 2009). These effects are magnified in the context of low- and middle-income countries (LMICs), where severe resource constraints are often the norm.

On the supply side, rapid and sustained spending cuts may occur, where the government cannot find sufficient additional financing, and where private capital inflows and domestic fiscal revenues drop sharply (World Bank, 2009: 1). In such a setting, teacher salaries may be delayed, schools may not receive their usual budget, and financing for school maintenance or construction may also be cut (World Bank, 2009: 7). Simultaneously, revenues from parents and communities may also be reduced (for example from fees, or community contributions), making schools and teachers even more reliant on government transfers. Teachers and school leaders may also face declining household incomes and/or purchasing power, increasing pressure on them to earn extra income through secondary employment, and increasing rates of 'moonlighting and absenteeism,' leading to declines in the quality of education (World Bank, 2009: 7).

Since teacher salary payments often constitute over three-quarters of the education budget at the primary level in LMICs (World Bank, 2018), they are particularly vulnerable in the face of economic shocks (World Bank, 2009: 3). Significant salary cuts can detrimentally impact the attractiveness of teaching as a profession, as well as impacting the quality and retention of existing teachers (OECD, 2013: 3).

On the demand side, declining household incomes can increase both the direct and indirect costs of schooling, in some instances pushing the poorest students out of school and putting pressure on children and young people to find work to supplement household incomes, impacting attendance, performance and dropout (World Bank, 2009: 5). Declining school quality, for example as a result of increased teacher absenteeism or overcrowding, may also work to disincentivise attendance at school. In other contexts, economic crisis may work to incentivise prolonged attendance at school, through a reduced opportunity cost of school attendance associated with fewer opportunities for paid work (World Bank, 2009: 5). Declines to household resources may also push students out of private schools and into the public system. In the context of strained or declining public expenditure on education, this may work to increase pupil-teacher ratios and increase pressure on existing public systems, compromising learning quality in the public sector and constraining the resources of the private sector (World Bank, 2009: 7). Effects may vary between schools and households according to location, poverty and a number of other factors, creating inequality of impact within a country.

In relation to the 2008 global financial crisis, UNESCO (2010:30) argued that "increased aid has the most immediate potential for increasing fiscal space. Early action on a sufficient scale could provide the budget resources needed to pre-empt potentially damaging public spending adjustments in education and other areas. It is critical to deliver this aid *before* fiscal pressures convert the financial crisis into an irreversible long-term human development crisis, with attendant consequences for progress in education."

Examples of impact

In recent examples of national large-scale economic the often severe effects of economic crisis on education systems has been clearly documented, underlining the importance of effective policy and management. However, except for the case of Indonesia, there is very limited documentation of pro-active policy responses in the wake of such crises:

Venezuela

Venezuela is in the midst of a severe and deepening economic and humanitarian crisis, linked to declining oil production and rising hyperinflation (the result of government mismanagement). Recently announced economic measures to address the crisis are widely interpreted as being likely to accentuate the crisis (Bahar et al., 2018). The start of the 2018 school year has demonstrated the extreme effects of the crisis on the education system. Media reports have documented how, in what used to be some of the best schools in South America, school days are often cancelled due to lack of electricity, food and water; drop-out rates have doubled since 2011; teacher absence is high and frequent owing in part to the necessity for teachers to wait in long food lines; report cards cannot be printed for lack of supplies; and looting of schools and violence against teachers is common². Media reports suggest that two weeks after their start date, schools were at just 60% capacity, whilst there has been significant movement of students out of the private sector and into public schools³. The system has also faced mass teacher migration to neighbouring countries,⁴ including at the tertiary level, with teachers driven out of the sector in order to meet basic needs⁵.

Greece

In a recent report on Greece, the OECD (2018: 3-4) noted that in the wake of a decade of severe economic and political crisis, Greece did not increase spending on public expenditure on education, such that the system now faces low resourced schools with up to 14% of teachers on temporary contracts, a diverse student body with high levels of child poverty, and a large number of migrant and refugee students (see the detailed case study presented later in this review for more details). The economic crisis has worked to further entrench educational inequality, making it increasingly necessary for students to pay for expensive private tuition to pass the exams required to get into university, something that has been increasingly difficult in the face of rising unemployment and falling salaries^{6,7}.

² <http://uk.businessinsider.com/students-in-the-crisis-of-venezuela-2016-6/?r=US&IR=T/#some-schools-lock-the-gates-to-their-main-entrances-every-day-which-for-some-students-makes-it-feel-like-a-prison-for-others-having-the-school-gated-feels-like-extra-protection-which-takes-away-some-of-the-fear-of-being-on-the-streets-in-a-country-that-is-now-among-the-most-violent-and-lawless-in-the-world-12>

³ <http://uk.businessinsider.com/students-in-the-crisis-of-venezuela-2016-6/?r=US&IR=T/#some-schools-lock-the-gates-to-their-main-entrances-every-day-which-for-some-students-makes-it-feel-like-a-prison-for-others-having-the-school-gated-feels-like-extra-protection-which-takes-away-some-of-the-fear-of-being-on-the-streets-in-a-country-that-is-now-among-the-most-violent-and-lawless-in-the-world-12>

⁴ https://www.washingtonpost.com/news/in-sight/wp/2018/10/08/venezuelan-children-head-back-to-school-amid-dire-shortages/?noredirect=on&utm_term=.9d57298691fa

⁵ <https://edition.cnn.com/2017/11/30/americas/venezuela-teachers/index.html>

⁶ <https://www.bbc.co.uk/news/business-34384671>

⁷ <https://www.theguardian.com/world/blog/2012/mar/14/greece-breadline-pooling-education-resources>

Indonesia

In the wake of the East Asian crisis in 1997, Indonesia was hit by a severe economic crisis, followed by significant political and social upheaval. Until this time, it had enjoyed improvements in key educational indicators, and the government was anxious to sustain this progress. In 1998 the government introduced a combined scholarship and school subsidy program as part of a wider Social Safety Net intervention (Sparrow. 2004). The program constitutes a rare example of a well evaluated policy response to mitigate the effects of economic crisis on education. However, the impacts of the policy on teacher motivation are not well documented, with the focus instead being on the ways in which the policy response protected enrolment rates, with implications for both access and equity⁸. In the years immediately following the crisis, schools generally remained open, enrolments were maintained and anticipated increases in school drop outs did not materialise, whilst some regional variation was evident (Hartono and Ehrmann, 2001).

Monitoring and prioritising efforts

Writing in relation to the 2008 global economic downturn, the World Bank (2009:2) draws attention to the importance of prioritising efforts and investments in the face of economic crisis, focusing on '(1) sustaining the level of investments where the returns are greatest, and (2) protecting the most vulnerable and disadvantaged parts of the population.' Such an approach relies on being able to monitor rapid changes in relevant indicators, including student enrolment, dropout and absenteeism, and in relation to service delivery, including delays in teacher pay, availability of school supplies and school closures (World Bank, 2009: 2-3). Such monitoring is critical for prioritising responses to the sudden shock of economic crisis in the education sector.

Opportunities for reform

Economic crisis can create opportunities for reform. In relation to the global economic downturn, the World Bank (2009:3-4) notes that economic crisis can be used to create opportunities to improve the education system over the long term, since fiscal constraints can work to encourage political support for tightening budget oversight and improving efficiency. For example, "in a weak labour market, it may be easier to attract better candidates in the teacher force and to compel current teachers to upgrade their skills. Teachers may be more willing to consider reforms that base part of their progression, promotions, or pay on measures of performance, rather than simply on factors like tenure and credentials that are at best weakly related to student outcomes" (World Bank, 2009: 4). Indeed, there are a number of examples of countries that have used economic crisis to implement large-scale reform (for example Finland, following a major economic recession in the early 1990s (OECD, 2010: 121-122)).

⁸ This example will be returned to in the second report in this series, focused on strategies and approaches to equitable access to quality education in the context of economic crisis.

Case Study: Teacher motivation in the wake of the Greek economic crisis (OECD, 2018)

Since 2009 Greece has faced a sustained economic crisis, with annual falls in GDP, high levels of national debt, and significant pressures on government spending. Household incomes have been severely affected, and the poverty rate has risen (OECD, 2018: 21). Over the decade, public spending in education declined by 36% (in nominal terms), with cuts affecting both teachers' wages and hiring. This economic crisis has been accompanied since 2015 by a refugee crisis, resulting in the influx of at 12,000 school-age children into the education system, further constraining system resources (OECD, 2018: 16).

The effect of the crisis was felt most acutely in relation to the employment and career advancement opportunities of teachers (OECD, 2018:72). By 2017, teacher salaries had declined to 74% of their 2008 level (OECD, 2018:46). In the immediate wake of the crisis, teachers were not identified as a 'priority sector,' effectively placing a recruitment freeze on the hiring of new teachers. Combined with natural retirement processes, this has led to a serious decline of permanent teaching staff, such that between 2008-2015 the number of permanent teachers, declined by 28% (OECD, 2018:72). Substitute teachers have been used to fill this gap in teacher supply. These teachers are employed every year for up to ten months without salaried summer holidays. In 2015, they comprised nearly 15% of the teaching workforce, being particularly prominent in pre-school and primary education, and often allocated to remote rural or island locations, or to schools serving refugee communities (OECD, 2018: 74).

Research suggests that these hiring practices have detrimentally affected unity and co-operation in the teaching workforce, and the high turnover of teachers employed on these short-term contracts, has undermined planning for in-service training and the introduction of new pedagogical approaches (OECD, 2018: 74-5). The lack of stability for these teachers undermines their opportunities to participate in school self-evaluation or school-level learning, to develop professional relationships (including relationships with mentors and peers) or strong teacher-student relationships (OECD, 2018: 153)

Ministry officials are concerned about the general impact of the economic crisis on teacher morale and low levels of trust in the education system. A 2012 European study on the attractiveness of the teaching profession confirms these observations. It found that teachers has been presented negatively in the media, accused of being lazy and of resisting change. When asked if they might envisage looking for another job, more than 60% of Greek teachers answered affirmatively (European Commission, 2013 in OECD, 2018: 47). However, teachers interviewed by the OECD review team were clearly dedicated to their students and enjoyed working with their peers, despite salary cuts and stressful workloads (OECD, 2018).

In response to challenges in the education sector, the government has proposed and introduced (since 2011) a number of reforms focused on steering Greek education 'toward more open public participation in education, greater transparency and attention to evaluation and monitoring,' maintaining a focus on equity and quality and orienting the system toward greater autonomy for schools and teachers (OECD, 2018: 52). Reforms are hindered by a lack of relevant educational data on which to base decisions, making it hard to know how many new positions might be needed, and in which sectors and locations reforms are needed (OECD, 2018: 85). A new data-oriented initiative – MySchool – may help to fill this gap.

3. Frameworks to understand what motivates teachers

Teachers are one of the most important factors influencing student learning and achievement (Mourshed et al., 2011; World Bank, 2018). Recent years have seen significant policy attention on issues of teacher supply and retention across the world, and an acknowledgement of the role of teacher commitment and motivation in influencing these issues (Edge, 2017: 2). Yet, education systems often lack effective mechanisms to mentor and motivate teachers (World Bank, 2018: 131). There is now increasing interest amongst governments and education organisations in what strategies might work to target teacher motivation: Edge et al. (2017: 10) state “ensuring that teachers are attracted to and well prepared for their roles, receive timely and meaningful professional development opportunities, and feel motivated to continuously develop and remain in the profession.”

Evidence suggests that a very sizeable proportion of primary school teachers, particularly in sub-Saharan Africa, have low levels of job satisfaction and are poorly motivated (Bennell & Akyeampong, 2007: vi; UNESCO-IICBA, 2017: 11), and that this has far-reaching adverse impacts on the behaviour and overall performance of primary school teachers and therefore student learning outcomes (Bennell & Akyeampong, 2007: x). In many LMICs, particularly in Sub-Saharan Africa, research has demonstrated significant challenges associated with developing a motivated and buoyant teacher workforce, linked to: limited, inefficient teacher training; high absence and attrition rates; poor working and living conditions; minimal professional development opportunities; and often weak appraisal and supervision structures (World Bank, 2007 in Edge, 2017: 11, see also Bennell 2004; Chaudhury et al. 2006; Guerrero et al., 2012; Muralidharan & Sundararamn, 2011; UNESCO-IICBA, 2017; World Bank, 2018). Such challenges are magnified in contexts of conflict or fragility, or in times of economic crisis.

Research on issues related to teacher motivation present a number of different frameworks to help understand the key drivers of teacher motivation. Definitions of motivation are diverse and contested (see Bennell & Akyeampong, 2007; Edge et al., 2017; Richardson, 2014; UNESCO-IICBA, 2017), and link to literature on teacher commitment, self-efficacy, professional learning and wellbeing (Edge et al., 2017). What motivates teachers may be complex and contextually specific and vary for different types of teachers at different life and career stages (Edge et al, 2017: 95).

Intrinsic and extrinsic factors

In a number of synthesis papers concerned with issues of teacher motivation, a distinction is drawn between ‘intrinsic’ motivational factors and ‘extrinsic’ factors (Bennell & Akyeampong, 2007; Edge et al., 2017; Richardson, 2014). Teachers who are intrinsically motivated may undertake a task for its own sake (UNESCO-IICBA, 2017: 28-29), demonstrating behaviour that is performed “in the absence of any apparent external contingency” (Deci & Ryan, 1980 in Edge et al. 2017: 15). Meanwhile, those who are extrinsically motivated may perform that task for professional advancement or to obtain a reward (UNESCO-IICBA, 2017: 28-29), undertaking tasks to achieve external outcomes.

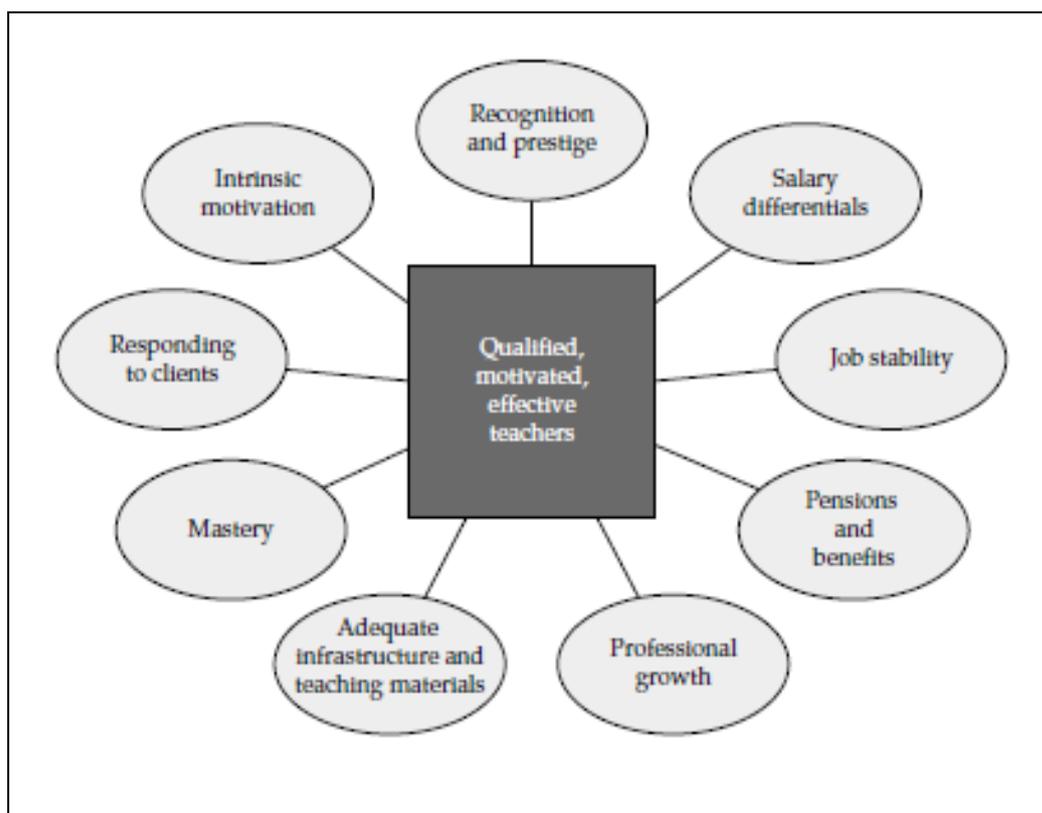
Whilst teacher-focused reform has tended to focus on “carrot and stick” strategies that influence external motivation, such as pay, incentives and career-structure reforms, (Edge et al. (2017:14) note that “increasingly, research evidence points to powerful factors that may be more intrinsic in

nature and those that increase teachers' feelings of efficacy and satisfaction with their practice." Traditional external factors, such as teacher salary, may be less important than how teachers' work is organised (Edge et al., 2017: 16); furthermore there is some evidence from high-income contexts, that extrinsic rewards may limit or reduce the effectiveness of intrinsic rewards (Edge et al., 2017: 15).

Bennell & Akyeampong (2007) identify 8 areas of policy and practice as impacting teacher motivation: (i) teacher and school accountability; (ii) security and conflict; (iii) the policy environment; (iv) teacher competence; (v) vocational commitment and occupational status; (vi) pay; (vii) working and living conditions, and (viii) teacher and system management. Meanwhile, Guajardo (2011) proposes that the factors that determine teacher motivation be organised into eight categories: (1) workload and appraisal; (2) learning materials and facilities; (3) remuneration and incentives; (4) recognition and prestige; (5) voice and accountability; (6) institutional environment; (7) career development, and (8) working conditions and school environment.

Figure 1 presents a way of conceptualising the different factors that may influence the motivation of teachers.

Figure 1: Factors influencing teacher motivation



Source: Vegas & Umansky, 2005: 5.

Some researchers suggest that these different factors and levers for policy intervention may be more or less important, depending on key contextual factors, and the extent to which basic needs are met. In a review of strategies to improve teacher motivation in LMIC contexts in which Save

the Children operates⁹, Guajardo (2011 in Edge, 2017:11) argues that “intrinsic and therefore significant long-term motivating factors are only possible once more basic, extrinsic, and environmental needs are met. Meeting extrinsic needs is not enough to motivate teachers; however, they serve as the foundation for the higher order needs of professionalization, achievement, and self-actualization.” In their background review of relevant frameworks, Bennell & Akyeampong (2007:4) similarly note that “teachers who are tired and hungry and excessively preoccupied about meeting their household’s livelihood needs, are unlikely to become strongly motivated by their involvement in professional development activities.” Meanwhile, Bruns et al. (2011: 183) state that “the ‘intrinsic’ rewards of teaching – even if they are explicitly maximised by a well-managed school system – cannot substitute indefinitely for financial remuneration.”

⁹ This study drew on 11 interviews with Save the Children Country offices.

4. Strategies and approaches to motivate teachers

The academic and policy literature is relatively rich in terms of studies documenting the challenge of low teacher motivation to LMIC education systems, identifying potential causes and suggesting solutions. However, examples of studies that rigorously document and/or evaluate strategies and approaches explicitly aimed at improving teacher motivation, are much less common. Whilst evidence on nuanced and scalable approaches to motivate teachers throughout their careers is becoming more important, the field is “in its infancy and requires continued evidence gathering, advocacy, and championing” (Edge et al., 2017: 20).

This section of the review begins by presenting a brief overview of the key themes that are identified as important considerations for teacher motivation interventions, as discussed in the academic and policy literature. It then moves on to document specific strategies and approaches that have been used to motivate teachers on LMIC contexts, with a focus on strategies and approaches that have been reviewed or evaluated and therefore constitute examples of *what might work*.

Whilst the focus of this review is on strategies that have been used in the context of the sudden shock of an economic crisis, the literature in such contexts is minimal. Indeed, the literature that was available for recent large-scale economic crisis (for example in relation to Greece, Venezuela or Indonesia) tended to document constraints to government spending and its implications, but presented limited evidence of examples of innovative responses targeted explicitly at improving teacher motivation.

However, there is a growing literature on strategies and approaches to improve teacher motivation in resource-constrained LMIC contexts which is potentially instructive, and as such it is this literature on which this section draws.

Key themes

The numerous reports on teacher motivation in LMICs present a series of synthesised statements about the characteristics of strategies which seem to show the most promise in relation to improving teacher motivation. In most cases, the literature calls for comprehensive and holistic strategies that address both extrinsic and intrinsic drivers, and “bridge systemic and school-based solutions at local and policy levels” (UNESCO-IICBA, 2017: 14; see also Edge et al., 2017: 102). Bruns & Luque (2015: 47) note that “ultimately, cross-country studies suggest that no education system achieves high teacher quality without aligning... three types of incentives: professional rewards, accountability pressures, and financial rewards. But these studies also suggest that the particular combinations that are most efficient are highly context-specific.”

In relation to Sub-Saharan Africa, UNESCO-IICBA (2017:15), suggest that projects showing the most immediate impact and sustainable results are those which:

- Recognise that the starting point and first resource for teacher motivation strategies must be teachers themselves and, thus, open-up opportunities for participative reflection on school improvement strategies;
- Look to teachers to reflect on their practice and propose micro-innovations to educational and instructional challenges in the classroom;

- Promote effective school leadership, support and management;
- Include a focus on support, guidance and counselling in difficult teaching contexts – especially for female teachers, in crisis and post crisis situations and for newly-qualified teachers, and
- Provide opportunities for collegiality within the school community (or clusters of schools) and broader support through learning communities, forms of peer learning and on-going professional development.

Meanwhile, drawing on data from 12 country case studies¹⁰ based on secondary data analysis and interviews with stakeholders, Bennell & Akeampong (2007: xi-xii) identify four key areas as top priorities for reform:

- Improve incentives for teachers in rural schools (for example good quality housing with running water and electricity, and/or rural allowances);
- Increase teacher pay - the 'core of the teacher motivation crisis';
- Create attractive and transparent career structures with regular promotions and incentives for teachers in hard-to-staff rural schools, and
- Increase teacher accountability to school management and to parents and the community.

Edge et al. (2017: xi) synthesise findings from six case studies, emphasising the contextual and complex nature of teacher motivation whilst making several recommendations for policymakers looking to improve teacher motivation:

- Initiate differentiated teacher motivation supports and interventions that reflect regional, career stage, and generational differences;
- Adopt system-specific strategies to mitigate possible structural retention challenges;
- Make high-level cooperation between leading actors and agencies a governmental priority;
- Prioritise positive public perception of and confidence in the system;
- Curate purposeful and meaningful opportunities for teachers to learn from each and with each other and inform the system;
- Adopt career structures and strategies that reflect the needs and desires of the newer generations of educators;
- Differentiate and innovate when seeking solutions to teacher motivation, and
- Create positive system-wide policy habits and expectations.

In relation to teacher absence and incentive programmes, Rogers & Vegas (2013: 74) identify several promising practices for experimentation:

1. Make teacher salaries and promotions dependent in part on performance, not just on qualifications and experience;
2. Introduce mechanisms for accountability, for example through greater community involvement in school management, and

¹⁰ Ghana, Kenya, Lesotho, Malawi, Nigeria, Sierra Leone, Tanzania, Zambia, Bangladesh, India, Nepal, Pakistan.

3. Increase the intrinsic and non-pecuniary rewards for good attendance, for example by turning schools into pleasant learning environments that offer adequate support for teachers.

Strategies and approaches

Strategies and approaches that have worked to motivate teachers in LMIC contexts are discussed below, organised according to strategies aimed at (i) remuneration and incentives; (ii) accountability-oriented reform; (iii) professional rewards; and (iv) intrinsic motivation. It should be noted that there is ‘deep asymmetry’ in the research base on the different types of programmes that target teacher motivation, with a concentration of evidence around financial incentives/bonus pay, and a very limited evidence base in relation to alternative approaches (Bruns & Luque, 2015: 40). The evidence on financial incentives is therefore included within the scope of this review. It should be noted that this does not mean that financial incentives are the most important intervention for consideration, indeed high-performing education systems often have very strong accountability pressures and professional rewards, and weak financial rewards (found in, for example, Finland and Canada) (Bruns & Luque, 2015: 40). The evidence about their effectiveness (or otherwise) is instructive for thinking about alternative strategies.

Remuneration and incentives

Salaries & job stability

Whilst financial top-ups are outside the purview of this review, the literature is clear that safeguarding salaries is an important factor contributing to teacher motivation, influencing both the attractiveness of the profession to new entrants, and the retention of existing teachers. Bruns et al. (2011: 183) state that “the ‘intrinsic’ rewards of teaching – even if they are explicitly maximised by a well-managed school system – cannot substitute indefinitely for financial remuneration.” Delays or reductions to teacher pay can lead to demoralisation, increased absenteeism (linked to the increased likelihood of the need to seek supplementary sources of income), and an erosion of the quality of instruction and learning which “may be difficult to turn around after the crisis” (World Bank, 2009: 14).

All 12 of Bennell & Akyeampong’s case study countries identified the inadequacy of teacher pay as being at the core of the teacher motivation crisis in Africa. In Kenya, they note that the major motivation crisis of the 1990s was in part ameliorated by improvements to pay and conditions of service since 2000, and since then by a harmonisation of public sector salaries that has ensured that teachers in public schools are now getting competitive benefits (UNESCO-IICBA, 2017: 51). The World Bank (2018: 137) note that restructuring teacher pay “both to remunerate competitively and to provide returns to good performance – whether directly through pay or indirectly through promotion or retention – may improve the quality of candidates entering the teaching profession.”

Beyond salaries, legislation to create paths out of teaching for low performing teachers is potentially important for ensuring a long-term, well-motivated workforce. There is some limited evidence of these reforms in Latin America, but their effect is extremely small (Bruns & Luque, 2015: 42).

Employing new teachers on short-term renewable contracts may generate stronger incentives for these teachers to perform, than the long-term contracts often offered to teachers in LMIC contexts. One approach which has been suggested in the context of strategies to improve accountability of teachers, is the creation of a parallel teacher cadre hired on short-term contracts, usually of a year, and renewable based on performance (Bruns et al., 2011: 146). Several rigorous studies of the impact of such contract teachers have found them to be cost-effective, to be associated with improved learning outcomes (in Kenya & India) and to offer improved local monitoring of teacher performance (Bruns et al., 2011: 156). However, the authors also state that “there are major questions about the sustainability of this policy over time,” with many teachers accepting contract positions hoping to secure full civil service positions later (Bruns et al., 2011:156). Snilstveit et al. (2016) also note that such teacher hiring policies may be difficult to implement and challenging to existing teachers. Evidence from Greece (highlighted earlier in this review) also suggests potentially negative long term impacts of such a reform on the teacher workforce (OECD, 2018).

Financial incentives

Differentiated financial rewards linked to a performance metric (usually teacher attendance, or pupil learning) are perhaps the most commonly implemented and evaluated approaches that explicitly target teacher motivation. Such programmes aim to incentivise teacher effort and reward excellence, using monetary rewards administered to individuals and/ or groups, following the logic that rewarding teacher performance increases teachers’ motivation and effort, which translates into improved student outcomes (Snilstveit, 2015: 277). Elsewhere in the literature these may be referred to as ‘bonus pay’ or ‘performance pay’ reforms, and they are attractive to policy makers because they are often politically and technically relatively easier to implement, and have few long term fiscal or pension implications (Bruns & Luque, 2015: 45).

In their systematic review of evidence on what works to improve student learning outcomes, Snilstveit et al. (2016: 34) identified 10 teacher incentive programmes which provided an incentive or reward to teachers based on their performance. They found that overall, the effects of teacher incentives on teacher performance and student outcomes are small, whilst effects do vary across programme and there was some evidence that incentives may improve teacher attendance if it is an explicit condition for a bonus (Snilstveit et al., 2016: 34).

In India, the Seva Mandir Teacher Incentive programme (Duflo et al., 2012) was specifically designed to incentivise teacher attendance. The programme gave tamper-proof cameras to teachers in schools in rural India, along with instructions to have a student take a picture of the teacher and other students at the start and close of each day. In schools that received the intervention, teachers received a bonus for each additional day they attended school in excess of the minimum 20 days expected, and a fine for each day they skipped. The incentive amounted to 5% of base salary per additional day and was paid every two months. Positive effects were found on teacher attendance. Also in India, Muralidharan & Sundararaman (2011) linked individual and group bonuses to student learning outcomes and found that whilst teacher attendance did not improve, student outcomes did, suggesting some impact on teacher effort/ teaching intensity.

In Peru, the META¹¹ programme involved trained local monitors carrying out attendance checks on teachers, and offering teachers both individual and group incentive bonuses. The programme was associated with improved teacher attendance (Cueto et al., 2008).

In Tanzania, Twaweza's¹² 'KiuFunza II' programme linked teacher incentives in public primary schools to student test scores and observed improvements to student learning outcomes during a trial from 2015-17 (Twaweza, 2018). The evaluation compared two different teacher performance pay systems, one rewarding numbers of students who reach specific proficiency levels, and the other rewarding teachers based on students' test score ranking gain relative to children at the same starting level. Both systems were found to be effective, whilst the simpler 'levels' system was at least as effective as the more complex 'gains' model.

There is also evidence from financial incentive programmes which have been tailored to motivate teachers to teach in particular schools or communities. Qualitative evidence from The Gambia suggested that a salary bonus of 40% for teachers who taught at target hardship schools led to large numbers of experienced teachers requesting postings to those areas (Mulkeen 2010: 3). However, this was the exception amongst Mulkeen's (2010) case study countries, with equivalent reforms having limited impact in other country contexts.

In Bolivia, a 'rural pay differential' policy was implemented, to compensate teachers for the perceived hardship of living and working in a rural area. An evaluation found no meaningful difference in student outcomes between teachers receiving the intervention, and a comparison group, suggesting that the policy has not been successful in getting teachers to improve their performance (Urquiola & Vegas, 2005, in Rogers & Vegas, 2013: 70).

Non-financial incentive strategies & approaches

In Kenya, Glewwe et al. (2010) evaluated an incentive programme which gave 'in-kind' prizes (such as bicycles) to teachers, awarded as group incentives linked to pupil performance in government exams. Prizes were awarded to top performing and most improved schools. The study suggested short-run benefits to pupil performance, but these did not persist after the programme ended, and no impact was found on teacher attendance.

Evidence from LMICs suggests that interventions focused on offering housing or transportation benefits may be effective at motivating teachers deployed to remote locations. These areas typically have particular difficulty attracting teachers, and often also have higher rates of absence and are staffed by less qualified teachers (Rogers & Vegas 2013:70). However, whilst this has been adopted as a policy approach in a number of contexts, "there is little rigorous evaluation of the programmes' effects on teacher qualifications or student learning, or on absenteeism" (McEwan, 1999 in Rogers & Vegas, 2013: 70). However, one exception was found by Mulkeen (2010): the countries in her case studies that offered a housing incentive, particularly in poor and rural areas, tended to have better luck attracting teachers.

¹¹ 'Mejor Educacion a traves de mas Tiempo en el Aula' programme (Better education through more time in the classroom programme).

¹² An organisation working in Tanzania, Kenya and Uganda to 'enable children to learn, citizens to exercise agency and governments to be more open and responsive.'

Key considerations for teacher incentive programmes (both financial and non-financial) include the method of administration, in terms of the size and type of bonus, timeliness of disbursement and structure of the scheme (Snilstveit, 2015: 278). Whilst evidence on the design elements of such programmes is still limited (World Bank, 2018: 139) it's important to understand the mechanisms at play because in some cases teachers have been found to respond adversely to incentives, for example by reducing collaboration to teach amongst themselves, 'teaching to the test' or other deleterious effects (Rogers & Vegas, 2013: 68). Despite these challenges, Bruns & Luque (2015: 45), note that such approaches may be productive in systems where other accountability pressures and teacher professionalism are weak.

Accountability-oriented strategies and approaches

Accountability-oriented strategies and approaches aim to align incentives between teachers and others, to improve the effectiveness of teaching and learning (World Bank, 2018: 138). Such policies typically have a range of different aims and objectives, of which improvements to teacher motivation (for example, as proxied by declines to teacher absenteeism), is only one. This section focuses on accountability-oriented programmes that have explicitly targeted dimensions of teacher motivation.

Examples of such strategies include community-based monitoring, and school-based management (Snilstveit, 2016). Community-based monitoring interventions have been used to provide information about public services and to create opportunities for public participation to improve the accountability of schools and teachers to parents and students (Snilstveit, 2016: 37). Such interventions might focus on an information campaign about existing accountability mechanisms, or provide information on the performance of education providers. Meanwhile, school-based management reforms aim to decentralise authority to the local level, typically working through school committees with responsibilities for key decisions (Bruns et al., 2011).

Rogers & Vegas (2013:71) review evidence of community monitoring on teacher attendance from Latin America, including El Salvador, Honduras, Mexico and Nicaragua, which have all experimented with policies that devolve authority over school management to communities. They find that a number of different research studies suggest that these reforms can result in less teacher absence, more teacher work hours, more homework assigned, and closer parent-teacher relationships (Rogers & Vegas, 2013: 71). For example, a quasi-experimental evaluation of the EDUCO programme in El Salvador found that this school-based management reform had major effects on teacher behaviour and student outcomes, including fewer school closings, less teacher absence, more meetings between teachers and parents, and longer work hours for teachers (Sawada and Ragatz, 2005 in Rogers & Vegas, 2013: 71)

Drawing on qualitative data from selected case study countries in Anglophone Africa, Mulkeen (2010:10-11) suggested that teacher absenteeism could be reduced with adequate monitoring, stating that "in Uganda, the absenteeism rate fell from 27% in 2004 to 19% in 2006, following increased measures to monitor attendance." In The Gambia, it was reported that church-run schools had higher teacher attendance than government schools, because managers routinely monitored attendance and deducted pay from teachers who were absent without permission. Also in The Gambia, teacher absenteeism decreased following the introduction of cluster monitors, who visited schools on a regular basis. Mulkeen (2010) suggests that involving parents

and the community in this monitoring can be a low cost and effective method of improving attendance and providing an extrinsic motivating factor.

Snilstveit (2016: 40-41) synthesises evidence from 12 school-based management reforms, finding that on average such programmes do not appear to improve teacher attendance on average, but that there is significant variability between contexts. Substantial increases in teacher attendance were seen in a programme in the Gambia, whilst there may have been a negative effect in Niger and Sri Lanka. Key factors influencing the effectiveness of these programmes may have included the limited capacity of principals, challenges to parents holding school managers to account, and length of programme implementation (Snilstveit, 2016: 42).

Professional rewards

Evidence of the effectiveness of strategies aimed at professional rewards are extremely limited. However, it should be noted that a number of high performing education systems have a particular focus on recognition and prestige, and emphasise continued mastery and professional growth (Bruns & Luque, 2015: 41).

Career-path reforms offer further opportunities for financial differentiation. Whilst they have been implemented in a number of contexts, however, they are hard to evaluate. Such reforms “typically make permanent promotions contingent on teachers’ skills and performance rather than on seniority and expand salary differentials across different grades” (Bruns & Luque, 2015: 43). Important considerations for such reforms are the use of valid measures of teacher skill and performance, working with external agencies to implement teacher evaluation, and managing the long-term fiscal implications (Bruns & Luque, 2015: 44).

Intrinsic motivation

Strategies that explicitly target the intrinsic motivation of teachers are receiving increasing attention, and variously focus on opportunities for autonomy, self-actualisation, empowerment and decision-making control within the classroom and school (UNESCO-IICBA, 2017: 13).

The most notable example is the STIR model, currently being implemented at scale in both Uganda and India (Uttar Pradesh). The programme aims to build teacher networks that enable collaboration to improve teaching practice and student learning, whilst also motivating principals and education officials to reinforce these networks and further motivate teachers (Edge et al., 2017).

In each context, STIR supports governments to run teacher networks, which serve as communities of practice that ignite and sustain teacher intrinsic motivation. A typical network involves around 30 teachers across 10 local schools who meet monthly for a couple of hours. The networks’ ‘expose teachers to key classroom mastery principles but give them the autonomy to adapt these principles to their own classroom contexts, collaborating with their peers in the process. In addition, the networks are designed to develop underlying behaviours and mindsets – reflective practice, problem solving, collaboration, self-efficacy and growth mindsets – that make the improvement process an ‘ongoing habit’ (Jeevan, 2017). STIR involves no direct financial incentives or explicit promise of career gains. The underlying hypothesis of the programme is that intrinsic motivation – what it calls ‘lightbulb moments’ – might matter most: “what seems to

motivate teachers most is seeing their children progress and learn and growing into the best teachers they can be. This works in a virtuous cycle in which teachers' classroom practice improves and their motivation improves" (Jeevan, 2017).

In Uganda, the partnership has also involved UNATU, the national teacher union, who has played a critical role in the implementation of the programme, in their capacity as a well-respected and trusted organisation amongst Ugandan teachers. In this context, STIR works with UNATU's decentralised teacher support system to train UNATU's regional trainers and community-level officials, whilst also engaging with district officials and UNATU leaders to ensure alignment with ongoing system policies and strategies (Edge et al., 2017: 46). Edge et al. (2017: 46) state that "what has been fundamental to this innovative partnership is the willingness of the Ugandan government and UNATU to think differently and create innovative opportunities to address motivation, moving from a twentieth century paradigm of 'carrots and sticks'" (i.e. extrinsic motivation factors) to a twenty-first century approach towards intrinsic motivation."

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