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The hidden crisis: Armed conflict and education

**"Teachers' pay - making the pipe work":
The role of improving teachers' payroll systems for
education service delivery and state legitimacy in
selected conflict-affected countries in Africa**

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**"Teachers' pay - making the pipe work":
The role of improving teachers' payroll systems for education service delivery and
state legitimacy in selected conflict-affected countries in Africa**

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Executive summary

The purpose of this paper is to examine the role of improving teacher's payroll systems for education service delivery and state legitimacy in selected conflict affected countries in Africa.

Government pay for teachers is typically the principal source of teacher remuneration in all but the most severely conflict-affected situations, and generally the largest civilian payroll by number of staff and value.

Ministries of Education in conflict-affected situations often find a supermajority of their resources goes on pay.

Yet, typically, limited technical resources, from Government or partners, are put into ensuring the payroll process pays the right people for the right amount of output, on time and accurately.

The following provisional generalisations are put forward, based on experiences in a number of countries at different stages of recovery from conflict:

- “whatever you do, do it in the sunshine”: it is important to be able to see and analyse what is being paid to whom: that requires basic computerised records to be shared with the central Ministry of Education
- getting teachers paid on time, accurately and decently is the core business of a Ministry of Education, and should not be wholly left to other government agencies
- bank payment offers major benefits in terms of verification of ID, but its corollary is greater output monitoring effort
- payroll is the key pass that can be defended with relatively limited resources
- if there have been pay problems, a large-scale field verification exercise (often called a “headcount”) can be helpful; but lessons learned from recent such exercises in health and education sectors are that:
 - headcounts are typically more useful when based on an existing set of data, rather than “from a blank sheet of paper”
 - the accuracy of a verification exercise will be increased if there is a credible balance of opportunities for:
 - recruitment of any “volunteer” teachers (that is, those who are currently working without government funding, but often with some income from fees)

- removal of any delinquents (that is, those who at one point taught, but now do not)
- Removal of ghosts (staff who do not exist at all)
- one-off verifications are not a substitute for a continuous process of monitoring attendance and output, resulting in payroll consequences
- key factors in successful activities in this field appear to include senior management will and regular follow-up, a high pace of operations, that can carry the wider education sector (and sometimes government) along with it, and the development and empowerment of a cadre of bright, typically young, analysts

Purpose of this paper

The purpose of this paper is to examine the role of improving teachers' payroll systems for education service delivery and state legitimacy in selected conflict-affected countries in Africa, drawing on selected recent positive examples.

Introduction

Government pay for teachers is typically the principal - though not the only - source of remuneration in all but the most severe of conflict-affected situations.

Thus, in Southern Sudan, most teachers are dependent on government for their wages. Eight out of ten schools are under government control, with no or minimal fees. The balance of mostly church schools fund teachers from a mixture of government salaries for some and church/parental funding for others¹. A similarly high percentage of teachers depend on government for their wages in Sierra Leone, a relatively higher-resource economy. By contrast, across Somaliland, Puntland and Central & Southern Somalia, the figure below shows that fees outstrip government contributions to remuneration by a margin of ten to one². This reflects the limited reach of the Transitional Federal Government, owing to ongoing conflict, and the limited tax base of the Somaliland and Puntland governments.

Figure 1: Estimated Annual Funding for Education by Source, Aggregate for CSS, PL and SL, m USD, Showing Estimated Amounts Spent on Remuneration

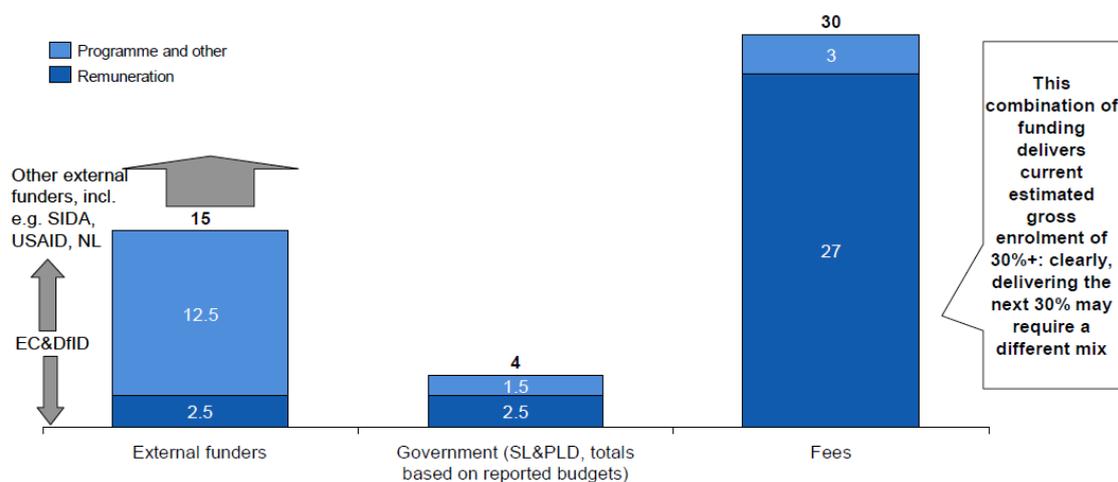


Figure source: *Review of the Current Status of Remuneration for Teachers and Other Education Employees – with details for Somaliland, Puntland, Central and Southern Somalia* – Charlie Goldsmith, for Africa Educational Trust, June-August 2009

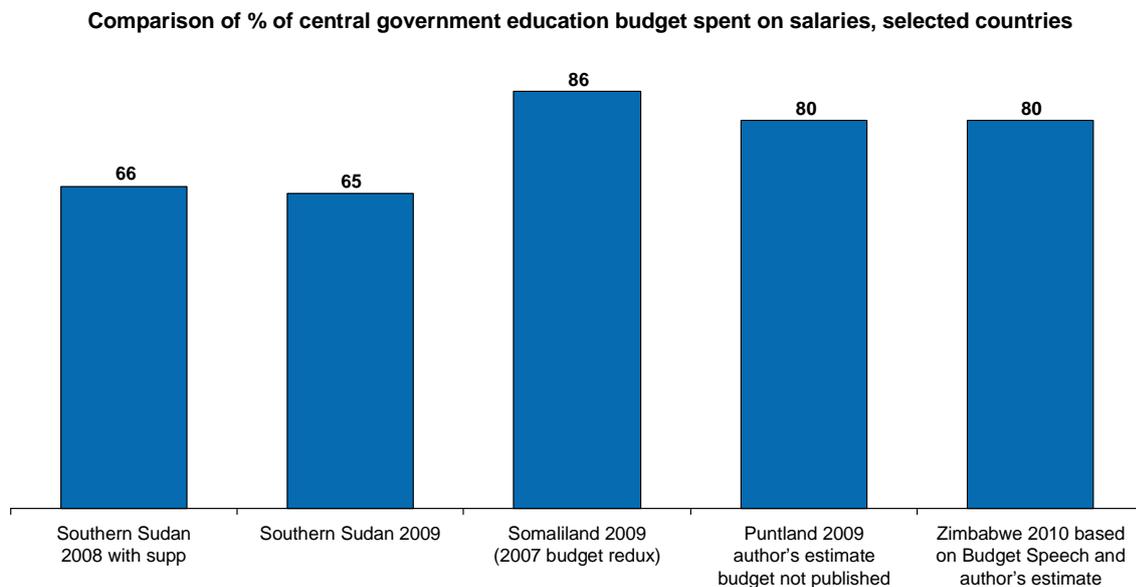
¹ See *The Role of the Church in Education in Southern Sudan, and its relation to Government*, Booz & Company for Association of Christian Educators in Sudan, 2008, p16ff; *Education Statistics for Southern Sudan 2009*, published by GoSS MoEST, has a figure of 82% of primaries run by government.

² The table shows estimated total funding for education disaggregated by source and use – the latter being between teachers' and officials' remuneration on the one hand, and programmes, such as school building, teacher training etc, on the other.

African countries that are further away from the effects of conflict typically show a relatively dynamic private education sector – as seen in Uganda and Nigeria, and, as of 2010, in Southern Sudan, where profit-making private schools have begun to open for the first time in some larger towns.

Most Ministries of Education in conflict-affected and emerging situations find that a supermajority of their resources - often higher than 80% - goes on pay, as shown in the table below. In Southern Sudan, the proportion is reduced by substantial expenditure on higher education and school feeding.

Figure 2: comparison of % of central government education budget spent on salaries, selected countries



Teachers are generally the largest civilian payroll by number of staff and value: for example, in Sierra Leone, the teachers' payroll of 32,000 dwarfs the home civil service payroll of 15,000, and the army, of 8,000. In Southern Sudan, an estimated 21,000 teachers compare to a total civilian payroll of 126,000, reflecting the role of organized forces in accommodating demobilized military and paramilitary personnel. In Zimbabwe, annual pay for over 90,000 teachers, at \$160 per month, makes up almost ten per cent of a total annual budget for 2010 of \$2.25bn, and one third of the government wage bill of \$600m.

Despite the crucial role of government pay for teachers in supporting delivery of education services, it is often the case that disproportionately little technical resource, from governments themselves or from their partners, is devoted to:

- making sure that the "pipe" through which pay flows is efficient and leak-free: this is often a major logistical challenge in post-conflict situations where pay is made in cash
- monitoring and, where necessary, improving the match between output and pay

In some cases, Ministries of Education have little or no control over, or information about, who gets paid, pay and/or appointment being handled by a central government Finance, Establishment or Public Service Function. In other cases, central Ministries of Education are under-resourced for the tasks of variously managing the payroll themselves or supervising sub-national government (regions/states/districts) in managing decentralized pay. Payroll is often left to the accounts department, with limited education-focused oversight. Inspection and teacher output supervision is often the “poor relation” of teacher training and school construction in operational and capital resourcing.

External technical resource in the HR management area is often focused by donors and hosts on education management information systems, rather than payroll systems, for reasons that can include, it appears, at one end, an abstract desire to “focus on outputs not inputs”, and at the other, the perceived sensitivity of payroll, as a high value process, and one which can involve explicit (re)allocation of resources between different parts of a country.

In short, in the words of the old Soviet joke, it is often the case that “you pretend to pay us, and we pretend to work here” - which is funny neither for governments, teachers, parents or pupils.

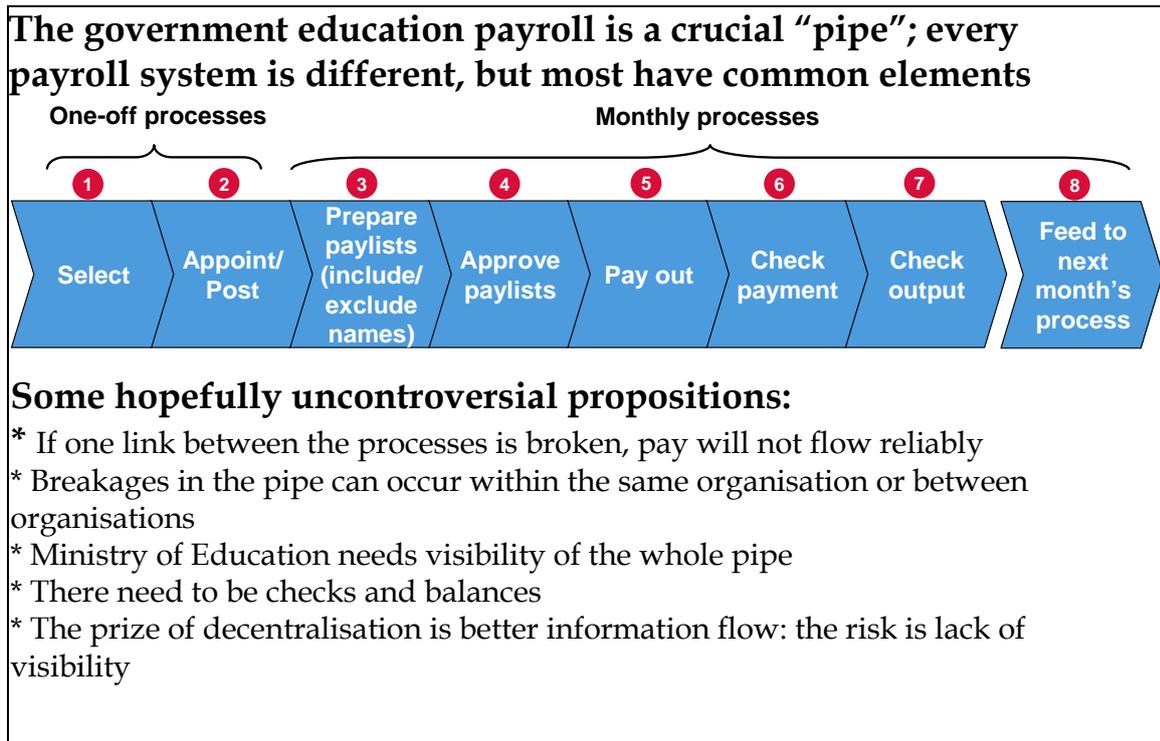
This note will look at current education payroll practice in selected African countries, and steps governments have recently taken to improve performance in these regards.

Challenges of paying teachers efficiently and appropriately

Current education payroll practice in selected African countries: analysing the "payroll pipe"

There is considerable diversity of education payroll systems in use, but most can be analysed in terms of the process flow shown below. In different countries, different processes occur at different levels.

Figure 2: the payroll “pipe”



Adapted from “Overview of the Workshop on Improving Teacher Management Systems in Challenging Situations”, World Bank, February 2010

The table below gives a summary for selected countries, some significantly more conflict-affected than others.

Country	Estimated Population	Teachers paid by government out of total teachers; role of government wages	Example monthly government wage for a classroom teacher	Where are paylists prepared?	Where are paylists checked/ approved?	How is pay paid out?	Where is pay paid out?	Are there change processes/controls?
Somaliland	3m	>2000 out of estimated 4000 staff (2009); most teachers paid by government also receive fee income	\$50 (possible imminent increase see below)	Regional Education Office, on computer or long carriage typewriter	Central MoE finance function checks hard copy payroll before issuing sub-warrants for transfers to banks in regional capitals	Cash	Mostly at school	Central appointment. Reactive replacement of staff, older staff often retained in absence of pension system. Some targeted recruitment of volunteers and graduates.
Puntland	4m	Up to 600 out of estimated 1500 staff (2009); most teachers paid by government also receive fee income	\$50	Central Ministry of Education or Regional Education Office (2009)	Accountant General's department in each Region checks paysheet before passes to central MoE.	Cash	Mostly at school	Believed similar to Somaliland.
Southern Sudan	8m	21,000 out of estimated 24,000; government wages principal source of income for teachers	\$100	10 State Ministries of Education	State Department of Public Service and State Ministry of Finance.	Cash	In principle, at school – sometimes at local centre (payam/county)	System based on change request forms being passed up to State Ministries of Education for approval. Pay relatively static in some locations
Sierra Leone	5m	32,000; government wages principal source of income for teachers	\$40	Central Ministry of Finance and Economic Development (Human Resources Management Office and Accountant General's Department)	Copy of each month's paysheets sent to Ministry of Education	Bank payment	Direct transfer into banks (can be withdrawn anywhere)	Communications problems between Districts and centre, and between line Ministries and central Human Resources Management Office mean that, across the public service, pay and reality have reportedly progressively diverged. Payment into banks mean that there is not a monthly check on output as there would be with

Country	Estimated Population	Teachers paid by government out of total teachers; role of government wages	Example monthly government wage for a classroom teacher	Where are paylists prepared?	Where are paylists checked/ approved?	How is pay paid out?	Where is pay paid out?	Are there change processes/controls?
								payment “on the table”.
Zimbabwe	12-13m	More than 90,000; government wages principal source of income for teachers	\$160 (2009)	Central Salary Services Bureau	Process for schools to report changes or request stops directly to Salary Services Bureau. Ministry of Education minimally involved in process.	Bank payment	Direct transfer into banks (can be withdrawn anywhere)	Some reports that teacher workforce changing rapidly on ground, not necessarily mirrored in who gets paid: Ministry of Education and Salary Services Bureau do not have linked IT systems.
Uganda	32m	Government wages principal source of income for teachers; significant for-profit private sector		At local level for primary teachers, by Teacher Service Commission for secondary teachers	At local level for primary teachers, by Teacher Service Commission for secondary teachers	Payment out managed by central bank	Predominantly bank accounts	

Steps governments have taken to try to improve payroll performance, and what has been achieved

Steps governments have taken to try to improve the performance of the payroll process have typically been from a range of choices including:

- One-off headcounts/field verifications
- Payroll system reform
- A range of HR Information System and Education Management Information System options
- Ongoing inspection improvements

This section is structured as a series of case studies by country.

Southern Sudan: headcount, followed by introduction of basic decentralised computerised payroll system, in parallel with EMIS: major savings by focusing expenditure

Headcount and payroll

Government of Southern Sudan Ministry of Education, Science and Technology conducted a field headcount in early 2008, to gather basic personal data, job, grade, workstation, qualifications, career and operational information on individual teachers across Southern Sudan. Funding came from the Capacity Building Trust for Southern Sudan, UNICEF, the World Bank, and the Government itself.

The headcount visited individual teachers in school, albeit predominantly not during term time. Each teacher filled in a form under supervision from an enumerator. Forms were countersigned by the headteacher of the school and enumerator. There was a role for civil society “witnesses” to confirm teachers were legitimate, but it was not formally recorded. The headcount gave a “sighting shot”, and was particularly useful for proportional resource allocation between States. The detailed data resulting from the headcount was useful, but not ideal, on account of:

- the policy choice not to count support staff, which resulted in many support staff obtruding themselves into the headcount as teachers
- the difficulty of matching staff names between field headcount and any collated existing payroll data. This difficulty is pronounced in a situation, like Southern Sudan, where two alphabets have been used, and neither nomenclature nor spelling are consistent, and there is no consistent ID number arrangement

The headcount was marked by strong involvement from education managers at all levels, with staff being swapped over at state, county and payam levels, so

incumbents had no opportunity to “cover their own tracks”, and from civil society. The headcount brought teachers’ pay to the fore of public discourse.³

Building on momentum from the headcount, GoSS MoEST commissioned the design of a basic computerised payroll system. Its introduction began in October 2008, and was largely complete by end 2009. Implementation was led by a Payroll Unit at GoSS MoEST, composed of a Head of Payroll, three analysts and a small consultant team. Typically, teams of one analyst and one consultant would travel to States to support implementation. The base data for the payroll system was typically a reviewed version of the legacy paper payroll system data, in some locations informed by comparison with the headcount and EMIS data.

Key factors identified in the success of implementation included:

- Senior management will: MoEST senior management set out clearly to the States and their own team what they expected, sought and received weekly reports on progress, following up when required, sometimes publicly
- A high pace of operations, to maintain peer pressure for payroll implementation, with a central team visiting each state typically every two or three weeks in the main implementation phase
- Developing a cadre of change agents, principally young and computer literate civil servants with strong analytical skills, and giving them substantial freedom of operation⁴

Operation of the payroll system is decentralised to the ten State Ministries of Education, with technical support provided by MoEST/GoSS. The payroll system uses a bespoke MS Excel tool, using built-in macros to automate calculation of pay, allowances and deductions, and to sort records into paysheets by individual workstations. Excel, rather than proprietary software, is used for wide availability, easy collaboration, and low computing requirements. Paysheets are printed on self-carbonated quadruplicate paper. Once signed, hard copies are given to 1) school 2) county 3) State 4) Centre, with a view to creating maximum visibility. There are typically one or two officials in each State Ministry who take responsibility for management of pay information and production of paysheets.

Paysheets had previously (in the old manual system) been produced and paid out by county, resulting in staff having to spend extended periods travelling to pick up their pay – or sometimes delegating others to pick up their pay, with obvious loss of accountability in both directions.

³ See “Resource file and narrative report: education payroll system introduction prepared for: Payroll Unit, Ministry of Education Science & Technology, Government of Southern Sudan, Booz & Company, 13th April 2009, *passim*

⁴ Based on “Lessons learned exercise on data gathering and payroll implementation – revised draft”, Booz & Company, 14th February 2010, p2ff

Paysheets under the new system are printed by individual workstation (school), and, as far as possible, paid out at the school – giving improvements in visibility of pay and output.

Payment is in cash in the States - in the absence of strong bank infrastructure - and into banks only at the centre. State Ministries are required to provide hard and soft copies monthly to the Centre for review, and on time reporting is improving. The system is now in operation at MoEST and in all ten States of Southern Sudan.

The system, notwithstanding its basic character, has improved visibility, and focused resources on front line teachers⁵:

- The System provides visibility of use of more than \$60m annually, to pay more than 21,000 teachers, and 8000 officials and support staff
- Management information from the system has enabled major refocusing of resources on front line teachers:
 - Unity State and Western Bahr-el-Ghazal State retrenched >350 and 700 support staff respectively
 - Eastern Equatoria State hired around 500 teachers with funds saved from retrenching unproductive staff
 - Lakes State brought its grading of jobs into line with the rest of the country, ending a situation in which staff were paid on rotation
 - Most recently, Central Equatoria State has embarked on a major retrenchment of unqualified and/or unproductive teachers and support staff, and returning managers to the classroom
 - There were improvements in timeliness of pay in a number of states
 - The standardization of salary scales, which had been highly variable by state, facilitates transfers of staff between states
 - In some States, teachers reported increases of take-home pay of up to 150% of what they had formerly received, without any increase in the overall resources committed to the sector by government: this was achieved through standardization of salary scales and greater transparency and scrutiny
 - Increased visibility of pay to central MoEST has enabled the Ministry to intervene – for example in a situation where a State Ministry of Finance had used funds intended for teachers pay for another purpose, MoEST were able to intervene to retrieve that month’s pay for teachers
- Data from headcount and payroll has enabled MoEST, in the 2009 and 2010 budgets, to improve resource allocation. By allocating resources based on

⁵ Based on “*Lessons learned exercise on data gathering and payroll implementation – revised draft*”, Booz & Company, 14th February 2010, p2ff. The problem of expenditure on support staff relative to spend on front-line teachers is not unique to Southern Sudan: for example, out of 610 staff paid by MoE/Puntland in mid-2009, 102 were support staff.

the number of teachers a state is paying, MoEST has created a “virtuous circle”, in which States are encouraged to focus resources on front-line resources away from “unclassified” support staff and often highly-graded officials; the number of states able to pay at 100% of standard rates, for twelve months of the year, increased from three to seven

- The new system has been widely accepted across the government, being rolled out first across the health sector, and then across the whole of Eastern Equatoria State, and now across the entire Government of Southern Sudan

Relationship of headcount and payroll exercises to EMIS data and policy choices

GoSS MoEST had, since shortly after the Comprehensive Peace Agreement, with assistance from consultants funded by USAID and UNICEF, been developing an Education Management Information System (EMIS). The data inputs to this system are based on a comprehensive annual field survey, with all schools visited. From 2008 onwards, this survey included data on individual teachers, in progressively more detail. However, the annual periodicity of updating, and the lack of a means to link to operational payroll data at State level, meant that EMIS data, while of vital importance in terms of planning with regard to enrolment and facilities, had more limited management impact in the specific sphere of individual teachers’ pay: in some of the higher capacity States it was used as a check on payroll data. Since late 2009, work has been ongoing in Southern Sudan to establish standardized numerical references for schools and staff to facilitate data matching and progressive integration of payroll, EMIS and, potentially, inspection, data. Plans for tightly focused inspection programmes, which would make it possible to reconcile findings on attendance and output with payroll consequences, are being discussed for 2011.

Any data which can be expected to be used for planning but does not have a “cost” attached to it, may offer an incentive to report generously, potentially in the hope of gains in resource allocation. In systems where the boundary between government and non-government schools is fluid, it can be hard to separate this effect from the issue of “volunteer”/non-government teachers. Thus, in Southern Sudan, teacher numbers reported by EMIS in 2009 were almost 5000 higher than those reported to be being paid – though, of these a good 2000 are likely to be accounted for by those church school teachers not paid by government⁶.

Directly output-based resource allocation approaches (e.g. funding on the basis of population or enrolment), while overtly attractive, tend to be more vulnerable to this skewed incentive than input-based ones where e.g. funding is allocated on the basis of identified staff numbers. Clearly, on the other hand, input-based approaches need to be informed by data on demand and need if they are not to reinforce disconnects between supply and demand – whether urban/rural or between regions. In both cases, resource allocation needs to be

⁶ *Education Statistics for Southern Sudan 2009, published by GoSS MoEST*

informed by an understanding of the absorptive capacity of the system in various locations.

Somaliland and Puntland: basic computer-enabled education payroll systems and strong central oversight in an ultra-low financial resource environment

In Somaliland and Puntland, respective Ministries of Education have introduced basic automated payroll systems, Puntland introducing a computer-enabled system in 2008-09. Somaliland has computerised its central Ministry of Education payroll system, and the payroll system in some Regions, while others continue to produce paysheets on long-carriage typewriters.

The computer-enabled payroll systems use standard MS Excel tables, printed out on plain A3 paper three times, with staff to sign on each copy, one being retained at the school, one by the Regional Education Office, and one being returned to the central Ministry. Clearly, multiple copies are not quite as secure as carbon copies of one original paysheet. Paysheets are prepared at Regional Education Offices and submitted to the Central Ministries for checking. There is also a cross-check from the Accountant General function, so that there is transparency of the process beyond the education sector. Bank transfer subwarrants are issued, and funds transferred to banks at regional headquarters, from where funds are withdrawn and taken to schools by District Education Officers to be paid out in cash. Reports, confirmed by a 2009 survey, are that pay is paid at the school in all but the remotest schools.

Pay is weakly progressive, with, in Somaliland, a graduate receiving 423000 Somaliland Shillings (around \$60), as against a secondary leaver receiving 345000 Shillings. Government pay also does not reach all teachers, with pay in Somaliland estimated as covering somewhat over 2000 of over 4000 teachers in 2009, and, in Puntland in 2009 (ahead of a projected recruitment), up to 700 out of an estimated 1500. In 2010 it is reported that Puntland recruited a further >100 teachers, and Somaliland has recruited 200.

Though very low, government pay does give a basic level of income security to the teachers paid, and of output security to the schools involved. Through the distribution of a mix of funded and unfunded teachers, it enables government to “punch above its weight”, with leverage across the majority of the education system: that is, government has influence on more schools than it would be able to fund from its own resources alone. This is also seen, on a more limited scale, in Southern Sudan, where government funding for some teachers in church-managed schools complements church and parental funding for additional teachers and/or (especially at secondary level) top-up incentives for the government teachers, to give management some sanction over them.

While monthly “payment on the table” at each school is time-consuming, and can result in delays to pay, it does ensure that Regional Education Officers are

visiting schools each month. The lack of a pensions system means that teachers leave the system only if they resign or die.

A remarkable aspect of the systems operated in Somaliland and Puntland is the economy of operation, and high degree of transparency. The total annual budget of the Somaliland MoE in 2009 was worth little more than \$2m, and yet delivered pay with a high degree of accountability – as was apparent from the 2009 survey of more than 100 schools across the country conducted for an Africa Educational Trust report – across a geographically dispersed workforce, presenting a number of basic physical access challenges. In 2010, with a 5% increase in budget over 2009, Somaliland has managed a relatively complex recruitment and deployment of staff, involving hiring graduates from the Amoud University Secondary Teachers programme, and bringing leading volunteer teachers onto the payroll, and covering all six regions⁷. Similar points could be made about the achievements of Puntland MoE with even fewer resources.

These achievements have been – with the exception of investments by Africa Educational Trust in basic payroll materials (first long-carriage typewriters and then printers), delivered largely independently. The contrast of this situation with bills for headcounts in other countries that commonly run to more than \$0.5m for technical assistance alone, is striking.

The recent Somaliland National Elections has also provided a notable instance of teachers' pay becoming a high profile political issue. The opposition Kulmiye party successfully campaigned on a platform of increasing enrolment, increasing teachers' pay, by a reported 300%, expanding pay to all teachers, removing the standard \$2 fee charged by government schools, and increasing education's share of the government budget to 15%. Details of implementation are expected to become clearer once the new government assumes office on 27th July.

Sierra Leone: successive headcount exercises

In Sierra Leone a number of major public sector reform campaigns have taken place over the last ten years. These have included the implementation of a centralized computerised payroll system, run from the Accountant General's Department at the Ministry of Finance and Economic Development (MoFED), and making payment into bank accounts, and the Records Management Improvement Programme, running since 2005. The latter focused on rebuilding and computerising paper record collections for the central civil service of c15,000 staff, following widespread loss or destruction of records during conflict. The programme is now, in 2010, being extended to the teachers' payroll, of c32,000 teachers. The context of the teachers' payroll, as in other geographically dispersed workforces, was that a disconnect had occurred

⁷ Discussions with MoE/Govt of Somaliland Senior Management, July 2010.

between centrally held payroll data, the Ministry of Education, Youth and Sport (MEYS)'s own records, and reality on the ground. In particular, the recruitment process, which went all the way up to the Permanent Secretary, MEYS, was reportedly taking so long (years rather than, in e.g. Somaliland, where a similar process exists, months) that schools generally recruited staff well ahead of their appointment. This was not unique to the education sector. Fee income allowed such provisionally appointed staff to work without salary. But the lack of the leverage of a salary offered government problems of planning/control for the centre.

A headcount exercise for teachers, conducted in 2008, took the approach, to maximize use of enumerator time, and minimize travel, of offering paid incentives to teachers to attend enumeration sessions in District centres (Districts being the tier of effective Government immediately below Central Government, the Three Regions having limited administrative role). The risk of this approach was clearly that people who were not working as teachers could obtrude themselves, without the restriction that local scrutiny imposes on a headcount conducted in the school itself. Perceptions that this had in fact occurred meant that the headcount data received limited use.

Government of Sierra Leone now has fresh plans for a verification, setting out in its 2010 budget plans, under its PFM I: Payroll Integrity programme, to "complete payroll verification exercise resulting in a validated personnel record for all teachers, and recorded trail of payments to schools.... Action plan to deal with anomalies between census data and payroll agreed...". While target funders for some of this work recorded in the GoSL Budget, are DfID and EC, in practice GoSL has found the savings and process improvements so advantageous that it has also prioritized this work for investment from its own resources.

The programme now being set in train by GoSL Records Management Improvement Programme (RMIP), part of GoSL's Public Sector Reform Unit (PSRU), and with support from International Records Management Trust (IRMT), working with MEYS, is due to have a number of differences from the previous headcount, and some innovations in the field of education verification, notably in its focus on documentary evidence⁸:

- use of multiple visits to the same workstation
- use of handheld computers/PDAs (bespoked from standard commercial products) to gather not only text input data but also photographs of teacher and location, document scans and basic biometric data from fingerprints
- Interview data transmitted to central office to be printed, checked and filed

⁸ *The following summarises "International Records Management Trust: A Programme to strengthen human resource management through accurate and reliable records", 2009*

- Interviews can only be performed within 1km of the school on day of interview, as verified by a GPS reading
- Checking that teachers can identify photographs of other teachers reportedly teaching in the same school and area

These innovations are based on successful use of similar techniques in the main civil service verification.

Zimbabwe: Sophisticated centralized whole-government payroll system, but limited visibility to Ministry of Education

In Zimbabwe, as in Sierra Leone, teachers' pay provided by government is processed centrally and paid directly into bank accounts. In Zimbabwe, the institution performing this function is the Salaries Service Bureau, a central institution within the Public Service Commission, which has run a computerised salary database since 1980. As at late 2009, teachers' pay was at a flat monthly rate of \$160 per month. Teachers also receive income from fees charged at school level.

The key process device used in Zimbabwe is that each month's paysheets are shared with schools at the same time they are transmitted to banks. Headteachers may place a "stop order" on pay, which is processed in time for pay to be retained that month, pending confirmation whether the person should be removed from pay and/or disciplined.

A similar structure is in place in Ghana, whose Education Service represents one of the largest public sector workforces in Africa, with around 270,000 teachers: there, District Directors can place an embargo on individuals' pay at the same point in the cycle, either with the Accountant General or directly with the bank where there is not enough time.

However, the present operation of the Zimbabwean system is hampered by the limited visibility of pay to the Ministry of Education, Sports, Arts and Culture (MoESAC), which receives paper copies of transfer instructions, but not, it appears, data in a format susceptible to processing and management. Instead, MoESAC operates an independent Education Management Information System. This uses a relatively sophisticated database application. However, the churn of teaching staff in the present economic context, and the lead-time to feed data up from the Provinces, means that the once-yearly field update of the data held is likely quickly to bear little resemblance to either reality or the central payroll. MoESAC has targeted investments in vehicles to facilitate inspections, and improved data communications with Provinces and Districts.

Other approaches to teacher payroll in use in Africa

Two other features of the teacher payroll landscape across Africa generally not yet applied in post-conflict situations are:

- Decentralisation of control of pay and recruitment to third tier of government or beyond (ie to local government or schools themselves) – used in Uganda at primary level, and in a number of Southern African countries based on capitation allowances
- Central Teachers' Commissions, to ensure the quality of, and depoliticize, recruitment: examples include the Uganda Teachers' Service Commission, which manages the secondary teacher workforce

A risk of the latter is clearly a focus on qualifications to the exclusion of output. A risk of the former is the ability of the centre to maintain and demonstrate accountability, in particular where school attendance is fluid, making it difficult to sustain capitation approaches: the author is aware of at least one senior civil servant in a recently conflict-affected country's Ministry of Education who has rejected the capitation approach explicitly for this reason.

Commentary

Southern Sudan has achieved significant improvements in focus of resources on front-line teaching by using payroll data to support management action and funding decisions. The challenge for Southern Sudan now is to use follow-up of pay to drive increases in attendance and output by teachers. A key element in this is likely to be, given the scale and geographic dispersal of the teaching workforce, and the physical challenges of reaching them, putting in place systems to aggregate and manage attendance, output and inspection data in a coherent fashion. In particular, while most schools take a register of teacher attendance and output, further steps need to be taken to communicate this data up to County and State level for payroll action. Similarly, while inspections occur and extended narrative reports sometimes produced, it is highly desirable that these should produce management information in a standard format, so that it can be communicated up through the system.

Somaliland and Puntland have achieved strong visibility of pay in a number of different directions – with checks by the finance function, inspection of paysheets by the centre before release of funds, and strong procedures for appointment – in an ultra-low resource situation.

Southern Sudan and Sierra Leone have both found it difficult to convert expensive headcounts into payroll consequences. Key issues are difficulties matching data, and the lead time and process to convert headcount information into payroll consequences. Both have progressively resorted to approaches

involving clarifying who is being paid, and then verifying progressively, rather than from a “blank sheet of paper”.

A number of Ministries of Education have found that incorporation of pay within whole-government bank payment systems has made it more difficult to keep track of who is being paid - because of interface issues with the agencies running payroll - and how much work they are doing - because payment into banks does not offer the basic verification of presence and activity that monthly cash payment does.

“Gold-plating” of pay, appointment and information systems - for example building in extensive checking phases in appointment, or complexity in data management - is potentially counterproductive in periods of high flux. In the worst scenario, it may risk obsolete names being left on paysheets and their pay reallocated *ad hoc* in some locations. A basic but clear decentralized system arguably beats a centralized one with more sophisticated processes that has seen its roots in local data reports weakened.

The human resources needed to maintain and coordinate basic payroll systems are strikingly few compared to those needed for many other activities: in Southern Sudan, typically one or two staff work on payroll in each of ten State Ministry of Educations, with a central team of, at its largest, five, supporting: in Somaliland, two staff in the Directorate of Finance supervise production of paysheets by typically one staff member in each of six Regions. Computer resources required, as demonstrated in Southern Sudan and Somaliland, can be entirely standard ones. By contrast, most countries in this bracket have multiple inspectors deployed at the third (county or similar), and sometimes even fourth level of government, whose effectiveness is typically reduced by the difficulty of resourcing their movement.

Some tentative learnings

Some tentative learnings are offered:

- “whatever you do, do it in the sunshine”: it is important to be able to see and analyse what is being paid: that requires basic computerised records to be shared with the central Ministry of Education
- getting the teachers paid on time, accurately and decently is the core business of a Ministry of Education; while some elements of pay processing might be helpfully outsourced to government finance functions, if the Ministry of Education does not know and have influence over who is being paid, it will eventually be found wanting - as a number of Ministerial and official casualties across the continent have found to their cost!
- bank payment offers major benefits in terms of verification of ID, but its corollary is greater effort on monitoring of teacher attendance and output, and linking that back to payroll consequences

- payroll can be the "Thermopylae" of public sector reform - the key pass that can be defended with relatively limited resources
- if there have been pay problems, a large-scale field verification exercise (often called a "headcount") can be helpful; but lessons learned from recent such exercises in health and education sectors are that:
 - headcounts are typically more useful when based on an existing set of data, rather than "from a blank sheet of paper"
 - the accuracy of a verification exercise will be increased if there is a credible balance of opportunities for:
 - recruitment of any "volunteer" teachers (that is, those who are currently working without government funding, but often with some income from fees)
 - removal of any delinquents (that is, those who at one point taught, but now do not)
 - Removal of ghosts (staff who do not exist at all)
 - one-off verifications are not a substitute for a continuous process of monitoring attendance and output, resulting in payroll consequences
 - key factors in successful activities in this field appear to include senior management will and regular follow-up, a high pace of operations, that can carry the wider education sector (and sometimes government) along with it, and the development and empowerment of a cadre of bright, typically young, analysts

It is sometimes suggested that the payment of teachers, along with funding of some other basic services, is a basic plank of state legitimacy. Others argue that, in a decentralised system, the centre should fund a basic level of service, and then leave states/regions to allocate funds. In some locations, there have been colourful campaigns in favour of "universal free primary education" and/or outlawing the charging of school fees.

It is not the purpose of this short practical note to enter the controversies about how best to use law, regulation and exhortation to achieve access to education for all. However, the author does note that:

- In most post-conflict settings, the centre finds it difficult to fund even a basic level of service in terms of teachers per child
- In some of the cases advanced above, in the emergency and post-conflict stage, well-targeted pay of some teachers by the centre can and does leverage contributions from parents, communities, and wider partners, notably, in the case of Southern Sudan, local and international church communities
- This is not to minimize the access disbenefits of even low fees, but to point out that local communities, suitably empowered and receiving a contribution from, can and do find ways to mitigate access disbenefits (fees relief etc)

Further avenues

An obvious next analytical step would be to compare the systems in these mostly conflict-affected countries that mostly do not receive direct budget support for teachers' wages, and systems in countries that do, to see if there is a "graduation path", and to understand how quickly/steeply it can be achieved.

Another would be to look at how donors and countries might work together to produce a virtuous circle, where countries could have reasonable confidence that a given level of performance would result in access to budget support for teachers' pay. This might have particular implications for Fast Track Initiative support to teachers' pay, in developing criteria for support beyond the existence of an Education Sector Plan judged viable.

Similarly, there are technological developments which have the potential to facilitate activity in this area. For example, it is clear enough that the availability of mobile telephones and similar devices that can

- i) identify their user and transmit a simple message (for example by Short Message Service)
- ii) offer a reasonably accurate geographic "fix"
- iii) take and transmit photographic records, including of documents
- iv) handle small value transfers
- v) coordinate with inexpensive (e.g. open source) database software

have the potential to improve the accuracy and regularity of attendance and output monitoring, and its link with payroll consequences. They will not, however, do so without the empowered analytical teams within education administration that are already the key to successfully "making the pipe work" and making the education flow.

Resource documents

Review of the Current Status of Remuneration for Teachers and Other Education Employees - Somaliland, Puntland, Central and Southern Somalia - Charlie Goldsmith, for Africa Educational Trust, June-August 2009

The Role of the Church in Education in Southern Sudan, and its relation to Government, Booz & Company for Association of Christian Educators in Sudan, 2008

Education Statistics for Southern Sudan 2009, published by GoSS MoEST, 2009

A programme to strengthen human resource management through accurate and reliable records, International Records Management Trust, 2010

"Overview of the Workshop on Improving Teacher Management Systems in Challenging Situations", World Bank, February 2010

Annex: Terms of Reference

The main aim of this background paper is to review and analyze strategies to ensure that teachers receive appropriate salaries on time. It will look at the role of teacher's payroll management reforms for education service delivery and state legitimacy in a limited group of conflict affected countries in Sub-Saharan Africa. The provisional list of countries where comparisons can be drawn is: Liberia, Somaliland, Puntland, Sierra Leone, and Southern Sudan. The paper is expected to draw on evidence from this broader list of countries, but also include some more detailed case studies from two countries: one country still in conflict and one which has moved into an early recovery phase.

1. A brief introduction to the challenges of paying teachers in selected conflict-affected countries.
2. A brief overview of steps governments in these countries have recently taken to improve payments to teachers.
3. To identify the major challenges and achievements of the improvement efforts and analyse the main reasons for those outcomes. In particular, the author is asked to focus the analysis on the following key questions:
 - a. To what extent have recent reforms been able to improve teacher pay – both in terms of level, and reliability of receiving payments?
 - b. How has the overall efficiency of payroll systems improved? Is it possible to estimate the efficiency gains in economic terms?
 - c. How have the achievements influenced broader public sector reforms and efforts to strengthen the legitimacy of the state in the view of its citizens?
4. A brief conclusion comparing the reform efforts in the different countries and drawing out a few key lessons.

The author is encouraged to include several concrete country examples of key achievements. The paper should draw out key outcomes and lessons for ensuring that teachers are paid an adequate wage regularly, rather than focus on the technical details of payroll systems. The paper will be based on key documentation, including government documents and studies on teacher pay reforms in the selected countries. As appropriate, the paper will also use data from interviews with key staff active in the recent reform efforts.