



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

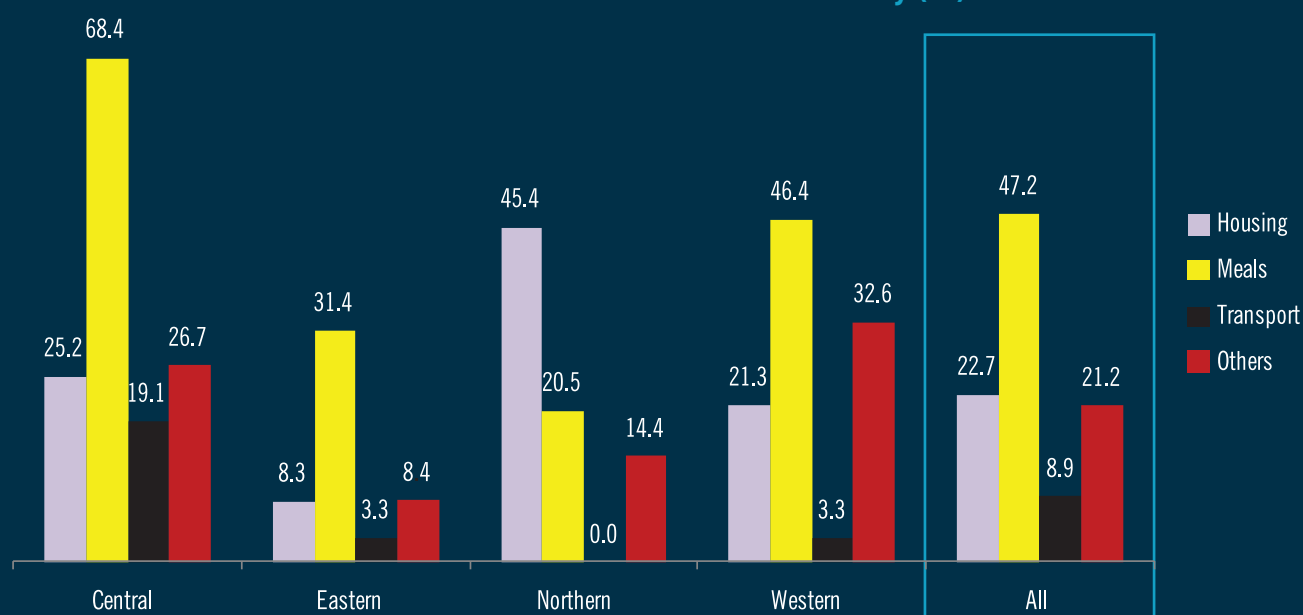
Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

EFFECTIVENESS OF THE PUBLIC PAYROLL DECENTRALISATION REFORMS IN UGANDA

Benefits teachers receive other than salary (%)



Source: EPRC Payroll survey dataset, 2016

RESEARCH SERIES No. 141

EFFECTIVENESS OF THE PUBLIC PAYROLL DECENTRALISATION REFORMS IN UGANDA

MUSA M. LWANGA
EZRA F. MUNYAMBONERA
MADINA GULOBA

April 2018

Copyright © Economic Policy Research Centre (EPRC)

The Economic Policy Research Centre (EPRC) is an autonomous not-for-profit organization established in 1993 with a mission to foster sustainable growth and development in Uganda through advancement of research—based knowledge and policy analysis. Since its inception, the EPRC has made significant contributions to national and regional policy formulation and implementation in the Republic of Uganda and throughout East Africa. The Centre has also contributed to national and international development processes through intellectual policy discourse and capacity strengthening for policy analysis, design and management. The EPRC envisions itself as a Centre of excellence that is capable of maintaining a competitive edge in providing national leadership in intellectual economic policy discourse, through timely research-based contribution to policy processes.

Disclaimer: The views expressed in this publication are those of the authors and do not necessarily represent the views of the Economic Policy Research Centre (EPRC) or its management.

Any enquiries can be addressed in writing to the Executive Director on the following address:

Economic Policy Research Centre
Plot 51, Pool Road, Makerere University Campus
P.O. Box 7841, Kampala, Uganda
Tel: +256-414-541023/4
Fax: +256-414-541022
Email: eprc@eprcug.org
Web: www.eprcug.org

TABLE OF CONTENTS

EXECUTIVE SUMMARY	3
PART A: INTRODUCTION AND METHODS	5
1. Introduction	5
2. The Survey	6
PART B: FINDINGS AND ANALYSIS	8
3 Decentralisation of public payroll and salary processing mechanisms in practice	8
3.1 Overview of decentralisation in Uganda: A recap	8
3.2 Decentralised public payroll and salary payment system reform: ideal and in practice	9
4 Teacher characteristics, awareness and knowledge	10
4.1 Teacher characteristics	10
4.2 Teacher awareness/ knowledge	11
5 Has efficiency and transparency in payroll management and salary processing been achieved?	12
5.1 Timeliness in salary payment, frequency and ease in occurrence and correcting of errors	12
5.2. Salary arrears	13
5.3. Deletions from the payroll	14
5.4 Transparency	16
5.4.1 Display of payroll	16
5.4.2 Frequency in checking displayed monthly payroll and receipt of monthly salary slip	16
5.5 Other outcomes as a result of the reform	18
5.5.1 Teachers absenteeism, attitudes and motivation	18
5.5.1.2 Attitude and motivation	20
5.5.2 Teacher welfare and other income generating activities	21
6 Emerging strengths and challenges	23
7. Conclusions and policy actions	26
7.1 Conclusions	26
7.2 Policy recommendations	26
REFERENCES	27
APPENDIX I: LIST OF KEY INFORMANTS	29
Appendix II: Focus Group Discussion Questionnaire Guide	29
Appendix III	31
EPRC RESEARCH SERIES	32

LIST OF FIGURES

Figure 1: Monthly Public Payroll Management and Salary Processing Schedule: Ideal framework	9
Figure 2: Share of primary teachers' knowledge on government decentralization of the payroll	12
Figure 3: Incidences of Salary Arrears (%)	14
Figure 4: Transparency in displaying teacher pay (%share)	16
Figure 5: Offices where salary payslips are picked (%)	18
Figure 6: Teacher absence from the school in the in last six months (February - July 2016)	19
Figure 7: Effect of the Payroll reform on teachers' attitude towards work	21
Figure 8: Share of teachers' perception on their current monthly net salary	21
Figure 9: Benefits teachers receive other than salary (%)	22
Figure A.1: Process flow for annual budgeting, payroll and salary payment processes	31

LIST OF FIGURES

Table 1: Teacher characteristics by region (%)	11
Table 2: Timeliness in salary payment, frequency and challenges in correcting errors reported (%)	13
Table 3: Effectiveness of the decentralization in reducing deletions from the payroll (%)	15
Table 4: Teachers information seeing behaviour on displayed payroll and salary payslip (%)	17
Table 5: Frequency in teacher absenteeism before and after reform (%)	20
Table 6: Reason for being absent from school (%)	20
Table 7: Teacher's secondary activities and income (%)	23
Table 8: Access to additional financial sources (%)	23
Table 9: Challenges and areas of improvement in implementing the reform (%)	25

EXECUTIVE SUMMARY

Following the Public Finance Management (PFM) Reform Strategy (2011/12 - 2016/17), the government of Uganda decentralised the management of the public payroll and salary processing system in 2014. This was aimed at addressing deficiencies such as consistent delayed payments of salaries, persistent wage shortfalls, errors and inaccuracies arising from the management of a centralised payroll. In addition, the process of correcting errors and inaccuracies on the centralised payroll was lengthy leading to constant reports of non-existent employees.

This study examines the extent to which the decentralisation of payroll management and salary processing has achieved its intended objectives. Findings reveal that there has been remarkable improvement in the key indicators of measuring efficiency, that is: increased awareness by teachers of the new mechanisms of the reform (95 percent), significant reductions in cases reporting of missing salaries (3.6 percentage point improvement) and reduction in cases reporting over payment. Furthermore, incidences of salary arrears have declined since the reform was introduced to 16 percent from 23 percent before the reform. Less teachers are being erroneously deleted from the payroll, from 11 percent prior to the reform to 4 percent after its introduction. The reform has enabled teachers to correct errors and omissions related to their salaries much faster (from 65 percent to 59 percent before and after the reform respectively). However, challenges of travelling long distances to districts, corruption at district level, and high absenteeism of district officials still impede the process of reporting and correcting errors.

Furthermore, despite increased awareness of the reform, transparency in displaying the payroll at the district remains a challenge. For example, few teachers (nearly 6 in 10) are aware that the payroll and monthly salary schedule is supposed to be displayed on district notice boards. This limited awareness is much worse among teachers in the Central region which is surprising given their close proximity to the central government governing institutions. Most teachers do receive their monthly salary payslips, nonetheless, the share declined during the reform phase (79 percent) in comparison to the before phase (96 percent). Challenges still arise in comprehending the various salary codes deduction on the payslips, hence capacity building is needed in this area.

In order to further improve effectiveness of Uganda's payroll and salary processing system, the study recommends the following;

1. ***Sensitize teachers on pay roll displays.*** In order to increase the effectiveness of the payroll display measure (meant for identifying “ghost” workers and thus ensuring a clean payroll), all civil servants, including primary school teachers, need to be aware of its existence. This could be done through a number of media broadcasts as well as seminars and workshops.
2. ***Leverage on new communication technologies.*** Despite decentralisation, survey findings have revealed the distribution of payslips has actually reduced. This negates the objective of improving the service by bringing it to the people. Accounting officers should devise means of ensuring that all civil servants get their monthly payslips regularly. Where possible, government should leverage on new technological innovations to effectively send out salary information. Such innovations include the use of e-mails and other online channels, SMS, as well as social media platforms. In addition, claims of teachers paying for payslips should be investigated to improve the credibility of the reform.
3. ***Sensitize teachers on payslip codes.*** A large number of teachers reported ignorance about some of the codes on their payslips. This lack of knowledge undermines the principle of transparency and points towards a lack of financial literacy amongst civil servants. In addition to increasing the distribution of

payslips, civil servants should be sensitized about the codes and deduction from their salaries. A key of the codes could be availed to all relevant offices to improve awareness.

4. ***Improving the use of the Integrated Financial Management System (IFMS) and Integrated Personnel and Payroll System (IPPS).*** Salary delays and errors continue to occur due the limited interfacing of IPPS with IFMS, poor network coverage, and lack of technical capacity at some local governments to effectively use the systems. An increase in IFSM and IPPS coverage and interface, as well as capacity building for public servants using the systems, will greatly reduce salary delays and errors.

PART A: INTRODUCTION AND METHODS

1. Introduction

Persistent deficiencies arising from delayed payments of salaries, wage shortfalls, errors and inaccuracies, non-existent “ghost” workers on wage payrolls, accumulation of salary arrears among others, led to the decentralisation of the management of the public payroll and salary processing system in Uganda (MoFPED, 2014). Decentralisation by definition entails the transfer of planning, decision making and administrative authority from the central to local government. In the early 1990s, Uganda adopted decentralisation both as a system and process of devolution¹ of power from the central to local authorities (Okidi and Guloba, 2006). In 2014, the management of the public payroll and processing of salaries was decentralised from the Ministry of Public Service (MoPS) to respective Accounting Officers of Votes as stated in the Medium-Term Expenditure Framework (MTEF) with the aim of addressing deficiencies therein.

Decentralisation of payroll management and salary processing is part of the wider Public Finance Management (PFM) reforms that the Ministry of Finance Planning and Economic Development (MoFPED) is undertaking based on the 2011/12-2016/17 PFM Strategy. These include: the introduction of the Treasury Single Account (TSA); upgrading the Integrated Financial Management System (IFMS) and the Integrated Personnel and Payroll System (IPPS); improving wage and payroll management, improving budget formulation, implementation, monitoring and reporting; and strengthening budget transparency (Munyambonera and Lwanga, 2015). However, despite these efforts, inefficiencies in financial accountability and management for enhanced service delivery still persist². Specifically, evidence points towards resources not getting to the end users on time and with minimal beneficiary empowerment to effectively utilise the resources to improve service delivery (MoFPED,

2010). Such insights prompted the decentralisation of public payroll and salary processing.

Efforts have been made to evaluate the reform process in terms of its performance within the short term of its being rolled out. For example, in April and May 2016, a team comprising of nine institutions, led by the MoFPED’s Budget and Accountant General’s Office, carried out a monitoring exercise to assess the reform with regard to its process, implementation, and awareness/sensitisation to stakeholders on aspects of salary processing and payments, among others. The assessment noted that despite observable achievements in timely payment of salaries by all Votes, there were still delays in implementation of an effective IFMS and the IPPS interface. Munyambonera and Lwanga (2015) found similar challenges with the systems. Furthermore, district officers continued to experience challenges in the use of the Microsoft Excel template (data loader) to upload the payroll data on the IFMS, leading to continued errors in the payroll system. Given that the assessment targeted mainly high-level stakeholders within local and central governments without covering the largest portion of actors at facility levels (such as education, health, water, agriculture), and that it was undertaken only a few months after the reform was effected, there is a possibility that these factors could have biased the findings.

Given these limitations, this study builds on MoFPED’s (2016) assessment and provides in-depth quantitative evidence on the effectiveness of the decentralised public payroll management system using a nationally representative sample targeting primary teachers in government aided schools. In addition, Focus Group Discussions (FGDs) were held, along with discussions with key informants at district level such as the Chief Accounting Officers (CAOs), Human Resource and Education divisions. This study specifically explores the effectiveness of public pay roll decentralisation reform by:

- a) contextualising the decentralisation process, as stated in the formal process and in practice;
- b) analysing the efficiency by looking at timeliness of salary payment, ease and timeliness in reporting and correcting errors;

¹ Devolution entails the transfer from the centre to local governments of the power to plan, budget, mobilize resources, and implement development programs.

² Republic of Uganda (2009). Public Financial Management Performance Report 2008. <https://pefa.org/sites/default/files/assessments/comments/UG-Jun09-PFMPR-Public%20-%20Copy.pdf> and MoFPED (2010). Financial Accountability and Management Programme (FINMAP) Mid-term Review 2010. Ministry of Finance Planning and Economic Development.

- c) examining the extent to which the reform has fostered transparency in terms of display on notice boards, verification and access to pay slips; and
- d) examining its impact on teachers' attitudes and motivation.

The focus on primary school education was guided by the fact that (i) primary school teachers make up the bulk of civil servants (over 40 percent); and (ii) studies such as *Improving Service Delivery in Uganda* (MoFPED, 2014; World Bank, 2014) indicate a deterioration of service delivery in public primary schools. Of note is that service delivery improved tremendously under the decentralisation system, especially with respect to access to primary education, healthcare, and water and sanitation services (Okidi and Guloba, 2006). For example, the passing of the Universal Primary Education (UPE) Policy in 1997, led to an instantaneous increment in enrolment from about 3.1 million in 1996 to 5.3 million in 1997 (a 73 percent increase) to 5.6 million in 1998 to 8.3 million in 2015. However, rural-urban enrolment and completion gaps continue to persist with ingrained gender biases in favour of males (MoES, 2015) and completion rates declining from 63 percent in 2002 to 56 percent in 2013 (World Bank, 2014). More evidence shows that service delivery in the education sector is still lacking with lower education outcomes than expected (MoFPED, 2014)³. This was partly attributed to low teacher motivation arising from low pay as well as delays in salary payment. In addition, despite the new reforms in salary payment systems, cases of unpaid teachers still arise leading to low teacher motivation (MoFPED, 2014). However, the extent of this magnitude is yet to be quantified, hence this study. Where are the loopholes such that targeted interventions can be put in place to fill these gaps?

Analytical findings from this study reveal a general improvement in efficiency in payroll management and the salary processing system arising from decentralisation. This is observed from improved timely delivery of salary payments, reductions in payroll errors, reductions in time taken to correct and update the payroll, and reduced incidences of salary

arrears. Further noted are improvements in teachers' attitudes towards work. While improvements have been registered, findings also show that a significant number of teachers continue to experience salary delays and arrears with erroneous deletions from the payroll observed due to the desire by the system to remove "ghosts". Moreover, while surprising, a high share of teachers do not comprehend the deduction codes appearing on their payslips and others report having paid to access payslips. Nonetheless, qualitative information on this practice was counterintuitive as accounting officers denied this behaviour.

The next section (Section 2) describes the study approach, specifically describing the methodology based on a sample survey. The main quantitative results augmented with qualitative data are laid out in Section 3 - where first, a description of the decentralisation of the public payroll and salary processing systems is operationalised in practice and second, results from the descriptive analysis of indicators help to provide a synopsis of the effectiveness of the reform. Conclusions and recommendations for public policy are discussed in Section 4.

2. The Survey

This section discusses the survey methodology. This study adopts a relatively simple but approved approach to answer the objectives of this study through a cross-section survey. This approach allows for designing of indicators that allow for assessment of the reform before and after it was rolled out given the increasing interest by the MoFPED to implementing effective tools that minimise leakages and foster efficiency in service delivery.

The payroll survey - the data source for this paper - was designed to assess the effectiveness of the decentralisation public payroll and salary payment process, a reform that MoFPED put in place to improve timeliness in payments and processing of salaries for public servants. The survey was carried out by the Economic Policy Research Centre (EPRC) in August 2016 with financial assistance from MoFPED. However, this survey specifically focused on teachers' service delivery in public primary schools. The survey collected a large range of data both quantitative and qualitative in nature.

3 Report by the Budget Monitoring and Accountability Unit in MoFPED

On a quantitative front, a two-stage stratified sampling strategy was adopted. In the first stage, Enumeration Areas (EAs) were selected using Probability Proportional to Size (PPS) based on a region and rural-urban location. Hence, a random sample of 58 districts was selected spanning the four administrative regions of Uganda. In the second stage, schools were drawn from a list of all schools in the sampled EA using Systematic Random Sampling. A total random sample of 169 schools was selected for the survey, such that 37 schools were from the Central region, 58 - Eastern region, 39 - Northern region and 35 - Western region. However, data from only 165 schools was analysed as only 165 schools were located and had complete information for inclusion. Thus, survey comprised of 1,065 teachers randomly selected from 165 sample schools all over Uganda designed to be representative at the national, rural/urban, and regional levels.

Data was collected using quantitative instruments administered on teachers and head teachers/institutions. The questionnaires were structured into different modules, which included sections on teacher perceptions and their understanding of the reform, timeliness of monthly salary payment, teacher presence at school, secondary activities conducted, teaching experience, teacher rights to public display of payroll, and location among others. In addition, teachers listed opportunities and challenges that have arisen with the decentralisation of the public payroll and salary management system in place. The questions were structured in such a way that it was possible to assess the impact of the reform, by looking at conditions before (2011 to 2013) and after (2014 to 2016) the reform.

Besides a quantitative estimate of the reform impact across a range of indicators, qualitative methods were also employed to provide contextual information for the quantitative data, and to capture impacts and explore factors that are not easily quantifiable (especially on satisfaction). The analysis was conducted through Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs). 21 KIIs were conducted with central and district level officials (Appendix I). These included: Head Teachers, Chief Administrative Officers (CAO), Human Resource Personnel and Education officers in selected districts, MoFPED and other stakeholders

involved in education service delivery at primary school level. Around 40 FGDs were facilitated in 40 out of the 169 schools. Each FGD had 7-10 teachers varying in age and gender but on government pay roll depending on the size of the school staff. FGDs were conducted using a set of select guiding questions (Appendix II). Each FGD was facilitated by two research assistants: one facilitator (Team leader) and one note taker.

The survey fieldwork process was facilitated by experienced field data collectors from the Uganda Bureau of Statistics (UBOS) with extensive experience in data collection especially at primary school level. A team of EPRC core researchers oversaw the entire survey both during training, pilot phase and data collection. Unless otherwise stated, teacher and school weights were employed, hence, the survey analysis is nationally representative at government primary school level.

PART B: FINDINGS AND ANALYSIS

This part presents and discusses field survey findings. Results are presented in various sections in order to critically provide insights on the stated objectives of the study. These sections heavily rely on the teacher level survey instrument with qualitative snippets applied to complement the statistics where necessary.

3 Decentralisation of public payroll and salary processing mechanisms in practice

This section highlights Uganda's decentralisation process while pointing out its achievements and challenges. Furthermore, this section also synthesises the decentralisation framework in regard to the public payroll management and salary payment systems compounded by qualitative discussions arising from the KIs conducted. This provides a good benchmark to critically assess the reform in theory and in practice.

3.1 Overview of decentralisation in Uganda: A recap

In the early 1990s, Uganda embarked on a policy to decentralise government operations with the aim of devolving power from the central government (CG) to the local governments (LGs) in order to empower people and institutions at every level of society. Furthermore, decentralisation also aims at improving access to basic services, increasing people's participation in decision-making and enhancing government's responsiveness, transparency and accountability (Okidi and Guloba 2006). To attain this in Uganda, decentralisation has been implemented in a phased manner. According to Okidi and Guloba (2006), first, was the political and administrative decentralisation that saw the creation of political offices at different levels right from District/City Councils to the Village Councils (in other words from Local Council V to Local Council I). Second, was the economic/fiscal decentralisation that aimed at enhancing the efficiency and effectiveness of public service provision (ibid). Following this policy, a number of services were decentralised. District councils are now responsible for functions and services including but not limited to education (primary, secondary, trade, special and technical); health (health centres, dispensaries, aid posts and hospitals other than hospitals providing referral and

medical training); the construction and maintenance of feeder roads; the provision and maintenance of water supplies; agricultural extension, land administration and surveying; as well as community development. Local councils through the district service commission are also responsible for hiring civil servants to provide these services.

At the onset, decentralisation brought some major achievements including: (i) institutional strengthening, for example, administrative systems at local level are now established; (ii) empowerment and participatory development as more citizens become aware of who is responsible for what; (iii) improvement in service delivery such as LG development grants on primary health care, primary education, water and sanitation, feeder and access road, agricultural extension and more; and (iv) employment effects as new districts and LG political and administrative structures required and created job positions that needed to be filled (Okidi and Guloba, 2006). However, with these achievements were some major challenges, such as (i) structural conflicts; (ii) capacity to implement constraints in the LGs; (iii) emphasis on the easier parts such as emphasis on the social sector in comparison to the productive sector; (iv) political interests; (v) public private partnerships which weakened institutions of accountability as stakeholders in the public setting are sometimes the service providers in a private setting; and (vi) accountability noted in the imbalance between upward and downward accountability (ibid).

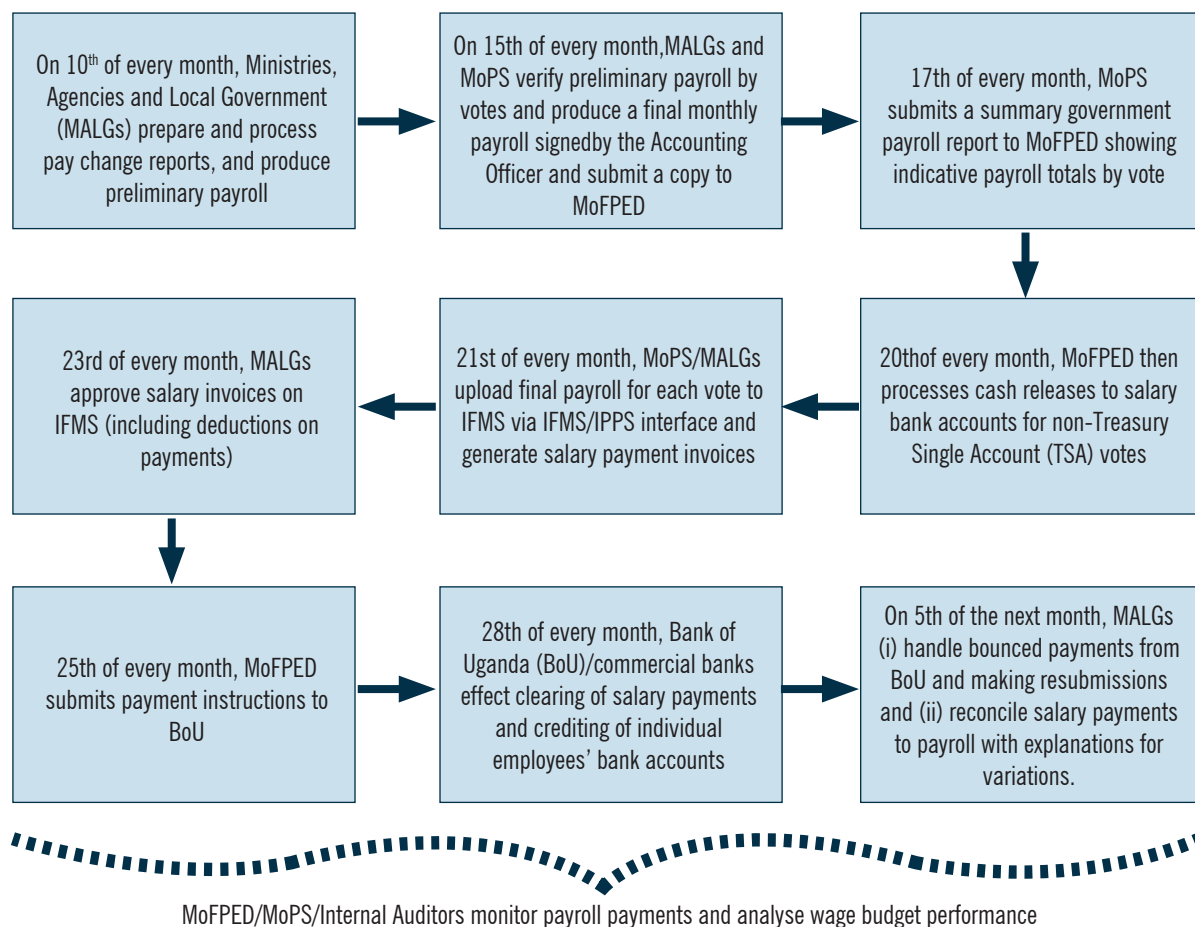
Specifically, the challenge faced in accountability in a decentralised system is that resources released from the CG are properly accounted for but not necessarily spent appropriately. Salary delays, wage short falls, and non-existent 'ghost' workers on payroll culminated as a result of limited transparency in accountability in the financial processing mechanisms between the CG and LGs. To curb such anomalies or illicit behaviour in accounting officers, MoFPED in 2011/12 introduced financial reforms and amended the 2003 Public Finance and Accountability Act (PFAA) into Public Finance and Management Act 2015 (Munyambonera and Lwanga, 2015).

3.2 Decentralised public payroll and salary payment system reform: ideal and in practice

Not until 2014, the GoU operated a centralised public service payroll system where management of the public payroll was solely the Ministry of Public Service (MoPS)'s responsibility. Implying that, despite the outlined challenges experienced in accountability, all salaries and benefits of civil servants were still channelled through MoPS. Under the decentralised payroll system, respective Accounting Officers, charged with day to day supervision of public servants, are now in charge of payroll and salary management. In addition to the reform, other complimentary measures have been put in place such as the printing and displaying payrolls on public notice boards, interfacing the IPPS with the IFMS, and entering staff lists into the Output Budgeting tool (OBT).

Appendix III provides the ideal general flow of budgeting for wages and payroll processing under a decentralised framework while highlighting the stakeholders involved at each phase. Ideally, the decentralised monthly payroll and salary payment process involves various stakeholders performing specific roles. Thus, to ensure a functioning system, the government sets clear deadlines upon which, each activity is completed and by whom (Figure 1). According to the set timelines, civil servants' salary must be paid on the 28th day of every month. The essence of this was that, with clear activities, roles, and timelines, it would make enforcing, implementing, monitoring and evaluation of the reform easy.

Figure 1: Monthly Public Payroll Management and Salary Processing Schedule: Ideal framework



Source: Government of Uganda, 2014

Box 1: Decentralisation of public pay roll and salary payment in practice

To accentuate payroll and salary verification process, schools through the head teacher are supposed to submit the updated list of the staff by the 12th of every month. This involves teachers signing against their names and with corresponding photos. Furthermore, at district level, the Human Resource Department has a standing order from the MoPS to start working on the payroll updates and pay changes by the 12th of every month and submit to MoPS by the 15th of every preliminary payroll for the district staff.

The MoPS updates the districts' payroll in terms of staff names, salary scales, and pay; and effects pay changes as submitted by the districts. This is done up to the 20th of every month. For those districts that are connected to IFMS and IPPS through their centres, this is automatically relayed to their systems for re-verification and approval. For those that are not yet connected, the Human Resource personnel travel to the MoPS or use regional centres to have it updated and re-verified. With all the re-verifications conducted by the Districts and updated by the MoPS, the Chief Administrative Officers (CAOs) approves payments by MoFPED. The MoPS does not have powers for approval of the payroll in the decentralized framework. It updates what is submitted from the districts. The approval by the CAOs is made by 22nd and the MoFPED begins payment through IFMS by 23rd of every month.

However, note that this back and forth in verification sometimes delays and in the process payment of salaries also delay.

Source: KILs, August 2016

In practice, according to KILs, the process outlined in GoU (2014) is in tandem with the ideal version. However, the discrepancy between practice and the ideal version arises from the lags in the timelines of execution. Box 1 narrates the process in practice

4 Teacher characteristics, awareness and knowledge

4.1 Teacher characteristics

In 165 sample schools, out of 2,455 teachers employed, 2,264 were on government payroll - a substantial number. For this study, 1,059 teachers on government payroll in sample schools were interviewed. Teacher weights are employed to ensure national representation.

Nationally, the demographic characteristics of the teachers indicate that 54.8 percent are female (Table 1). The majority of the female teachers are in the Central region (67.4 percent) and Western region (51.8 percent) and while more male teachers are located in the northern region (65 percent) and eastern region (50.6 percent). Majority of teachers (about 70 percent) had an Ordinary Certificate of Education - Senior Four

is the highest education attainment level. Furthermore, while other teachers had diplomas (17.4 percent) these were mainly in the Central region (25.1 percent) with a small portion from the Eastern region (6.7 percent). Given that most primary teachers stopped in O-Level, this is depicted in the equally high majority obtaining Grade III qualifications (50 percent). These are mainly located in the Northern (about 72 percent) and Eastern (60 percent) regions. Of note is that at least 31.5 percent of the teachers had upgraded to Grade V and about 11 percent had a Diploma in primary education (Table 1). Only 4.7 percent were graduates and skewed in distribution towards the Central region (8.8 percent). A significant share of teachers are also married (77 percent) irrespective of region.

Table 1: Teacher characteristics by region (%)

	Central	Eastern	Northern	Western	All
<i>Gender:</i>					
Male	32.6	50.6	65.0	48.2	45.2
Female	67.4	49.4	35.0	51.8	54.8
<i>Marital status:</i>					
Married Monogamous	72.3	79.2	87.4	78.3	77.5
Married Polygamous	4.1	4.5	4.8	3.4	4.2
Divorced/Separated	6.9	6.1	3.2	1.5	5.1
Widow/Widower	7.9	4.6	0.9	2.7	5.0
Never Married	8.8	5.6	3.6	14.1	8.3
<i>Educational attainment:</i>					
O-Level	58.9	78.7	68.1	80.4	69.9
A-Level	6.2	12.6	9.6	1.6	7.5
Diploma	25.1	6.7	20.6	14.9	17.4
Bachelor's Degree	8.9	0.7	1.8	3.1	4.5
Post Graduate Diploma	0.3	0.4	0.0	0.0	0.2
Master's Degree and Above	0.7	0.9	0.0	0.1	0.5
<i>Highest grade attained:</i>					
Untrained/Licensed	0.0	0.0	0.3	0.5	0.1
Grade II	1.5	1.3	0.8	0.2	1.1
Grade III	33.2	60.1	71.9	53.8	50.1
Grade IV	0.5	2.3	1.4	3.7	1.8
Grade V Including Dsne, Dse, Dte	47.0	20.9	18.1	25.7	31.5
Diploma in primary education	9.0	13.2	6.6	13.3	10.7
Graduate	8.8	2.2	0.9	2.9	4.7

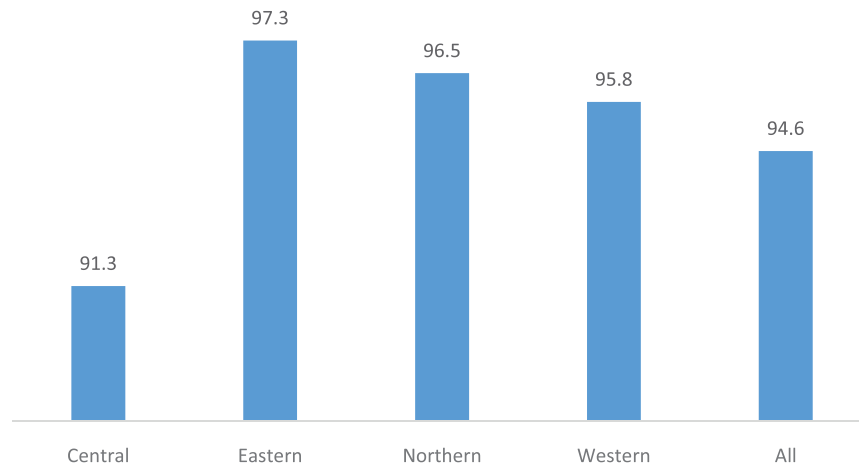
Source: EPRC Payroll survey dataset, 2016

4.2 Teacher awareness/ knowledge

For any reform to work, actors have not only to be aware about it but also knowledgeable about its functionality too. Thus, teachers were asked if they were aware of the decentralisation of payroll management and salary processing.

Figure 2 presents the level of awareness of the reform in Uganda by geographical location. Generally, awareness among primary teachers on government payroll is high. This reveals that on average teachers know what is taking place with regard to changes in the salary payment system of public servants. Put differently, in terms of awareness, nearly nine out of every 10 teachers on government pay roll in Uganda are conversant with the decentralization of the payroll and salary processing system. This was partly driven by the significant campaigns by the MoPS and MoFPED on the changes across media and use of the decentralized governance systems to pass on the

message. However, geographically, the Central region surprisingly had majority of teachers indicating not to be aware of the reforms (8.7 percent). According to FGDs, majority of teachers in Kampala district were not aware of the reform because they intimated that their salaries were drawn from Kampala Capital City Authority (KCCA) and that the payroll is managed at the Division level within KCCA. Hence, the close proximity to city administrative structures and the MoPS and the limited change in the mode of receiving salary by teachers in the Central region (dominated by Kampala) could partly have contributed to the lack of awareness about the changes.

Figure 2: Share of primary teachers' knowledge on government decentralization of the payroll

Source: EPRC Payroll survey dataset, 2016

5 Has efficiency and transparency in payroll management and salary processing been achieved?

A key objective for this study is to analyse the extent to which the reform has led to efficiency and transparency in the payment and salary processing system. To achieve this, a comparison is drawn based on teachers' observations on the intermediate period before (2011–2013) and after (2014–2016) the reform was implemented. Indicators of interest here include aspects on: timeliness of salary payments, occurrence of errors and omissions on the payroll, ease of updating the payroll and correcting errors, incidences of deletions, and salary arrears. We discuss these in tandem below.

5.1 Timeliness in salary payment, frequency and ease in occurrence and correcting of errors

Teachers were asked whether they experienced any of the following (i) delay in salary payments, (ii) missing or incorrect information (e.g. bank account number), (iii) under-payment, (iv) over-payment, and (v) any other anomalies. Table 2–Panel A provides results on the types of errors being reported in relation to monthly salary processing and payments. Despite the increase in absolute shares in the five indicators of measurement of timeliness and errors considered, only two indicators (missing salary and over-payment) were still statistically significant even after the reforms were implemented (Table 2–Panel A). Nonetheless, this is not an issue for serious concern

given the implementing officials had expected this in the process of migrating from the centralised payroll management system to a decentralised one. The lack of statistical significance in the results of delay in salary payment, missing account number, and under-payment indicate a general improvement in these indicators of timeliness and correcting errors that occur. In addition, delays were faced in the processing of payments under the Treasury Single Account (TSA) system which affected salary payments, leading to increased cases of missing salaries and, in some skewed instances, over-payment, especially in Wakiso district (this has been rectified).

In particular, teachers were asked also whether they experienced any salary delays during the 3rd term of 2015. Nationally, nearly 30 percent of teachers reported to have experienced salary delays in the 3rd term of 2015. This incidence was highest in the Northern region (45.6 percent) and the Eastern region (40.3 percent). Nonetheless, over 51 percent indicate that the delay occurred only *once* during the term. Hence, the arguments presented above still hold here which implies that the delays are not persistent hence not significant.

Table 2: Timeliness in salary payment, frequency and challenges in correcting errors reported (%)

Indicator	Before 2011-2013	After 2014-2016	t-stat
Panel A			
Delay in salary payment	63.1	65.2	0.47
Missing/incorrect account number	3.4	4.1	0.51
Missing salary	6.6	10.2	1.65
Under payment	21.3	23.8	0.6
Over payment	0.6	1.9	1.59
Other	0.6	2.3	1.92
Panel B			
<i>If teacher faces challenges in correcting errors:</i>	65	59.3	-1.45
Types of challenges faced			
Corruption/bribes	9.5	3.9	-2.89
No particular office at the district	5.6	2.4	-2.07
District officers are not very helpful	26.9	11.8	-3.9
Long travel distance to the district	14.6	6.3	-4.25
High transport costs to the district	16.2	9.3	-3.53
District officers are usually absent	11.6	7.5	-1.72
Others	13.4	13.3	-0.03

Source: EPRC Payroll survey dataset, 2016

From Table 2-Panel B, the share of teachers facing challenges in correcting errors and omissions from the payroll declined from 65 percent before to 59.3 percent after the reform. However, despite this numerical decline, analysis shows that this is not statistically significant even at 10 percent. Despite the aggregated challenges not being significant, at each indicator level, challenges like corruption/bribes, limited clarity on which particular office at the district handles errors, incompetency in district officers, long travel distances, high transportation costs coupled with high absenteeism rates of district officers continue to be some of the single most significant challenges facing teachers in correcting errors related to their salary payroll and processing (Table 2-Panel B). This is supported from findings made in FGDs that were counterintuitive. That is while some teachers reported that it is easier to clear errors and omissions at the district because officers in charge of the payroll management are near and approachable, others argued that poor service delivery at some districts was still an obstacle. Teachers also revealed that the time it takes to correct errors has also reduced since decentralisation of the reform. For example, complaints logged in by the 5th of the month are

adjusted and reflected in the next month's payments. Complaints beyond 15th take longer and end-up into arrears which are very hard to claim.

With regard to knowledge on the procedures to be followed when reporting an error or omission, majority of the teachers demonstrated a clear understanding of the process of reporting an error and the different offices to go to irrespective of the reform. Specifically, more teachers report to have gone to the MoPS before the reform and after the reform about 98 percent indicated to have gone directly to the District's Personnel's Office (in-charge of the human resource), which is the right move.

5.2. Salary arrears

At the national level, reported incidences of salary arrears by teachers, declined by 7.2 percentage points before and after the reform. This is partly attributed to increased awareness and knowledge about the reform and hence teachers were prepared. From Figure 3, the Northern and Western regions showed remarkable reductions in salary arrears incidences reported (by 10.9pp and 13.4pp between 2011-2013 and 2014-2016 respectively). Nonetheless, long lags in salary

arrears repayment period still remain with more than 64 percent of teachers saying that it took more than *five months* to have their arrears paid in 2014-2016 (EPRC survey, 2016). According to FGDs held with teachers, salary arrears still arise largely due to:

- (i) a teacher being promoted without his/her salary being adjusted,
- (ii) salary increments not being effected immediately, and
- (iii) deletion from the payroll which leads to teachers missing their salary. This mostly happened to teachers accessing the payroll for the first time and being mistaken for “ghosts” workers, or in cases where a teacher is transferred but his or her name fails to appear on the new station’s payroll yet he/she was deleted from the former station payroll.

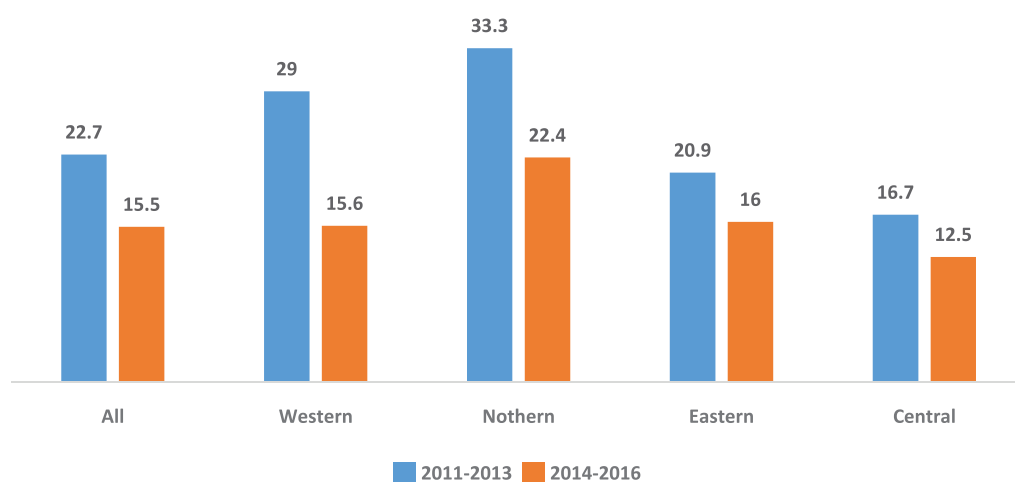
However, while some teachers in districts or schools experienced salary delays in payment others intimated that promotions and salary increments were reflected on the payroll immediately. This was achieved when the District Service Commission worked together with the CAO’s office to ensure coordination. The diversity in handling salary payments points towards the differences in staffing levels across districts, limited capacity of some district personnel as well as the lack of enabling infrastructure such as IFMS and the need for coordination among different offices.

5.3. Deletions from the payroll

General improvements are noted at the national level, where the share of teachers that have ever been deleted from the payroll declined when the reform was enforced (from 10.9 percent to 4.4 percent before and after the reform respectively) –Table 3. The West, a region that had the highest proportion of teachers being deleted from the payroll before the reform (15.5 percent) experienced the highest improvements after the reform (5.2 percent), a 10.3pp reduction in such an incidence. Majority of teachers reporting to have been deleted only once improved, with notable reduction in the shares of teachers reporting to have been deleted more than two times. Strong improvements are seen in the Eastern and Central regions. However, the 16.2 percent–North and 17.7 percent –West of the teachers report to have been deleted from the payroll more than three times during the reform period. This is mostly explained by the arguments placed during the FGDs in subsection 5.2.

In addition, over 50 percent of teachers in the North did not know why this error occurred and it took between three and more than five months to get reinstated on the payroll, while for the Central region, about 67 percent of the 80.7 percent of teachers who reported to have been deleted at least once or twice during the reform indicated that the deletion occurred

Figure 3: Incidences of Salary Arrears (%)



Source: EPRC Payroll survey dataset, 2016

by mistake (Table 3). Like their counterparts in the North, it took *two months*, with more reporting *more than five months* (57.4 percent) to be reinstated on the payroll. While not conclusive, the duration between reporting an error, number of times payroll deletions occur and the duration for reinstatement have improved since the reform was implemented in 2014 signalling improvements in efficiency in the payroll management and salary processing system. Teachers further revealed during FGDs that it also depended on the magnitude of the error. For instance, deletion from the payroll requires more lengthy investigations, which entails a prolonged period before it is concluded and

for one to be reinstated. Decentralisation of the payroll reduced 'ghost' teachers as information submitted by the head teachers had to be investigated by district officials once a school is suspected of inflating the number of teachers who do not exist. Furthermore, in the process of cleaning up the payroll a number of teachers' names were deleted or sent to other stations leading to a rise in incidences of missing salaries. According to MoFPED (2016), the issuance of 'deduction codes' on the payroll by MoPS instead of the Accounting Officers at the district led to excessive salary deductions beyond 50 percent, hence causing massive payroll deletions.

Table 3: Effectiveness of the decentralization in reducing deletions from the payroll (%)

Indicator	2011-2013					2014-2016				
	Central	Eastern	Northern	Western	All	Central	Eastern	Northern	Western	All
Ever been deleted from the payroll	8.3	11.7	9.7	15.5	10.9	2.0	6.1	7.0	5.2	4.4
<i>Number of times been deleted:</i>										
Once	78.1	74.8	94.8	78.0	79.1	80.7	100.0	73.8	75.3	85.0
Twice	17.1	15.0	0.0	18.3	14.8	19.3	0.0	10.1	7.0	7.2
Thrice	0.0	1.2	0.0	3.7	1.4					
More than three times	4.8	9.0	5.2	0.0	4.7	0.0	0.0	16.2	17.7	7.8
<i>Reasons for deletion:</i>										
Indiscipline	0.0	0.0	4.0	0.0	0.5					
Deleted by mistake	49.4	29.4	22.8	45.6	38.9	66.7	17.1	7.5	24.2	25.6
Do not know	3.3	22.3	58.0	20.1	21.2	27.9	42.9	52.2	14.0	35.4
Others	47.3	48.3	15.3	34.3	39.4	5.4	39.9	40.3	61.8	38.9
<i>Time taken to reinstated on payroll:</i>										
One month	8.8	2.3	3.9	25.3	11.3	6.1	26.5	23.1	29.8	22.7
Two months	8.0	18.4	7.0	1.8	9.0	36.5	26.3	6.4	4.1	19.0
Three months	4.5	15.3	17.1	6.1	9.7	0.0	20.5	39.5	0.0	16.8
Four months	16.1	16.7	8.5	3.5	11.5	0.0	0.0	0.9	25.9	5.6
More than five months	62.5	47.3	63.5	63.3	58.5	57.4	26.8	30.2	40.1	35.8

Source: EPRC Payroll survey dataset, 2016

5.4 Transparency

The aim of this sub section is to provide highlights of the progress registered so far in achieving transparency in payroll management and salary processing in Uganda. To assess this indicator stakeholders (teachers) were asked to indicate if they were aware of the practice of displaying the payroll on district notice boards. This measure not only makes it easier to identify errors and omissions on the payroll but also helps to identify 'ghost' workers. In addition, not only were teachers asked to indicate the frequency of receipt of payroll salary slips and how often they checked the notice boards but also if they can deduce and comprehend the salary codes and deductions therein.

5.4.1 Display of payroll

Only 42 percent of primary teachers were knowledgeable about the display of staff payroll on district notice boards. Furthermore, of the 42 percent, 60 percent said that displays were done at the District Headquarters Offices (which was correct) and 16 percent said they were done at school level (which was not entirely accurate) [EPRC, Payroll Dataset, 2016]. With regard to the geographic locations, over 50 percent of the teachers in the Northern and Eastern regions were aware of the practice of displaying salary payroll on district notice, a practice that seems to have bypassed the teachers in other regions. The rationale of such heterogeneity is either, teachers are negligent in seeking information concerning them; district

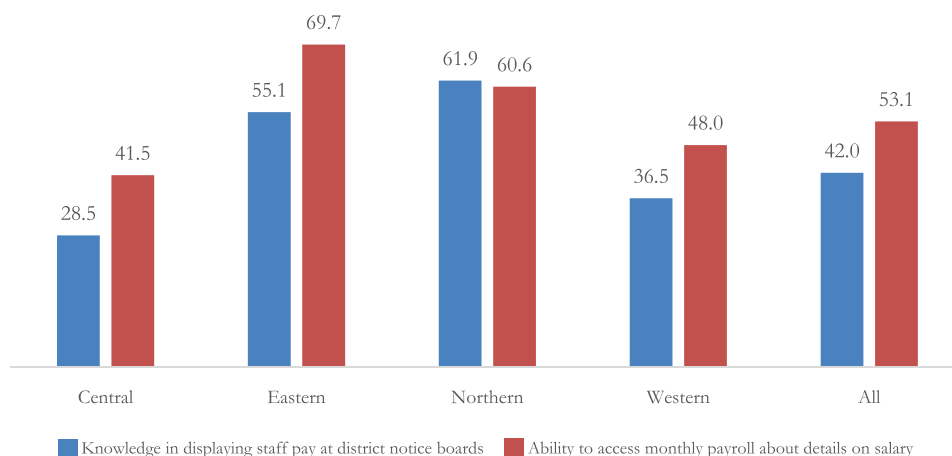
officials are defiant in being transparent or have not done enough sensitisation on the semantics of the new reforms. Similar patterns are observed in teacher ability to access details on their monthly payslip (Figure 4). Simply put, decentralised systems in the North and East appear to be understanding certain aspects of information sharing more accurately and the other regions need to learn from them.

5.4.2 Frequency in checking displayed monthly payroll and receipt of monthly salary slip

Checking displayed monthly payroll: Collectively, majority of teachers irregularly or never check the district notice board on details concerning their monthly payroll (over 80 percent). Over 90 percent of teachers with such behaviour are from the Western region (Table 4). However, on indicator basis, the Central region had over 58 percent of teachers who indicate to never check salary details on the displayed monthly payroll at the district, while the North had more who irregularly checked and the East with a higher share of teachers who regularly checked the district notice board for payroll details (Table 4). Teachers need to take this activity seriously so as to avoid future mistakes on the payroll.

Receipt of monthly salary payslips: Table 4 highlights that before the reform, at the national level on average over 95 percent of teachers were receiving their monthly payslips but after the reform the share declined by 17 percentage points. The Central and Western regions

Figure 4: Transparency in displaying teacher pay (%share)



Source: EPRC Payroll survey dataset, 2016

performed well before the reforms in efficiently distributing payslips to the teachers. At the time of the survey in mid-August 2016, only 20 percent of teachers had received their monthly July 2016 payslip. FGDs with teachers articulated that indeed before decentralisation of the payroll, they would receive their payslips, however, after decentralisation; it now takes two to three months without receiving payslips. For instance, a teacher revealed that, *“Ever since the year started, I have only received the May 2016 payslip.”*, while another in Sheema district said that *“We last got our payslips in September 2015.”* This made it difficult to know whether they were overpaid or underpaid. Those who requested for payslips were told to pay. For example, in Kabarole district, *“You have to pay or buy papers to have a print out of your payslip, especially when you want to get a loan.”* reported one of the teachers. Nonetheless, it can also be argued that when implementing a new system, this delay was likely to occur, especially if one of the core issues was to clean the payroll.

Teacher knowledge on different codes and deductions on the payslip: Less than 40 percent of the teachers reported knowing the different codes and deductions on their monthly salary payslips (Table 4). It is vital for stakeholder/beneficiaries to understand how their net salary is arrived at, the benefits/pension accruing to them during duration of service, contribution to

revenue collection and hence, development of the country. Hence, the low share in teacher knowledge on this indicator is an activity the district officials need to work on to ensure teacher capacity to understand the various codes on their monthly payslip is enhanced. Discussions at FGD level showed that very few teachers were aware of the codes on the monthly payslip. Most could comprehend only the Pay as You Earn (PAYE), Uganda National Teachers Union (UNATU) and bank loan deductions, however, majority also complained that new codes were introduced without explanations of what such deductions meant.

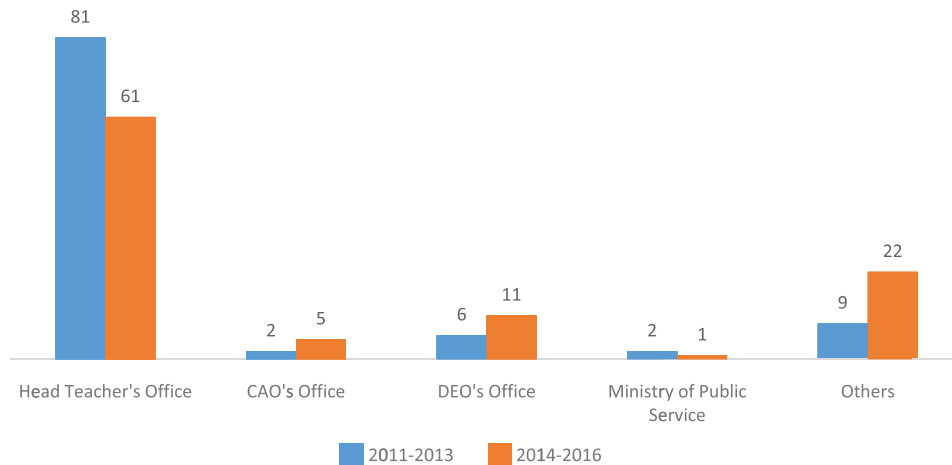
According to a teacher in Hoima district, *“Sometimes you even find codes that come and disappear by themselves.”* Another in Lwengo asserted that *“There is no clear explanation where our money is going; we do not know how much we are supposed to get after deductions.”* There were arguments that the deductions did not benefit them in anyway. For example, a teacher in Kampala argued, *“Why do we have to pay UNATU our money and we are not benefiting from them.”*, while those in Gulu felt that *“The Ushs 4,000 deducted for UNATU was too high and there was no value for their money.”* Contrary to what the teachers revealed, KIs, accounting officers at the district, argued that teachers and all public servants are sensitised about the codes on the payslips and that payslips are printed and distributed to all departments every month.

Table 4: Teachers information seeing behaviour on displayed payroll and salary payslip (%)

	Central	Eastern	Northern	Western	All
<i>How often do you check for salary details on the displayed monthly payroll at the district?</i>					
Regularly	18.6	22	14.9	8.7	16.9
Irregularly	23	42.4	55	41.4	37
Never	58.4	35.6	30.1	49.9	46
<i>Did you receive a monthly payslip?</i>					
2011-2013 (Before)	98	97.4	90.8	92.4	95.6
2014-2016 (After)	77.7	77.9	76.5	82.7	78.6
Did you receive payslip for July 2016?	24.2	24.4	12.3	14.8	20.6
<i>Do you understand the different codes and deductions on your monthly salary payslip?</i>					
	32	47.1	34.8	27.4	35.5

Source: EPRC Payroll survey dataset, 2016

Figure 5: Offices where salary payslips are picked (%)



Source: EPRC Payroll survey dataset, 2016

Offices for salary payslip collection: A higher share of teachers indicated that monthly payslips were collected from the head teacher's office irrespective of the period. However, from Figure 5, a decline is noted after the reform (81 percent vs 61 percent). For other offices, there was a notable increase in the issuance of payslips.

Plate 1, clearly indicates that teachers were informed on where to receive payslips. It is of note that these are received through the head teachers who access them from the DEO's offices. This resonates with the findings in Figure 5. However, there are still some teachers who do not receive their payslips from the head teacher's office.

Plate 1: Exhibit showing evidence of communication to staff at district level

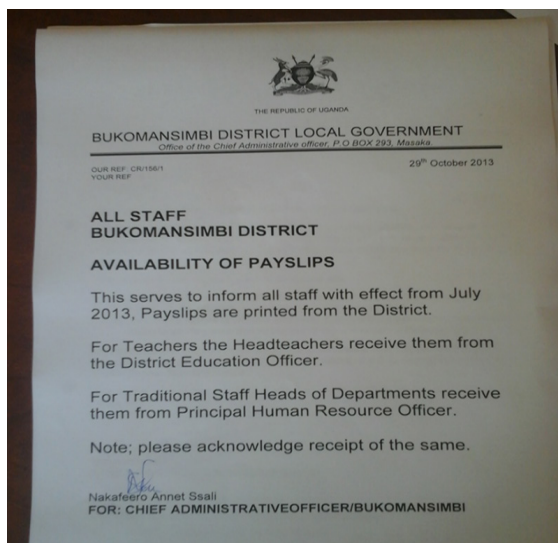


Photo by Musa M. Lwanga, August 2016

5.5 Other outcomes as a result of the reform

This subsection provides a clear discussion on the potential spillover effects of the decentralization of the payroll and salary processing on teacher presence in school as well as their attitudes and motivation towards work. In addition, if the reforms have brought better service delivery (timeliness etc.) and transparency, then it is postulated that such actions should in essence have an effect on the overall welfare of beneficiaries. Such interactions are analyzed in this sub section.

5.5.1 Teachers absenteeism, attitudes and motivation

5.5.1.1 Absenteeism

Studies have shown that there have been high levels of teacher absenteeism and low levels of motivation, especially in government aided schools. According to the 2013 Uganda Service Delivery Indicators (USDI) teacher absenteeism was higher in public schools (26.9 percent) in comparison to private schools (14 percent) with similar characteristics (Wane and Martin, 2013). While the Budget Monitoring and Accountability Unit conclude that service delivery in the education sector is still lacking, with education outcomes being increasingly lower than expected (MoFPED, 2014). Low teacher motivation arising partly from low pay as well as delays in salary payment has contributed to the poor performance within the sector.

Note that the absenteeism analysed here is based on self-reported absenteeism by teachers from work. The survey enquired whether teachers have ever been

absent from school during the period February to July 2016. Figure 6 reveals that at the national level, about 19 percent of teachers were absent from school in the first 6 months (February-July) of 2016. Absenteeism here is lower than that reported by the 2013 SDI survey. Care should be taken when comparing the two surveys due to differences in methodologies in gathering absenteeism data and sample. Nonetheless, other surveys done after 2014 also report lower absenteeism such as the 2015 National Service Delivery Survey (NSDS) reports teacher absenteeism at 11 percent for public schools.

Across regions, there were significant differences in teacher absenteeism with the Central region having the highest share of absent teachers (about 26 percent) while the share in the Western region was the lowest (12 percent). This results means that more than 2 in every 10 teachers found in the Central region were absent from school in the first six school months of 2016.

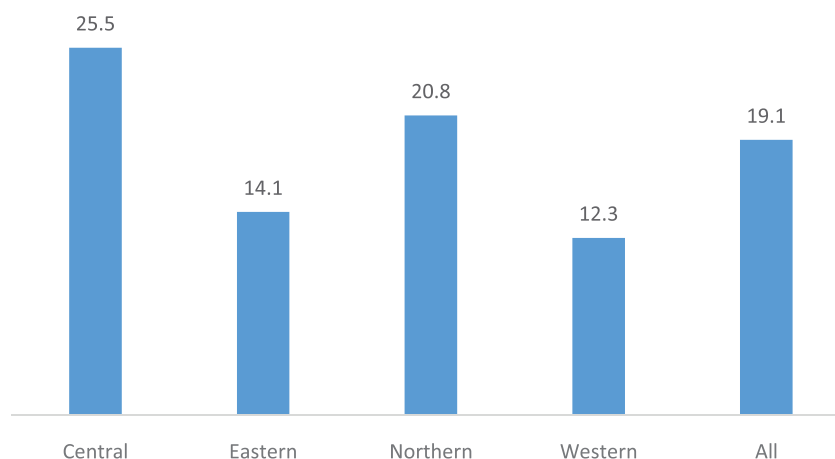
However, as Table 5-Panel A shows, despite having the lowest share in teacher absenteeism, the Western region has a much higher share of teachers who were absent ‘very often’ from school (4.1 percent) compared to the central region (1.5 percent). That is teachers might be absent in the central region but this is not occurring very often. Generally, there is a reduction in the frequency of teacher absenteeism between the two

reform periods (Table 5-Panel A). According to FGDs there are three reasons why teacher absenteeism may be reducing in Uganda’s public schools. This could be as a result of:

- 1) The reduction in ghost teachers due to the PFM reforms which has reduced the level of “disguised absenteeism”. Analysis shows that ghost workers/teachers were often reported as absent, raising the level of absenteeism.
- 2) Increased supervision from accounting officers. The reforms empowered accounting officers and thus increased their level of supervision. The threat of being deleted from the payroll, acts as a deterrence for teacher to miss school.
- 3) The teacher salary increments which government effected after the reform may have further motivated teachers to stay in school instead of moonlighting or engaging in other economic activities.

In addition, from Table 5-Panel B, the number of teachers who were originally very often absent from school as a result of pursuing monthly/payroll related issues reduced significantly across regions more especially in the Central region (from 55 percent before to 12 percent after the reform). In the same region, those who were now rarely absent more than doubled (from 38 percent to 67 percent) over the same period.

Figure 6: Teacher absence from the school in the in last six months (February - July 2016)



Source: EPRC Payroll survey dataset, 2016

Table 5: Frequency in teacher absenteeism before and after reform (%)

	Before (2010-2013)					After (2014-2016)				
	Central	Eastern	Northern	Western	All	Central	Eastern	Northern	Western	All
<i>Panel A: Frequency in teacher absenteeism from school</i>										
Very often	2.2	5.0	0.0	0.7	2.4	1.5	0.4	1.5	4.1	1.7
Quite often	0.4	7.9	7.1	5.9	4.5	0.5	3.2	3.0	2.2	1.9
Often	5.6	12.2	15.9	12.0	10.1	5.2	10.4	17.2	7.4	8.7
Rarely	91.8	74.9	77.0	81.5	83.0	92.7	86.0	78.2	86.3	87.6
<i>Panel B: Teacher absenteeism to pursue monthly/payroll related issues</i>										
Very often	55.1	1.0	3.4	1.2	5.6	12.0	0.0	1.7	1.0	2.7
Quite often	0.0	5.5	7.8	6.7	6.3	0.0	1.9	6.4	1.7	2.8
Often	7.4	37.7	10.7	12.5	16.8	21.3	21.8	6.8	6.7	11.7
Rarely	37.5	55.8	78.0	79.5	71.3	66.8	76.3	85.1	90.6	82.8

Source: EPRC Payroll survey dataset, 2016

The major reason (ranked 1st) for teacher absenteeism was sick leave - 60 percent before and 51 percent after the reform (Table 6). Other reasons included burial and attending to a sick family member which were ranked 2nd and 3rd respectively. It is also of note that pursuit of salary related issues still remains as well. A negligible share was absent due to annual leave probably because this is included in the mandatory school holidays when all schools break off. Teacher trainings need to be revamped given the relatively low share reporting absenteeism due to this activity (Table 6).

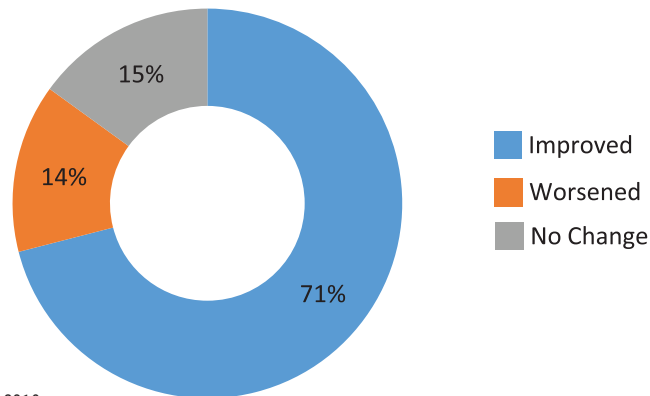
5.5.1.2 Attitude and motivation

The study also sought to find out the effect of the reforms on teachers attitudes and motivation toward work. The terms 'attitudes and motivation' usually go together because they have a very close relationship. According to literature, attitudes and motivation (effort and desire) are two factors that are believed to have a correlation with success or failure of an activity uptake (Gardner, 1985). (More than 70 percent of the teachers indicated that their attitudes had improved positively since the reform (Figure 7). The change in teacher attitude has implications on their motivation to work.

Table 6: Reason for being absent from school (%)

Reason	Before 2011-2013			After 2014-2016		
	Ranked 1	Ranked 2	Ranked 3	Ranked 1	Ranked 2	Ranked 3
<i>Sick leave</i>	60.2	15.5	9.5	50.5	15.3	6.1
Annual leave	0.2	2.8	1.3	0.2	2.1	1.2
<i>Burial</i>	13.4	35.1	24.0	17.2	29.8	21.8
<i>Attending to a sick family member</i>	7.8	24.6	25.4	10.5	22.4	24.1
Attending a seminar	1.4	3.8	7.8	2.5	10.1	8.8
Maternity/Paternity leave	4.8	4.4	6.6	4.3	2.1	1.7
Further training	0.6	0.5	0.8	1.6	1.3	3.1
Administrative duties	1.6	3.9	5.5	6.1	5.1	9.3
Pursue Salary/Payroll related issues	2.7	5.7	9.1	2.3	5.5	17.2
Others	7.3	3.7	10.1	4.8	6.3	6.6

Source: EPRC Payroll survey dataset, 2016

Figure 7: Effect of the Payroll reform on teachers' attitude towards work

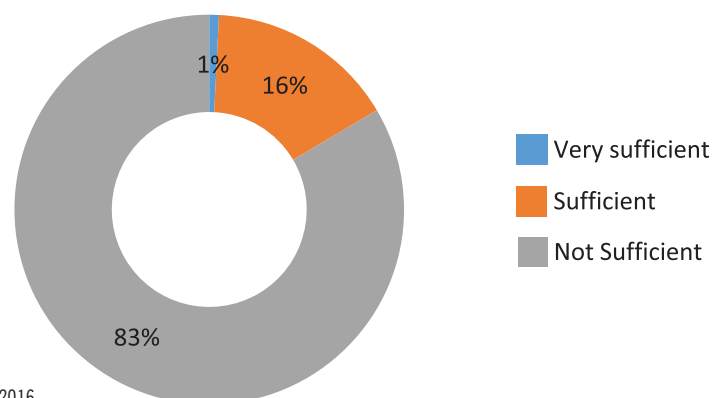
Source: EPRC Payroll survey dataset, 2016

5.5.2 Teacher welfare and other income generating activities

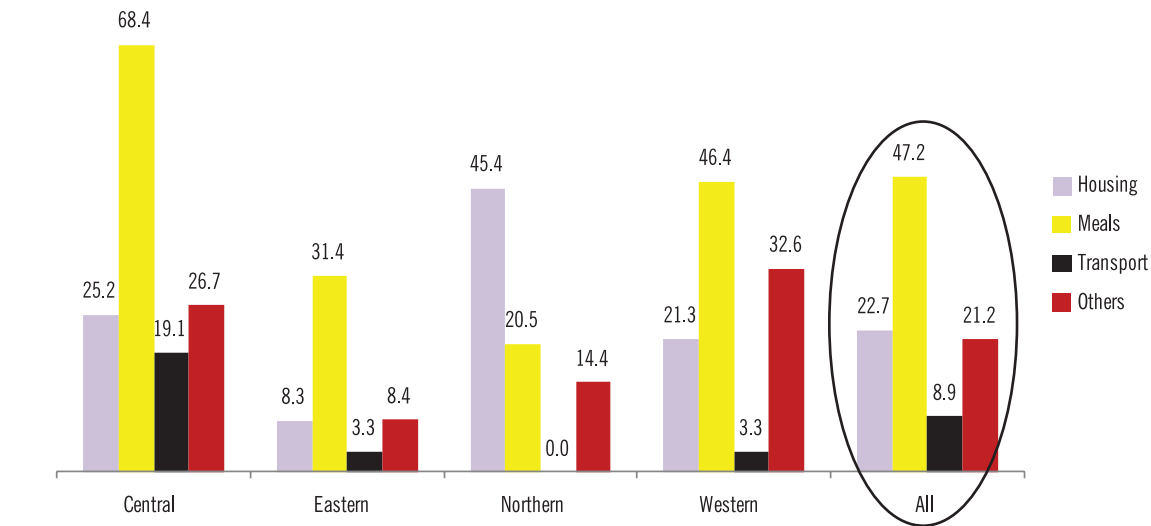
This subsection discusses teacher satisfaction with monthly salary, engagement in other income generating activities and credit worth (access to loans) as variables that directly impact on teachers' welfare. Government in recent times has increased primary school teacher salaries with the intension of improving teacher welfare and morale to work. Survey findings show that only 1 percent of the teachers perceived their monthly salary to be very sufficient. In Uganda, nearly 8 out of 10 teachers indicate that their net monthly salary was very insufficient. Evidence elsewhere has shown that uncompetitive salaries make it much harder to attract the best candidates to the teaching profession. It was acknowledged that bonuses and incentives on offer to teachers were strengths of any education system. Flanagan and Grissmer (2006) examined the effect of teacher pay on district test scores, controlling for other variables in Illinois. They

find that where students performed poorly, teachers had low pay, implying they were less motivated and with poor attitudes towards their profession. However, one in this case will argue that what is sufficient to boost motivation towards work for primary teachers in Uganda.

Welfare enhancing activities beyond salary: despite teacher satisfaction levels being low with salary, 69 percent revealed that they received other benefits provided by school management beyond the monthly salary such as school meals (breakfast and lunch), housing and other benefits (Figure 9). The Central region had the highest for all benefits in comparison to the other regions. Simply put, the incentive system in the Central region is more attractive given the region's peculiarities and location (the capital city is in the central). The teachers in the Eastern region seem to lag behind on all aspects of benefits such that the low share receiving school meals (31 percent) is a close indication on the level of poverty and food insecurity

Figure 8: Share of teachers' perception on their current monthly net salary

Source: EPRC Payroll survey dataset, 2016

Figure 9: Benefits teachers receive other than salary (%)

Source: EPRC Payroll survey dataset, 2016

within the region or differences in administrative functions at school level in ensuring teachers meals are incentivised. Other benefits can be in the form of parent support to the school in financial or in-kind terms, free medical coverage

Given the low incentive structure from government, engagement in other off-the job/school income generating activities is another avenue that teachers can use to make extra income without increasing absenteeism. In this case, nationally, at least 3 out of every 10 teachers were engaged in other income generating activities other than teaching. Geographically, the Western region had a higher portion (42 percent) of their teachers engaged in other income generating activities in comparison to other regions. Crop farming (at 43 percent) is the most common secondary activity teachers engage in to obtain other finances besides their salary (Table 7-Panel A). Furthermore, both animal husbandry and poultry keeping activities (at 13 percent) are also commonly practiced, however with large gaps in the percentage contribution in comparison with crop farming. However, as Table 7-Panel B reveals, while crop farming is the most widely practiced, it does not bring in regular income in comparison to transport which had fewer teachers engaged in it. In addition, retail trade is the second most secondary activity that generates more income to a teacher (66 percent) with notable heterogeneities at geographical region levels (Table 7-Panel B). All these activities can ultimately contribute to absenteeism of teachers from school.

Teachers' credit worth

Efficiency in the time salary is received by beneficiaries can increase confidence in a financial institution to extend credit/loans to teachers, strengthen social capital and trust among colleagues which elevates your social standing in a community.

Given the reform, teachers were asked during the survey if since the reform they have been able to borrow more. In this regard, at a national level, 65 percent of teachers had gotten a monthly salary loan, most likely from a bank; 24 percent were also obtaining other loans; 47 percent were members of a teachers SACCO (a savings and credit scheme); and 32 percent of their monthly salary was servicing the loan (Table 8). Usually, a bank devises a payment mode agreed upon with the beneficiary depending on the size of the loan and duration of teacher service (remaining years in employment).

As can be seen from Table 8, the Eastern and Western regions had majority of teachers with monthly salary loans (75 percent and 70 percent respectively). Diversifying financial access sources through group/sector SACCOs is identified as one of the vital avenues for fostering financial inclusion for the low paid workers and those with limited access to the formal banking institutions to obtain credit and save as well. The Northern region had the least share of teachers belonging to a teacher SACCO (30 percent) implying their saving mechanism is low. Tensions

Table 7: Teacher's secondary activities and income (%)

	Region				
	Central	Eastern	Northern	Western	All
<i>Panel A: Other income generating activity/activities apart from teaching</i>					
Crop Farming	20.9	52.3	57.4	60.0	43.3
Transport (e.g. Boda, Taxi)	0.4	1.0	0.5	2.9	1.1
Animal husbandry	9.6	20.1	8.3	14.0	13.1
Poultry	16.5	14.5	6.8	8.8	13.1
Wholesale trade	0.0	0.4	0.0	0.0	0.1
Retail trade	5.1	10.0	4.0	6.7	6.6
Others	26.3	3.3	10.5	14.7	16.0
<i>Panel B: If activity brings in regular income (share %)</i>					
Crop Farming	2.6	5.7	41.5	54.2	27.7
Transport (e.g. Boda, Taxi)	100.0	100.0	100.0	100.0	100.0
Animal husbandry	0.0	44.5	34.4	90.4	40.1
Poultry	32.0	34.3	65.4	100.0	43.2
Wholesale Trade	0.0	0.0	0.0	0.0	0.0
Retail Trade	71.2	57.2	81.1	66.9	65.5
Others	2.7	30.4	53.2	85.3	25.4

Source: EPRC Payroll survey dataset, 2016

in the North still exist and communal structures are still weak to make SACCOs work whose operational networks require a strong sense of community sense and mutual trust among groups. Intuitively, the loan obtaining behaviour can allude to a number of issues; teachers are diversifying beyond teaching, salary is not sufficient to undertake investments or a teacher has pressing family obligations and hence obtains a loan to boost income. Such that the; timely salary is now enabling teachers to plan better and improve livelihoods. However, it should also be noted that high levels of indebtedness can increase absenteeism as teachers seek secondary economic activities to pay off loans.

6 Emerging strengths and challenges

This section focuses on emerging strengths and challenges that have risen since the implementation and enforcement of a decentralized payroll processing and salary management system. Specifically, it explores the reasons for differences the reform carries within it by stakeholders (government level, district level and teachers).

Government and district level

Key informant discussions with government and district accounting officers reveal that the strengths of the decentralized payroll processing and salary payment process are several. That is:

Table 8: Access to additional financial sources (%)

Region	Monthly salary loan	Other loans	Member to a teacher's SACCO)	% of monthly salary spent on servicing a loan
Central	56.7	22.3	58.7	32.5
Eastern	74.9	22.9	36.7	32.8
Northern	60.9	26.5	29.6	28.4
Western	70.3	25.3	51.0	30.2
All	65	23.7	47.1	31.5

Source: EPRC Payroll survey dataset, 2016

- At the school level, the incidences of 'ghost' workers have significantly 'reduced'. This has been achieved by the teachers signing against their names, with a certified photograph attached. In addition, head teachers are able to report changes every month and consequently, the Human Resource (HR) Department at the district is able to update the payroll monthly and effect changes.
- Most of the teachers are currently being paid by the 28th of every month, compared to the period before the reform, when payment of salaries could be delayed for at least two weeks. In addition, teachers are able to know how much they earned by signing on their pay slips, for those who get them.
- Through the District Education Inspectors, who conduct quarterly inspection of the school's performance including the payroll, the HR Department is able to detect incidences of 'ghost' workers. As such the HR Department is able to re-verify errors and omissions that occur at the MoPS and make quick corrections with a month's time.
- Compared to the period before the reform, accessing the payroll now by new teachers who have been accidentally/erroneously deleted takes only one month, compared to more than 6 months before the reform. In addition, this has eased the periodic monitoring by the MoPS staff on the payroll management which has led to reduced incidence of errors and omissions. However, it depends on the nature of error.
- There has been increased capacity building from the MoFPED staff to district accounting officers in the operations of the IFMS and IPPS. This has improved the efficiency of the staff at the districts data management.

Despite the above strengths, KIs also pointed out that challenges still remain. That is:

- *Long distances and tedious verification process:* For schools which are very far from the district

headquarters, the head teachers are not able to re-verify their payroll. This creates some room for 'ghost' creation by district official without the head teacher knowledge through the Human Resource Department. In addition, the decentralization of the public payroll management system has also become more expensive to operationalize because the final approvals are still being carried out at the central government by MoPS. This means the CAOs have to travel frequently to the central Ministry for verification and processing of the payroll.

- *Limited coverage of IFMS and IPPS:* Districts which are not yet connected to IFMS and IPPS still have challenges of travelling to the MoPS for re-verification of the payroll. This creates some room for creation of ghost teachers at the MoPS level. In addition, the travel cost for districts that are not connected to IFMS and IPPS is high. Districts not connected to IFMS and IPPS have their officials like the Chief Administrative officer (CAO), Human Resource Officer and Chief Finance Officer (CFO) spending on average 5 to 10 days every month out of office and approximately 5 million shillings per month on travel for payroll processing (Munyambonera and Lwanga, 2015). Furthermore, interfacing of IFMS and IPPS in most districts is still a problem resulting into running parallel systems which affects the efficiency of payroll management.
- *Limited equipment and capacity.* Despite the introduction of IFMS/IPPS regional centres to support districts which are unconnected, challenges such as (a) limited number of computers and (b) lack of technical personnel to help out district officials in cases of need remain. Furthermore, some district officials still lack adequate capacity to use the systems despite their availability.
- *Inconsistent availability of internet:* The persistent problem of internet breakdown affects thorough cleaning and re-verification of the payroll. As a result, errors and omissions still occur. However, these are easily detected and quickly addressed in the following month.

- Disappearance of names from the payroll after it has been submitted to effect payment. CAOs revealed that sometimes names disappear from the payroll after verification and submission for payment. This creates incidences of missing salaries, delays and salary arrears. The key question is how do they disappear?
- Transparency in payroll management:* The districts are required to display the payroll every month to enable the public and district officials, head teachers and teachers to check for 'ghost workers' and salary errors and omissions. This activity is not being done uniformly across districts due to limited stationary. It is apparent that the facilitation given to the districts for this process is very low. However, most of the district officials reported that they give head teachers a copy of the payroll and payslips for teachers for verification. In most of the districts, the teachers counter sign the payroll as proof that what they are receiving is the salary pay and scale.
- Limited inspection and monitoring:* Inspection and monitoring of the payroll implementation in most of the districts by the education inspectors and human resource personnel is still constrained by facilitation in terms of vehicle and fuel. Inspection and monitoring is supposed to scrutinise teacher absenteeism and the

management of the payroll at schools. Due to the large number of public servants on the payroll in education, this requires regular and thorough checks. The system therefore requires highly technical persons to manage it however this is still lacking at the district level.

Teachers

Teachers ranked the top three challenges still being observed despite the reform being in place. From Table 9-Panel A, *delays in salary payment* (36 percent) and *difficulty in understanding the codes on the salary payslip* (21 percent); were ranked as the top three challenges still being faced since the introduction of the reform. Furthermore, irregular salary receipt did not fall far behind among the challenges faced.

However, teachers identified pathways through which some of the persistent challenges can be tackled. According to findings from Table 9-Panel B, issues surrounding sensitisation of teachers about the different codes on the payslips and the issuance of payslips on a regular basis were ranked as the most vital in enhancing the performance of the decentralisation of the public payroll reforms, which should not be a problem for the government and district officials as this is part of their roles and responsibilities as long as their respective budgets capture these components.

Table 9: Challenges and areas of improvement in implementing the reform (%)

	Combined	Ranked 1	Ranked 2	Ranked 3
<i>Panel A: Challenges observed with the reform</i>				
Delays in salary	44.3	35.5	13.3	9.1
Irregular salary	28.8	13.3	19.7	10.9
Corruption/bribes	10.1	3.7	4.8	11.1
Too many codes	21.1	9.3	13.9	10.5
Poor customer care	8.4	2.5	5.2	8
Difficulty understanding	27.8	7.7	21.3	20.1
Others	46.2	27.9	21.8	30.4
<i>Panel B: Areas of improvement for the reform</i>				
Reduce corruption	12.9	8.3	6.9	8.0
Have a specific office	10.1	5.9	5.5	8.5
Issue pay slips regularly	30.5	18.7	20.3	10.1
Sensitize teachers	38.8	19.3	29.6	22.5
Others	66.2	0.1	0.0	50.9

Source: EPRC Payroll survey dataset, 2016

7. Conclusions and policy actions

7.1 Conclusions

Uganda has been implementing the decentralised payroll processing and salary processing system since 2014. The above discussion has shown that the government through the MoFPED is enforcing this reform as part of the pathways to curb persistent inefficiencies in salary payment, errors and omissions of beneficiaries on the payroll and payslips, clean out 'ghost' workers who blow up the wage bill unnecessarily and reduce leakages in processing and payment of salaries. In this regard, this study sets out to evaluate the effectiveness of this reform, since its enforcement, in addressing these inefficiencies that were common during the centralised payroll processing and salary payment system era.

Data for this study comprised of 1,065 teachers randomly selected from 165 sample schools all over Uganda, designed to be representative at the national, rural/urban, and regional levels. Findings reveal that there has been remarkable improvement in the key indicators of measuring efficiency, that is: increased awareness by teachers of the new mechanisms of the reform (95 percent), significant reductions in cases reporting of missing salaries (3.6 percentage point improvement) and reduction in cases reporting over payment. However, in absolute terms, there was an improvement in the timely payment of monthly salaries, however this was not statistically significant at any level.

Furthermore, incidences of salary arrears have declined since the reform was introduced to 16 percent from 23 percent before the reform. More teachers are not being deleted from the payroll from 11 percent before to now 4 percent after the reform. The reform has enabled teachers to correct errors and omissions related to their salaries much faster (from 65 percent to 59 percent before and after the reform respectively). However, challenges of travelling long distances to districts, corruption at district level, and high absenteeism of district officials still impede the process of reporting and correcting errors.

Despite increased awareness of the reform,

transparency in displaying the payroll at the district remains a challenge. Such that few teachers (nearly 6 in 10) are aware that the payroll and monthly salary schedule is supposed to be displayed on district notice boards. This limited awareness is much worse among teachers in the Central region, quite surprising given their close proximity to the central government governing institutions. However, teachers are also not taking an initiative to regularly check for salary details on the displayed district board. 46 percent said they never check, a situation much worse in the Central (58 percent) and Western (50 percent) regions. Most teachers do receive their monthly salary pay slips, nonetheless, the share declined during the reform phase (79 percent) in comparison to the before phase (96 percent). Challenges still arise in comprehending the various salary codes deduction on the pay slips, hence capacity building is needed in this area.

With regard to monthly salary, nearly 8 in 10 teachers perceived that it was insufficient despite government increasing primary teacher monthly pay by Ush 50,000 in 2014 (a 25 percent salary increment). This improved teacher attitudes and motivation as 71 percent said that they are now motivated to work and that the reform has made them become more credit work to get loans as their salaries are now timely and predictable.

7.2 Policy recommendations

In order to improve effectiveness of Uganda's payroll and salary processing system, the following have to be done.

1. **Sensitize teachers on pay roll displays.** In order to increase the effectiveness of the payroll display measure (meant for identifying "ghost" workers and thus ensuring a clean payroll), all civil servants, including primary school teachers, need to be aware of its existence. This could be done through a number of media broadcasts as well as seminars and workshops.
2. **Leverage on new communication technologies.** Despite decentralisation, survey findings have revealed the distribution of payslips has actually reduced. This negates the objective of improving the service by bringing it to the people. Accounting officers should devise means

of ensuring that all civil servants get their monthly payslips regularly. Where possible, government should leverage on new technological innovations to effectively send out salary information. Such innovations include the use of e-mails and other online channels, SMS, as well as social media platforms. In addition, claims of teachers paying for payslips should be investigated to improve the credibility of the reform.

3. **Sensitize teachers on payslip codes.** A large number of teachers reported ignorance about some of the codes on their payslips. This lack of knowledge undermines the principle of transparency and points towards a lack of financial literacy amongst civil servants. In addition to increasing the distribution of payslips, civil servants should be sensitized about the codes and deduction from their salaries. A key of the codes could be availed to all relevant offices to improve awareness.
4. **Improving the use of the Integrated Financial Management System (IFMS) and the Integrated Personnel and Payroll System (IPPS).** Salary delays and errors continue to occur due the limited interfacing of IPPS with IFMS, poor network coverage, and lack of technical capacity at some local governments to effectively use the systems. An increase in IFMS and IPPS coverage and interface, as well as capacity building for public servants using the systems, will greatly reduce salary delays and errors.

REFERENCES

- BMAU. (2014). Budget Monitoring and Accountability Unit (BMAU). (2014). *Improving Service Delivery in Uganda*. Kampala, Uganda: Ministry of Finance, Planning and Economic Development.
- Flanagan, A. and D. W. Grissmer. (2006). Effect of Teacher Pay on Student Performance: Findings from Illinois. WR-378-EDU Prepared for the Department of Education.
- Gardner, R. C. (1985). *Social Psychology and second language learning: The role of attitudes and motivation*. London: Edward Arnold.
- GoU. (2014). *Guidelines and Procedures for Decentralised Salary Payment Processing*. Kampala: Government of Uganda.
- Lee, M., Goodman, C., Dandapani, N., and W. Kekahio. (2015). *Review of international research on factors underlying teacher absenteeism*. Washington, DC: U.S.: Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Pacific. Retrieved from <http://ies.ed.gov/ncee/edlabs>.
- Ministry of Education and Sports (1999). *The Ugandan Experience of Universal Primary Education (UPE)*. Ministry of Education and Sports (MoES), The Republic of Uganda
- MoES. (2013). *Teacher Issues in Uganda: A Diagnosis for a Shared Vision on Issues and the Designing of a Feasible, Indigenous and Effective Teachers' Policy*. Kampala: Government of Uganda.
- Ministry of Finance, Planning and Economic Development. (2010). *Uganda PFM Reform Strategy (2011/12 - 2016/17)*. Kampala: Ministry of Finance, Planning and Economic Development.
- MoFPED. (2014). *Decentralized Payroll Management in Uganda: A case study of initial trends in selected central government institutions*. Ministry of Finance Planning and Economic Development, Budget Monitoring and Accountability Unit (BMAU). Kampala: Government of Uganda.

- Munyambonera, E., and M. M. Lwanga (2015). *A Review of Uganda's Public Finance Management Reforms (2012 to 2014): Are the Reforms Yielding the Expected Outcomes?* Kampala: Economic Policy Research Centre.
- Nishimura, M., Ogawa, K., Sifuna, D. N., Chimombo, J., Kunje, D., Ampiah, J. G., and S. Yamada. (2009). A Comparative Analysis of Universal Primary Education Policy in Ghana, Kenya, Malawi, and Uganda. *Journal of International Cooperation in Education*, Vol.12 No.1 (2009), 143 - 158.
- Okidi, J. A. and M. Guloba. (2007). 'Decentralisation and Development: Emerging Issues from Uganda's Experience', EPRC Occasional Paper, no. 31, Economic Policy Research Centre, Kampala
- Steiner, S. (2006). Decentralisation in Uganda: Exploring the Constraints for Poverty Reduction. *GIGA German Institute of Global and Area Studies*.
- Wane, W., and G. H. Martin. (2013). *Education and Health Services in Uganda, Service Delivery Indicators*. Washington DC: International Bank for Reconstruction and Development / The World Bank.

APPENDIX I: LIST OF KEY INFORMANTS

1.	Paul Walakira	CAO, Mbale District
2.	Dembe Bayeza Davis	CAO, Kalungu District
3.	Nkugwa Norbert Robert	Deputy CAO, Pallisa District
4.	Ofamba Peter Adonyo	Senior Human Resource Officer, Pallisa District
5.	Kateu Charles	Human Resource Officer, Pallisa District
6.	Ssali Annet	Assistant Deputy CAO, Bukomansimbi District
7.	Joseph Enyimu	Ag. Assistant Commissioner, Economic Policy and Research Department, MoFPED
8.	Rosetti Nabbumba Nayenga	Deputy Head/Technical Monitoring Officer, Budget Monitoring and Accountability Unit, MoFPED
9.	Mulongo Richard	CAO, Lira District
10.	Abua George	DEO, Lira District
11.	Akidi Irene	PHR Officer, Lira District
12.	Abirebe Assy	Town Clerk, Lira Municipality
13.	Awoli James	Deputy CAO, Aleptong District
14.	Wakise Simon	DEO, Bulambuli District
15.	Kamuli Boas	D. Inspector, Bulambuli District
16.	Wadada Lawrence	Deputy CAO, Bulambuli District
17.	Madaba Daniel	HR Officer, Bulambuli District
18.	Evelyn Akunda	Senior HRO, Hoima District
19.	Sarah Kamasomi	Principal HRO, Hoima District
20.	Godfrey Tumussiime	Assistant CAO, Mbarara District
21.	Kagaba Allan	Senior HRO, Mbarara District

Appendix II: Focus Group Discussion Questionnaire Guide

- Are you aware of any payroll reforms in the past two years? (If yes please describe the reforms to the best of your knowledge (probe: who manages the payroll in the new arrangement- what is the role of teachers, head teachers, DEO, and CAO etc.)?)
- What does the decentralized pay-roll management mean to you? Probe for benefits, whether the head teacher and CAO are in control more than before.
- What has changed since the decentralized pay-roll management?
- Are there still case of:
 - Delay in salary payment?
 - Missing/ incorrect account number?
 - Missing salary?
 - Under payment?
 - Over payment?
 - Deletion from payroll?
 - Teacher not on payroll in your school and why?
 - Teacher promotion vs new salary reflection on payroll

Probe for:

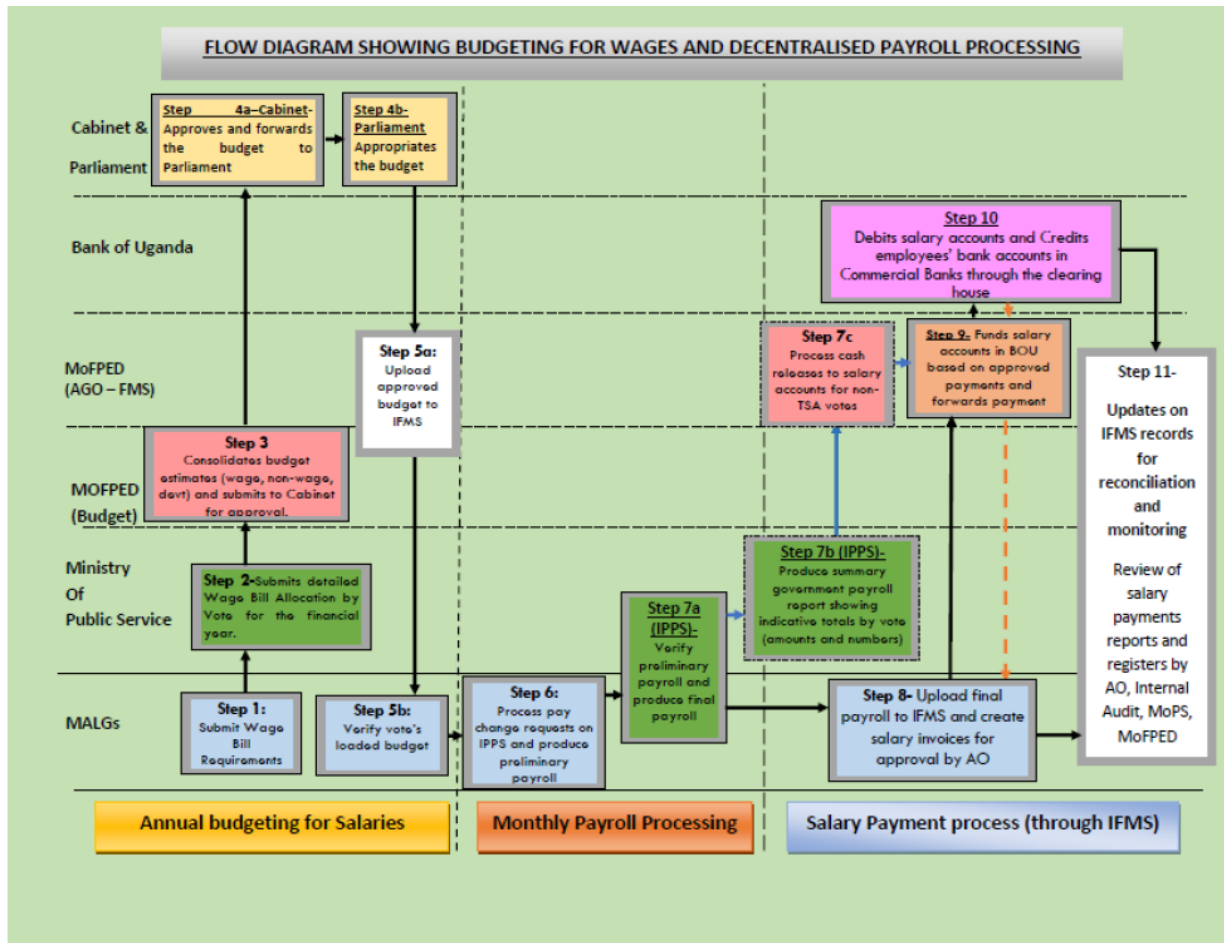
5. Which of the above are most common before 2014 and now and why?
6. What are reasons for each of the above cases?
7. What is the process of correcting such errors - which office (s) addresses each cases – has the process been made easy or still difficult.
8. Before 2014, how long did it take to correct each of the above?
9. How long does it take to correct each of the above cases now?

Awareness of salary codes on the pay slip

10. In your opinion, since the decentralization of the payroll, has the number of payroll complaints increased or reduced, and why?
11. Are aware of the salary complaint call centre? Probe for utilization of the call centre.
12. What areas of improvement do you suggest to this new decentralized payroll management system?
13. Before 2014, did you receive pay slips, (if yes, how regularly? If no, why?)
14. Currently, do you receive pay slips (if yes how regularly? If no why?)
15. Are you aware that the district published the staff payroll at the notice boards? (If yes, how often do you check for your details?)
16. What are the limitations to the practice of displaying the payroll? How can these limitations be addressed?
17. Before 2014, how was the situation of the following and why?
 - Teacher absenteeism
 - Teacher class time
18. Has the decentralization of the payroll management affected any of the following?
 - Teacher absenteeism (reasons for absenteeism – probe for salary related issues)
 - Teacher class time (is there evidence of increased time the teacher spends in class?)
19. On the scale of 1-5, how do you rate the level of school inspection and supervision? Probe for before 2014, and now, reasons for ratings and who does the inspection and supervision
20. Are there teachers leaving the teaching professional because of low or late salary in the one past year? Probe for case studies
21. Before 2014, where there teachers leaving the teaching professional because of low or late salary? How prevalent were such cases?
22. In the last six months, which WEEK of the month do you usually receive your salary? Probe for possible reasons for the variations.
23. What are the current issues affecting teachers' work?
24. Before 2014, what were the common issues affecting teachers' work?
25. What are some of the solutions to improve teachers' work?

Appendix III

Figure A.1: Process flow for annual budgeting, payroll and salary payment processes



Source: Government of Uganda (GoU), 2014

EPRC RESEARCH SERIES

Listing of Research Series published since 2010 to date. Full text format of these and earlier papers can be downloaded from the EPRC website at www.eprc.or.ug

Series No.	Author(s)	Title	Date
139	Isaac M.B. Shinyekwa Anita Ntale	The Role of Economic Infrastructure in Promoting Exports of Manufactured Products: Trade Facilitation and industrialisation in the EAC	September 2017
138	Swaibu Mbowa Tonny Odokonyero Anthony T Munyaho	Harnessing Floating Cage Technology to Increase Fish Production in Uganda	July 2017
137	Miriam Katunze Annette Kuteesa Theresa Mijubi Denis Mahebe	Uganda Warehousing Receipt System: Improving Market Competitiveness and Service Delivery	June 2017
136	Tonny Odokonyero Francis Mwesigye Annet Adong Swaibu Mbowa	Universal health coverage in Uganda: The critical health infrastructure, healthcare coverage and equity	June 2017
135	Joseph MAWEJJE Paul C. E. LAKUMA	Macroeconomic Effects of Mobile Money in Uganda	June 2017
134	Madina Guloba Sarah Ssewanyana Elizabeth Birabwa	Rural Women Entrepreneurship in Uganda A synthesis report on policies, evidence, and stakeholders	May 2017
133	Madina Guloba Sarah Ssewanyana Elizabeth Birabwa	A pathway to social protection development in Uganda: A synthesis report	May 2017
132	Isaac M.B. Shinyekwa Francis M. Mwaura Patrick Apecu	A comparative Analysis of the Tourism Sectors in the East African Community: The Way Forward for Uganda	April 2017
131	Corti Paul Lakuma Musa Mayanja Lwanga	Linking budgets to plans in a constrained resource and institutional environment: The Case of Uganda	March 2017
130	Joseph Mawejje Ezra Munyambonera	Financing Infrastructure Development in Uganda	February 2017
129	Isaac M.B. Shinyekwa, Miriam Katunze	Assessment of the Effect of the EAC Common External Tariff Sensitive Products List on the Performance of Domestic Industries, Welfare, Trade and Revenue	September 2016
128	Isaac M.B. Shinyekwa Alex Thomas IJJO	Determinants of Domestic Food Price Differentials in Uganda: The Potential for and Constraints on Intra-County Trade	August 2016

Series No.	Author(s)	Title	Date
127	Musa Mayanja Lwanga Annet Adong	A Pathway to Financial Inclusion: Mobile Money and Individual Savings in Uganda	March 2016
126	Gemma Ahaibwe Corti Paul Lakuma Miriam Katunze Joseph Maweje	Socio Economic Effects of Gambling: Evidence from Kampala City, Uganda	January 2016
125	Joseph Maweje Ezra Francis Munyambonera	Tax Revenue Effects of Sectoral Growth and Public Expenditure in Uganda	January 2016
124	Tilak Doshi Fred Joutz Paul Lakuma Musa Mayanja Lwanga Baltasar Manzano	The Challenges of Macroeconomic Management of Natural Resource Revenues in Developing Countries: The Case of Uganda	October 2015
123	Ssewanyana N. Sarah Ibrahim Kasirye	Progressivity or Regressivity in Uganda's Tax System: Implications for the FY2014/15 tax proposals	June 2015
122	Gemma Ahaibwe Ibrahim Kasirye	Creating Youth Employment through Entrepreneurship Financing: The Uganda Youth Venture Capital Fund	May 2015
121	Ezra Munyambonera Musa Mayanja Lwanga	A Review of Uganda's Public Finance Management Reforms (2012 to 2014): Are the Reforms Yielding the Expected Outcomes?	April 2015
120	Joseph Maweje Musa Mayanja Lwanga	Inflation Dynamics and Agricultural Supply Shocks in Uganda	March 2015
119	Munyambonera F. Ezra, Corti Paul Lakuma, Madina Guloba	Uganda's Tea Sub-sector: A comparative Review of Trends, Challenges and Coordination Failures	September 2014
118	Sarah N. Ssewanyana and Ibrahim Kasirye	Uganda's progress towards poverty reduction during the last decade 2002/3-2012/13: Is the gap between leading and lagging areas widening or narrowing?	June 2014
117	Mayanja Lwanga Musa and Maweje Joseph	Macroeconomic Effects of Budget Deficits in Uganda: A VAR-VECM Approach	June 2014
116	Adong Annet, Muhumuza Tony and Mbowwa Swaibu	Smallholder Food Crop Commercialization in Uganda: Panel Survey Evidence	June 2014
115	Barungi Mildred, Wokadala James and Kasirye Ibrahim	Implementing Universal Secondary Education Policy In Uganda: How Has The Public-Private Partnership Performed?	May 2014
114	Mwaura Francis, Okoboi Geoffrey and Ahaibwe Gemma	Determinants of Household's Choice of Cooking Energy in Uganda	April 2014
113	Maweje Joseph	Tax Evasion, Informality And The Business Environment In Uganda	December 2013
112	Shinyekwa Isaac & Othieno Lawrence	Trade Creation And Diversion Effects Of The East African Community Regional Trade Agreement: A Gravity Model Analysis.	December 2013

Series No.	Author(s)	Title	Date
111	Mawejje Joseph & Bategeka Lawrence	Accelerating Growth And Maintaining Intergenerational Equity Using Oil Resources In Uganda.	December 2013
110	Bategeka Lawrence et ; UN Wider	Overcoming The Limits Of Institutional Reforms In Uganda	September 2013
109	Munyambonera Ezra Nampewo Dorothy , Adong Annet & Mayanja Lwanga Musa	Access And Use Of Credit In Uganda: Unlocking The Dilemma Of Financing Small Holder Farmers.	June 2013
108	Ahaibwe Gemma & Kasirye Ibrahim	HIV/AIDS Prevention Interventions In Uganda: A Policy Simulation.	June 2013
107	Barungi Mildred & Kasirye Ibrahim	Improving Girl's Access To Secondary Schooling A Policy Simulation For Uganda	June 2013
106	Ahaibwe Gemma, Mbowwa Swaibu & Mayanja Lwanga Musa	Youth Engagement In Agriculture In Uganda: Challenges And Prospects.	June 2013
105	Shinyekwa Isaac & Mawejje Joseph	Macroeconomic And Sectoral Effects Of The EAC Regional Integration On Uganda: A Recursive Computable General Equilibrium Analysis.	May 2013
104	Shinyekwa Isaac	Economic And Social Upgrading In The Mobile Telecommunications Industry: The Case Of MTN.	May 2013
103	Mwaura Francis	Economic And Social Upgrading In Tourism Global Production Networks: Findings From Uganda.	May 2013
102	Kasirye Ibrahim	Constraints To Agricultural Technology Adoption In Uganda: Evidence From The 2005/06-2009/10 Uganda National Panel Survey.	May 2013
101	Bategeka Lawrence, Kiiza Julius & Kasirye Ibrahim	Institutional Constraints To Agriculture Development In Uganda.	May 2013
100	Shinyekwa Isaac & Othieno Lawrence	Comparing The Performance Of Uganda's Intra-East African Community Trade And Other Trading Blocs: A Gravity Model Analysis.	April 2013
99	Okoboi Geoffrey Kuteesa Annette & Barungi Mildred	The Impact Of The National Agricultural Advisory Services Program On Household Production And Welfare In Uganda.	March 2013
98	Adong Annet, Mwaura Francis & Okoboi Geoffrey	What Factors Determine Membership To Farmer Groups In Uganda? Evidence From The Uganda Census Of Agriculture 2008/9.	January 2013
97	Tukahebwa B. Geoffrey	The Political Context Of Financing Infrastructure Development In Local Government: Lessons From Local Council Oversight Functions In Uganda.	December 2012
96	Ssewanyana Sarah & Kasirye Ibrahim	Causes Of Health Inequalities In Uganda: Evidence From The Demographic And Health Surveys.	October 2012
95	Kasirye Ibrahim	HIV/AIDS Sero-Prevalence And Socioeconomic Status: Evidence From Uganda.	October 2012
94	Ssewanyana Sarah and Kasirye Ibrahim	Poverty And Inequality Dynamics In Uganda: Insights From The Uganda National Panel Surveys 2005/6 And 2009/10.	September 2012
93	Othieno Lawrence & Dorothy Nampewo	Opportunities And Challenges In Uganda's Trade In Services.	July 2012
92	Kuteesa Annette	East African Regional Integration: Challenges In Meeting The Convergence Criteria For Monetary Union: A Survey.	June 2012



51, Pool Road, Makerere University Campus,
P. O. Box 7841 Kampala, Uganda
Tel: +256414541023/4 Fax: +256414541022
Email: eprc@eprcug.org,



www.eprcug.org



TWITTER: [@EPRC_official](https://twitter.com/EPRC_official)



www.facebook.com/EPRCUganda



eprcug.org/blog