Using Delivery Approaches to Improve Public Services: Education Sector Reforms in Tanzania, 2013-2023

DeliverEd Initiative Working Paper

Ken Opalo

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DeliverEd: Building knowledge on how to use delivery approaches to advance education reforms

The DeliverEd Initiative was launched in 2019 to strengthen the evidence base for how governments can achieve their policy priorities through delivery units and other delivery approaches. Globally, more than 80 countries have used such approaches to achieve better outcomes for policy reform and implementation. Forty-seven percent of those include an education focus, either as a single focus sector or as part of a multisector approachi. But there was little empirical evidence, especially from developing countries, on the effectiveness of delivery approaches in delivering education outcomes or on the design choices, contextual features, and enabling factors that contribute to their performance.

DeliverEd has helped to fill this evidence gap and create a better understanding of the practices leaders can adopt to improve their policy delivery and reform efforts. It has conducted research within and across countries on the effectiveness of delivery approaches in improving reform implementation, with the key findings included in this final report. It has facilitated knowledge and experience sharing among countries—for example, through the Africa Policy Forum—to equip policymakers with a deeper understanding of delivery challenges and solutions to make informed decisions. It continues to increase awareness and the uptake of research to improve schooling and learning in low-income countries.

The Education Commission leads DeliverEd with Oxford University's Blavatnik School of Government and funding from the UK Foreign, Commonwealth, and Development Office (FCDO). Other partners include the University of Toronto, the Institute for Educational Planning and Administration (under the Auspices of UNESCO), University of Cape Coast, Ghana, Institute of Development and Economic Alternatives (IDEAS) in Pakistan, World Bank, and Georgetown University in the U.S. For more information about DeliverEd, and to view the country studies and other related research and policy engagement materials, please visit www.educationcommission.org/delivered-initiative.

We are very grateful to the Blavatnik School of Government and all our research partners for their in-depth research, especially during the COVID-19 pandemic. This DeliverEd Final report is the Education Commission's interpretation of the research. For the detailed research papers themselves, please see the next page.

DeliverEd Research Products

Anderson, K., Ibarra, A., & Javaid, N. (December 2022). The Education Commission. A Case Study of the Sierra Leone Delivery Unit. DeliverEd Initiative Policy Note.

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Bell, S., Leaver, C., Mansoor, Z, Mundy, K., Qarout, D., & Williams, M. (March 2023). The Role of Delivery Approaches in Education Systems Reform: Evidence from a Multi-Country Study. DeliverEd Initiative Working Paper.

Boakye-Yiadom, M., Leaver C., Mansoor, Z., & Iocco, MP. (March 2023). Management and performance in mid-level bureaucracies: Evidence from Ghanaian education districts. DeliverEd Initiative Working Paper.

Gulzar, S., Ladino, JF., Mehmood, MZ., & Rogger, D. (March 2023). Command and Can't Control: An Evaluation of Centralized Accountability in the Public Sector. DeliverEd Initiative Working Paper.

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Mansoor, Z., Qarout, D., Anderson, K., Carano, C., Yecalo-Tecle, L., Dvorakova, V., & Williams, M. (July 2021). A Global Mapping of Delivery Approaches. DeliverEd Initiative Working Paper.

Qarout, D. (November 2022). The Accountability Paradox: Delivery Units in Jordan's Education Sector 2010–2019. DeliverEd Initiative Working Paper.

Williams, M., Leaver, C., Mundy, K., Mansoor, Z., Qarout, D., Asim, M., Bell, S., & Bilous, A. (April 2021). Delivery Approaches to Improving Policy Implementation: A Conceptual Framework. DeliverEd Initiative Working Paper.

DeliverEd Policy Products

Anderson, K., & Bergmann, J. (2022). The Education Commission. Design Choices for Delivery Approaches in Education, DeliverEd Initiative Policy Brief.

Anderson, K., & Carano, C. (2021). The Education Commission. The Challenge of Delivering for Learning DeliverEd Initiative Policy Brief.

Villaseñor, P. The Education Commission. (2021) Delivery Approaches in Crisis or Conflict Situations, DeliverEd Initiative Policy Brief.

Using Delivery Approaches to Improve Public Services: Education Sector Reforms in Tanzania, 2013-2023

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Abstract:

Under what conditions can reforms implemented under delivery unit approaches become institutionalized and therefore sustainable? This paper answers these questions by describing the operationalization of Tanzania's Big Results Now (BRN) delivery unit. Qualitative analyses of policy intervention suggests that, despite only existing at the national level, Tanzania's delivery unit in the education sector was nonetheless able to influence (albeit in an imbalanced fashion) the behavior and practices of bureaucrats at the subnational level. Quantitative survey data suggest that there were significant differences in delivery unit's impacts at the national, district, and school levels across four specific measures. Finally, the paper argues that initiatives under BRN were more likely to be sustainable following the departure of the policy champion if implemented through the normal line ministry operations, or if they were donor funded. These findings have implications for our understanding of how delivery units might be deployed to improve public service delivery in lower-income countries like Tanzania.

1: Introduction:

Education is one of the most important public goods provided by modern governments (Ansell and Lindvall 2020; Stasavage 2005). In most countries the sector typically consumes the largest share of government spending as well as employing the largest proportion of public workers. In addition to the education sector's considerable fiscal and human-resource demands, it also creates unique administrative-bureaucratic challenges for governments. The running of tens of thousands of schools and associated supplies, training of teachers, curriculum development and updates, deployment of assessments, and continuous quality control all contribute to the overall organizational complexity of the sector. It is therefore not surprising that many governments, lacking in the fiscal and bureaucratic capacity needed to effectively manage these complex operations, fail to provide quality education services (Hickey and Hossain 2019; Opalo 2022). One consequence of this reality has been the widespread decoupling of schooling from learning. Around the world, many governments are in the grips of a "learning crisis."[1]

Despite observable failures in education systems, attempts at reforming the relevant administrative-bureaucratic systems and increasing resource allocation often fail due to organizational weaknesses, political pressure from vested interests, and ideational inertia (Aina 2010; Cheung 2005; Mwenda and Tangri 2005). Faced with this reality, and with an eye on election cycles, several governments around the world have turned to delivery unit approaches as a

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[1] Opalo, Ken Ochieng'. 2022. "What is the Point of Schooling? Education Access and Policy in Tanzania Since 1961," *Center for Global Development Working Paper*; Sifuna, Daniel N. 2007. "The Challenge of Increasing Access and Improving Quality: An Analysis of Universal Primary Education Interventions in Kenya and Tanzania Since the 1970s." *International Review of Education* 53:687–699; Nestour, Alexis Le, Laura Moscovix and Justin Sandefur. 2021. "The long-term decline of
school quality in the developing world." *Working Paper*

mechanism for achieving "quick wins" in service delivery (Barber 2009; Siddiquee 2014;Behn 2017; Lafuente and Gonzalez 2018; Mansoor et al. n.d.).

Delivery unit approaches focus on specific priority areas and time-bound quantifiable outcomes. Important features of delivery units include the existence of a policy champion in the form of a senior politician, clear metrics and regularized evaluation of performance, public incentive schemes and accountability mechanisms, realistic plans backed by adequate resources and time-bound targets, routinized problem-solving strategies, and investment in specific data systems that aid in the monitoring and evaluation of reform implementation. Due to their reliance on policy champions, delivery units usually comprise teams physically domiciled close to important policymakers and outside the normal bureaucratic hierarchy (Mansoor et al. n.d.).

This paper answers two questions: 1) To what extent can the operationalization of delivery units influence bureaucratic behavior and habits at different levels of government towards stated reform objectives? and 2) Under what conditions can reforms implemented under delivery unit approaches become institutionalized (including after the departure of a policy champion)? It does so by describing the operationalization of Tanzania's Big Results Now delivery unit which lasted between 2012 and 2015. This paper also examines the sustainability of specific initiatives implemented under the delivery unit approach to improve learning outcomes.

To this end, the paper uses data from multiple sources, including administrative examination data on school performance, official policy documents published by the government and donors, key informant interviews, and a qualitative survey of 161 key stakeholders in the education sector at national, district, and school levels. This study is retrospective and was conducted years after the Tanzanian government implemented (2012) and abolished (2015) its Big Results Now! (BRN) delivery unit approach in six core sectors of the public service. In the

analysis, I reference survey data from the Water and Health sectors for comparison. The former also had a delivery unit at the same time as the education sector, while the latter did not.

In the education sector, BRN had the express objective of increasing pass rates in national examinations to at least 80 percent in both primary and lower secondary schools. Tanzanian students sit national examinations in Standard Seven and Form Four. To achieve its objectives, Tanzania's BRN unit was created to work closely with both the Ministry of Education Science and Technology (MoEST) and the ministry in the President's Office in charge of regional and local governments (PO-RALG, also called TAMISEMI – an acronym for the ministry's Swahili name). The delivery unit came up with nine specific initiatives to assist schools improve learning outcomes – including official public ranking of schools; an incentive scheme for improved schools; investments teacher motivation; a national assessments of students in Standards One and Two on 3R skills (reading, writing, and arithmetic); training of teachers in 3R competencies; student teacher enrichment program that trained teachers on how to identity and support weak students; dissemination of a school improvement toolkit to headteachers to boost their management skills; and timely and equitable disbursement of capitation grants to schools to support the purchase of school supplies, including textbooks.

Given the complexity of reforming Tanzania's education program via the above initiatives, this paper relies on a variety of sources of evidence in studying BRN policy implementation, impacts, and sustainability. These include administrative data from different issues of the Basic Education Statistics (BEST), the Education Management Information System (EMIS), as well as policy reports from the World Bank and the Government of Tanzania. I also rely on an original survey of 161 government officials in the education sector as well as surveys conducted as part of the Research on Improving Systems of Education (RISE) program initiative. I use administrative

data on school enrolment, student performance, and resource allocation to evaluate variations in policy implementation and outcomes. Various policy documents issued before and after the onset of the BRN program provide further information on the government's efforts towards policy implementation. Finally, qualitative retrospective surveys of key stakeholders at the national, district, and school levels provide information on the actual implementation and operational characteristics of the BRN program.[2]

Figure 1: Total Number of Primary and Secondary Schools in Tanzania

Trends in Total Number of Primary and Secondary Schools
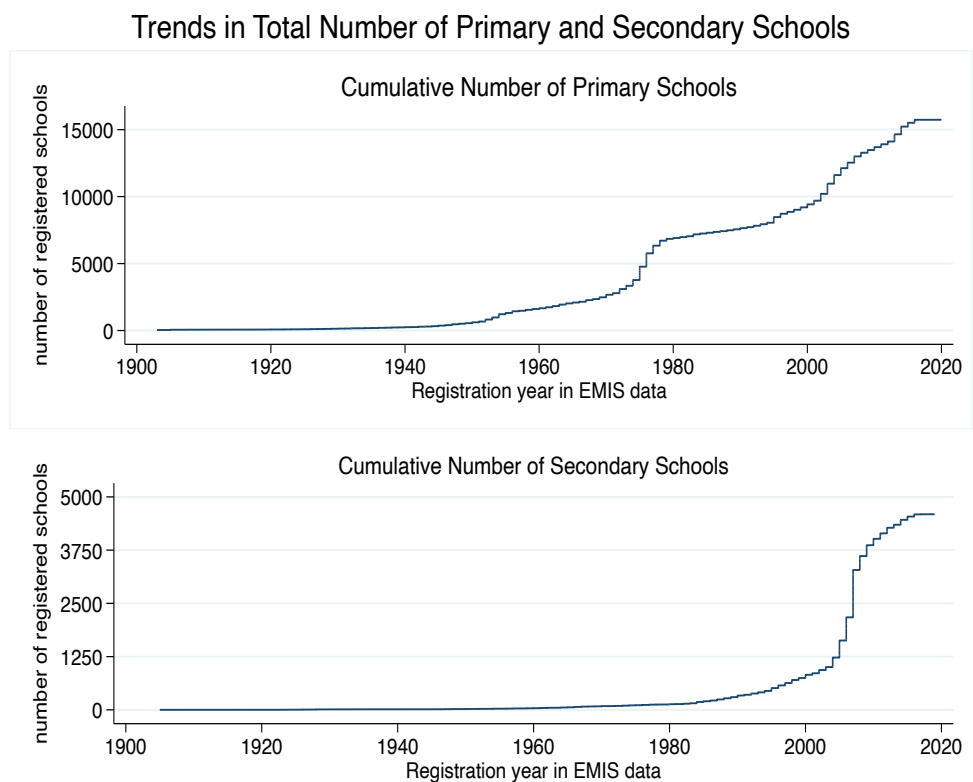
Notes: Cumulative number of primary and secondary schools in Tanzania. Notice that the significant lag in secondary school expansion relative to primary schools which saw expansion drives in the late 1970s and early 2000s.

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[2] See the Appendix for a summary of the reforms initiated under the Big Results Now! (BRN) delivery unit approach.

Figure 2: PLSE and CSEE Pass Rates (2004-2016)
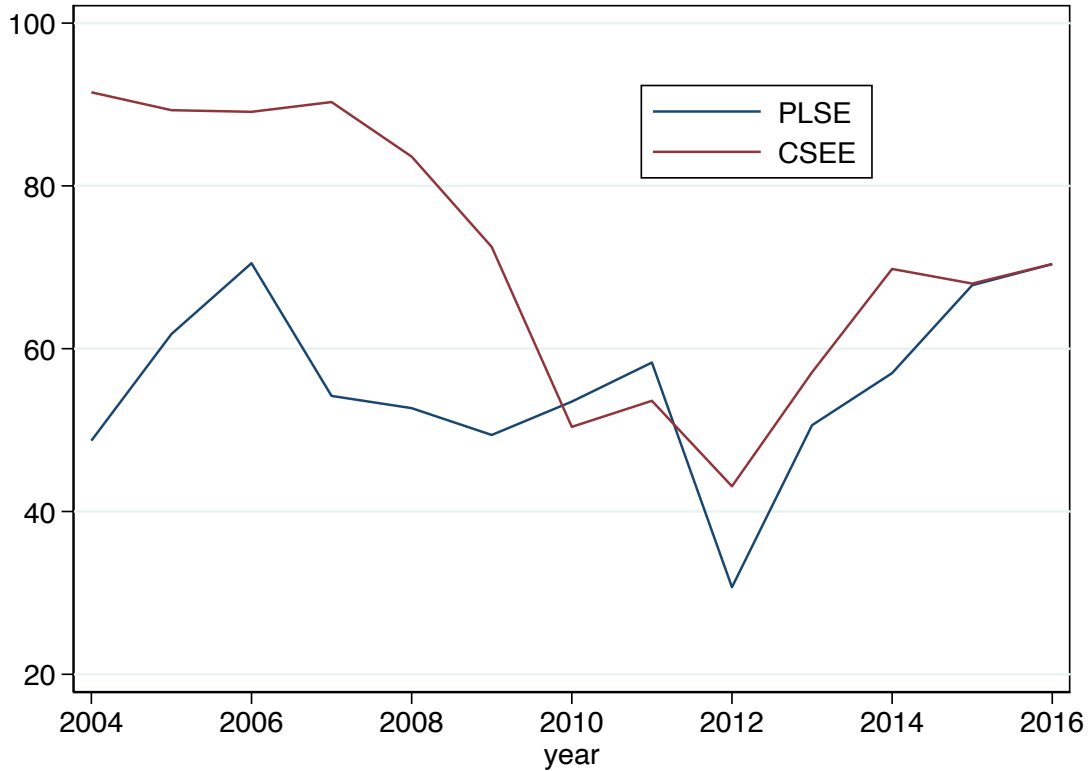
Notes: Figure shows pass rates in the Primary School Leaving Examination (PLSE) and the Certificate for Secondary Education Examination (CSEE). Figures from the United Republic of Tanzania Basic Education Statistical Abstract, 2004-2017.

Tanzania is an important case for studying delivery unit approaches to education reforms for two important reasons. First, like many lower-income countries, it has historically had a weak administrative-bureaucratic state that has not always been effective at delivering essential public goods and services like education. Second, like many countries that implemented universal primary education under the Millennium Development Goals, the country's education system has seen significant shifts over the last three decades (see Figure 1). Key among them have been the re-introduction of universal primary education (UPE) in 2002 and universal secondary education

(USE) in 2015.[3] Both UPE and USE policies principally relied on the abolition of school fees. In addition, due to the limited availability of secondary schools, the USE policy was concurrently implemented with an unprecedented school construction drive in Tanzania that begun in 2006.[4] Between 2000 and 2020, primary school enrollment increased from 68.8% to 96.9%, while the corresponding increase in secondary school was from 5.7% (1997) to 31.4% (2020).[5] One of the effects of the rapid increases in access to schooling was a decline in learning outcomes. Pass rates, an admittedly crude but nonetheless suggestive measure of learning levels, declined in both the primary and secondary school leaving examinations – reaching a nadir in 2012. Thereafter, pass rates improved on the back of BRN initiatives (See Figure 2).[6]

Using measures of the operationalization of typical core features of delivery units – priorities and targets, monitoring and data, accountability, and problem solving – I find suggestive evidence that the implementation of BRN was uneven across the national, district, and school levels.[7] First, the results show that subnational administrators and bureaucrats (at the district and school levels), were less likely to report recalling successful operationalization of BRN compared to their national-level counterparts. Second, the evidence suggests that management practices related to problem solving was lowest at the school level, a finding that reveals the top-down nature of BRN implementation and relative weakness of Tanzania's front-line bureaucrats. I also examine

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[3] Tanzania initially introduced free primary education in 1977, but the policy was rescinded in the face of economic crises in the 1980s. The Fee Free Basic Education (FFBE) policy was introduced in December 2015 following the presidential election. As a candidate, former President John Pombe Magufuli pledged to implement free secondary schooling in the country – a policy whose implementation he oversaw after winning office. See ``Remembering Magufuli's effect on the education sector," *The Citizen*, March 23, 2021

[4] See Habyarimana, Opalo and Schipper (2020)

[5] World Bank Development Indicators

[6] The education system remained strained by the massive increase in enrollment. As of 2020, classroom ratios were 1:76 for primary students and 1:40 for secondary students. There was also significant variation by region (see UNIEF, Tanzania Education Budget Brief 2020).

[7] The prioritization of these features was development as part of a comparative effort to understand the implementation and impacts of delivery unit approaches in the education sector (Anderson et al. 2021).

qualitative data and policy documents to understand the longevity of specific reform interventions following the departure of BRN's policy champion. These data suggest that features of BRN that could be readily absorbed into the regular line ministry functions and appropriation processes, and which were not dependent on donors survived the departure of BRN's policy champion in 2015.

These findings have implications beyond Tanzania. The country's historical low levels of fiscal and bureaucratic-administrative capacities are shared by many developing countries around the world (Brinks, Levitsky, and Murillo 2019; von Haldenwang and von Schiller 2016; Levy 2007; Mkandawire 2015).[8] In addition, many developing countries have seen stagnating or declining levels of education performance in the wake of increasing school enrollment over the last several decades (Le Nestour, Moscoviz, and Sandefur 2022; Sifuna 2007). Understanding the operationalization of the BRN delivery unit approach in Tanzania provides important insights on how to best design delivery units in similar contexts. On the one hand, Tanzania's BRN experience shows that it is possible to set clear targets and priorities that are broadly understood throughout the bureaucratic hierarchy; and that it is possible to lock in reform efforts within a relatively short period of time. On the other hand, it illustrates the difficulty of implementing a top-down reform effort in a context with weak subnational administrative-bureaucratic systems. In exploring these dynamics, this paper increases our understanding of strategies of improving policy implementation in weak states plagued with bureaucratic-administrative weakness in the public sector (Harris et al. 2022; Lotta et al. 2022; Peeters and Campos 2022).

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[8] For example, the Ujamaa policy of villagization and the initial implementation of Universal Primary Education (UPE) in the late 1970s both failed on the back of weak fiscal and administrative capacities (Carnoy and Samoff 2014; Hyden 2020; Opalo 2022).

2: Delivery Unit Approaches to Service Delivery

Government administrative and bureaucratic structures typically involve a series of nested principal agent relations relationships running from elected politicians to street-level bureaucrats and which are often wracked by policy transmission gaps (Balla 1998; Besley 2007; Greif 2007). These gaps may include problems of policy knowledge at lower levels, monitoring and accountability challenges due to moral hazard and adverse selection, as well as resource constraints that limit street-level bureaucrats' ability to property do their jobs. To address the problem of administrative-bureaucratic failures to achieve immediate results, politicians may adopt delivery units as a means of circumventing failures in the mainline administrative-bureaucratic structures. Rather than provide broad policy prescriptions, delivery unit approaches emphasize the importance of procedural discipline in setting specific policy targets and goals, monitoring their implementation, accountability and incentives, and problem solving. This, in theory, promises to enhance clarity of purpose and systems of accountability in the mainline government administrative-bureaucratic systems; and to achieve immediate results. This section discusses the conceptual justification for the delivery unit approach to service delivery and its specific application in Tanzania's education sector.

2.1 Conceptual Framework

The typical country's system of nested principal-agent relationships running from president to street-level bureaucrat is comprised of multiple potential points of failure during policy

implementation. [9] Problems of adverse selection and moral hazard abound.[10] The sheer size of modern governments means that administrative-bureaucratic systems may not readily respond to emerging crises. In addition, efficient information flow is often not guaranteed even in the most connected governments. Observing bureaucratic performance is often difficult. As multi-task agents, the performance of public sector workers in all domains under their purview may not always be readily observable to politicians. Workers may exert all effort in one domain that is readily observable to the detriment of less observable domains. Inadequate resourcing may further complicate any efforts to distinguish between types of bureaucrats, all of whom may appear to be uniformly under-performing. Finally, on account of their critical role in running the government, public sector officials enjoy non-trivial amounts of administrative-bureaucratic power (Greif 2007). They can hold up government operations as a bargaining tactic. This is especially true in contexts where a country's political leadership relies on bureaucratic support to remain in office.

For these reasons every node in the series of principal-agent relationships that characterize public bureaucracies presents a potential breakdown of accountability relationships. Consequently, reform efforts may not be achievable through simple commands coming from politicians. Even successful reforms may take longer than is desired by politicians attentive to political business cycles. These circumstances present politicians working with ineffective public bureaucracies with multiple options. They could use the existing bureaucratic systems, their weaknesses notwithstanding, without the guarantee of effective policy implementation. Another option would be to invest in the long-term reform efforts needed to improve bureaucratic performance, even if

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[9] See Epstein and O'Halloran (1994); Greif 2007; Holmstrom and Milgrom (1991) for discussions of the politics of principal-agent relationships in public bureaucracies.
[10] Besley, Timothy. 2006. *Principled Agents: The Political Economy of Good Government*, Oxford, UK: Oxford University Press

such reforms stretch outside electoral cycles. Or they could circumvent the bureaucratic channels of incentivizing administrative-bureaucratic effectiveness by creating delivery units.

It is worth reiterating that delivery units do not aim to completely overhaul existing administrative-bureaucratic systems. Instead, their focus tends to be in shaping incentives and organizational behavior by setting clear time-bound targets, establishing regularized review of performance and associated rewards and sanctions, and increasing the salience of political accountability to the policy champion. All else equal, several factors may drive the likelihood of success of delivery units. First, the sanctions and rewards promised by the political champions of delivery units must be credible. The political champion's credibility might in turn be a function of their time horizon in office, perceived commitment to the outcomes targeted by the delivery unit, and capacity to sanction officers in the public bureaucracy. Second, given that delivery units seek to leverage the capacity of existing structures and human capital, their success crucially dependents on the existence of a modicum of fiscal and administrative-bureaucratic capacities.[11] Without funds to sufficiently resource the achievement of targeted outcomes and minimum competence in the bureaucracy, delivery unit approaches are likely to fail. This is because such specialized units are poor substitutes of mainline ministerial bureaucracies and systems.

Overall, the design of delivery units typically seeks to raise the salience of desired outcomes, accentuate the credibility of the sanctions and rewards regime in the nested principal-agent relationships in public bureaucracies, and to signal deliberate investments in fiscal and administrative-bureaucratic capacities needed for reforms. Clear time-bound targets, additional resources for reforms, regularized evaluation accompanied by clear rewards and sanctions, and the use of a dedicated highly skilled delivery unit staff signal resolve. Evaluating the effectiveness of

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[11] Existing evidence suggests that problem solving is the least leveraged toolkit used by delivery units (Anderson et al. 2021).

delivery units therefore entails understanding both the operationalization of delivery unit approaches as well as their impacts on bureaucratic behavior and practices. Core focus areas that measure the operationalization of delivery units include political leadership and commitment, priority setting and targets, monitoring and data collection, accountability and associated incentives, and problem solving and adaptation. The empirical section of this paper qualitatively evaluates the operationalization of the delivery unit approach in Tanzania along these five focus areas. Analysis of the impacts of delivery units is rendered straightforward by the existence of time-bound quantifiable outcomes.

2.2 Tanzania's Big Results Now! Delivery Unit

As a public sector service delivery methodology, the *Big Results Now!* (BRN) initiative in Tanzania aimed to achieve quantifiable outcomes within a specified timeframe.[12] The government adopted BRN in 2012 with the goal of accelerating improvements in both administrative performance and service delivery in six critical sectors, including education, water, agriculture, transportation, energy, and resource mobilization.[13] These sectors comprised the National Key Result Areas (NKRAs).[14] This initiative was part of a broader National Strategy for Growth and Reduction of Poverty (NSGRP) which aimed to catapult Tanzania to middle income status by

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[12] The Government of Tanzania modeled the BRN on Malaysia's Performance Management and Delivery Unit (PEMANDU) designed to operationalize the Big Fast Results initiative (Siddiquee 2014).
[13] United Republic of Tanzania, *Big Results Now! 2013/2014 Annual Report*
[14] In 2014 the BRN NKRAs were expanded to twelve, with the addition of six new areas covering land tenure, contract enforcement, corruption, labor laws and skills development, regulatory rationalization, and rationalization of taxation. The expansion of NKRAs reflected a general acknowledge of lack of administrative-bureaucratic capacity in much of Tanzania's public sector. In other words, in addition to service as a traditional delivery unit approach, BRN also had a strong capacity building component.

2025.[15] The operationalization of BRN involved three important features. First, through a consultative process, the president, the political champion of the initiative, was to approve clear performance targets.[16] The ministries in charge of education and the regional and local governments were the responsible implementation units. Second, the achievement of the targets would be monitored through detailed quantification of performance by dedicated delivery unit staff. The staff would be domiciled in a presidential delivery bureau (PDB) and ministerial delivery units (MDUs). The monitoring process would be proactive, with built-in incentives for problem solving at different levels of the administrative-bureaucratic structure. In particular, BRN included clear data collection and publication of progress reports, as well as training of teachers and disbursement of a school management toolkit to all headteachers. Third, there would be a transparent process of data-driven performance management, evaluation, and accountability. After its launch in 2012, in 2014 the BRN initiative in education received donor financial support in the form of the results-based financing program EP4R (Education Program for Results).[17]

In the education sector, the BRN initiative had a clear goal of increasing pass rates in the Primary School Leaving Examination (PSLE) and Certificate of Secondary Education Examination (CSEE) to 80 percent of pupils by 2015/16. To this end, the government committed to a raft of nine specific reform initiatives – including transparent school ranking, national 3R

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[15] NSGRP is known by its Kiswahili acronym MKUKUTA II (Mpango was Pili wa Kukuza Ucgumi na Kuondoa Umaskini Tanzania). MKUKUTA II is part of Tanzania's Development Vision 2025.

[16] The consultative process included BRN Labs wherein teams of stakeholders and technical experts engaged prioritized investment areas, provided solutions to emerging problems, and were on hand to evaluate performance via measurable key performance indicators; a transformation and delivery council headed by the president and which provided strategic direction to the initiative; the president's delivery bureau – which was independent from line ministries and which consulted with the government on prioritization, problem solving, and monitoring and evaluation; steering committees comprising key stakeholders in individual ministries; and individual line ministry delivery units. Figure 1 in the Appendix summarizes the overall structure of the BRN delivery unit approach and its relation to existing cabinet and administrative architecture in Tanzania.

[17] World Bank Group, Tanzania Education Program for Results: https://projects.worldbank.org/en/projects-operations/project-detail/P147486

assessment, direct transmission of grants to schools, non-financial teacher motivation, school improvement toolkit, [18] 3R teacher training, student-teacher enrichment program (STEP), timely delivery of capitation grants, and construction of school facilities. The combination of a clear target to increase pass rates to 80 percent and the public ranking of schools was meant to generate both administrative-bureaucratic and popular accountability.[19] Schools could either fall in a green (improved), red (deteriorating) or amber (middling) bands.[20]

The BRN delivery unit operated primarily at the national level. Its implementing arm was the regular subnational administrative-bureaucratic apparatus. Furthermore, the operationalization of BRN had to contend with the ministerial division of labor in the education sector. The ministry in the President's Office in charge of Regional and Local Governments (PO-RALG) implements basic education. The Ministry of Education directs education policy in addition to overseeing higher education. The employment and remuneration of teachers is handled by the ministry in the President's Office in charge of Public Service Management and Good Governance (PO-PSMGG). Important agencies in the sector include National Examination Council of Tanzania (NECTA) that administers national examinations, the Tanzania Institute of Education (TIE) in charge of curriculum development and training of curriculum specialists, the Teachers Service Commission (TSC) which handles employment, promotion, ethics, and discipline in the teaching profession, and the Tanzania Teachers Union (TTU).

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[18] The school improvement toolkit was designed to provide practical guidelines for problem solving for heads of schools. School heads in Tanzania serve as the representatives of the District Education Director in the school. Their functions include supervision of teachers, monitoring of school funds, overseeing curriculum implementation, managing school-community relations, and coordination with quality assurance officers.

[19] The STEP program was designed to train 17000 primary and 8000 secondary teachers.

[20] World Bank Group, Tanzania Big Results Now in Education Program: Technical Assessment for Program for Results Financing. March 2014.

Figure 3: The Architecture of Delivery Units in Tanzania
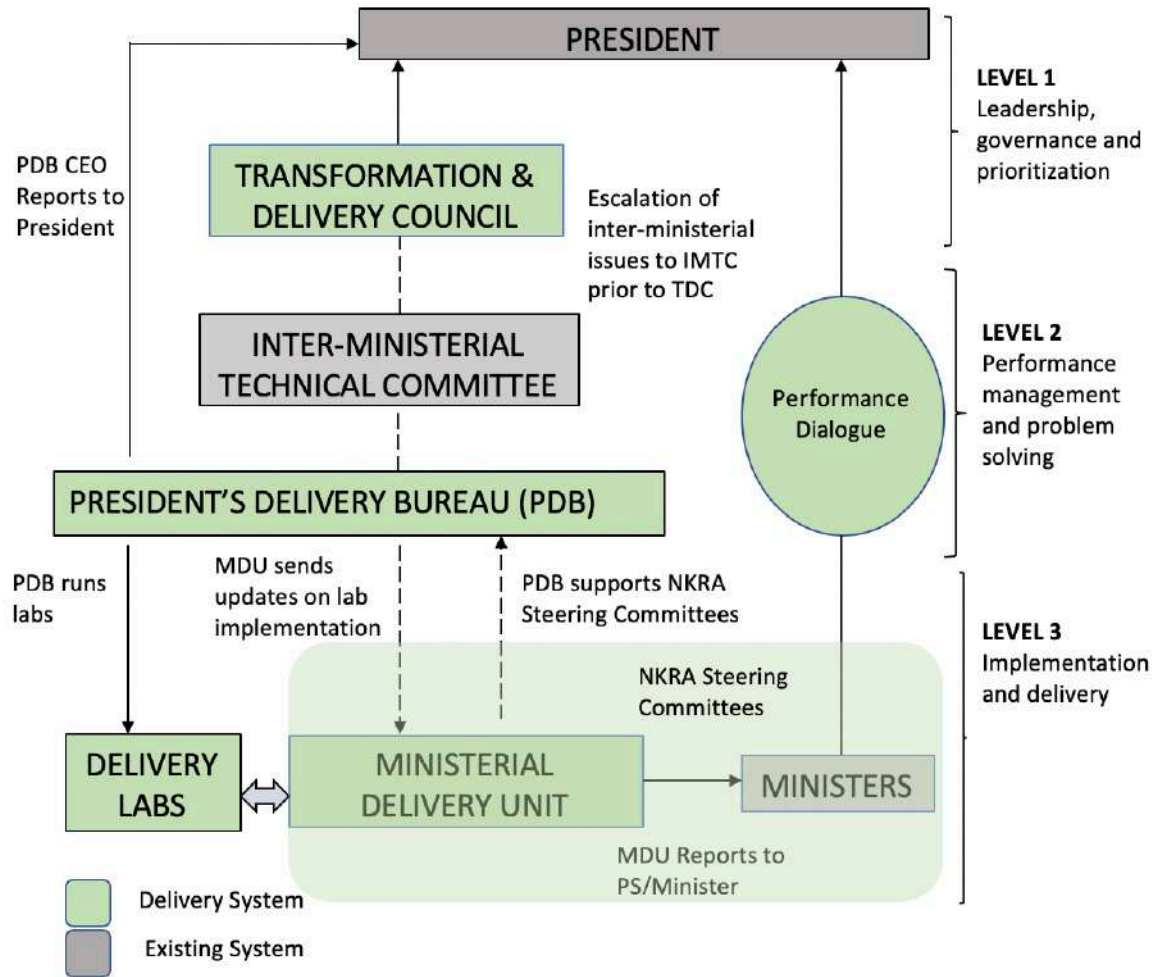
Notes: Figure shows the structure of the BRN Delivery Units in Tanzania. In addition to the presidential delivery bureau, each BRN Ministry had a ministerial delivery unit. Below the ministerial level, the BRN Delivery Units relied on the mainline ministerial bureaucracy to achieve their objectives. Tanzania's policy delivery administrative-bureaucratic system principally relies on the ministry in charge of the Regional and Local Government system, PO-RALG. Local Government Authorities (LGAS) comprise the primary subnational unit of policy implementation. Each line ministry has officers at the LGA level.

At the subnational level, the education administrative-bureaucratic apparatus has regional, district, and school-level components. The Regional Education Officer (REO) oversees the implementation of education policies in LGAs within her jurisdiction. This includes financial oversight, deployment of teachers, review of district education plans (in accordance with the Regional Education Plan), advising LGAs and the ministry on the implementation of regulations,

rules, and legislation, and reporting to the Ministry of Education. At the LGA level, there is a District Education Officer (DEO). The DEO reports to the District Executive Director, who is the administrative head of LGAs and oversees all education activities within their jurisdiction. These include data collection, supervision of construction activities, monitoring of financial management in schools, teacher deployment and retention, and curriculum implementation. Within LGAs, there are Ward Education Coordinators (WEC). The primary role of the WEC is to link schools to communities. In addition to reinforcing the functions of DEOs at the ward level, they also closely monitor examination evaluation, identify problems and hold meetings to improve learning outcomes, educate the public on their roles as stakeholders in the education sector, and to monitor the in-house training of teachers.

Nine specific initiatives comprised the reform efforts under BRN. Under the guidance of the president as the policy champion, the delivery unit converged on specific interventions designed to increase the salience of the policy objective (improve pass rates), boost morale and operational efficiency in schools, and improve accountability mechanisms. While the design of these nine initiatives (described below) was not informed by an explicit mapping of the four delivery functions outlined above, it is possible to evaluate them using the rubric of priority and targets, data and monitoring, accounting, and problem solving. Importantly, the specific routines of reporting, problem solving, and feedback that characterize delivery units were not necessarily tied to these initiatives. BRN was principally domiciled at the national level, which rendered the subnational units at the district and school levels as mere implementation agencies with little input in the delivery unit routines and instruments.

Evaluated against the four delivery functions, BRN's design had both strengths and weaknesses. It had a committed policy champion in President Jakaya Kikwete who staked his

legacy in improving government performance the six target sectors. At the same time, the initiative came within three years of the president's retirement, leaving little time for implementation and institutionalization of BRN process under the policy champion. Following Kikwete's retirement in 2015, BRN was abolished by his successor, albeit while maintaining many of its interventions. BRN's priorities and targets were clear: the government wanted to achieve 80% pass rates in national examinations at the primary and secondary school levels. The introduction of transparency through school rankings made performance on this priority area readily observable by all interested stakeholders. Monitoring and data collection was to be well implemented – an effort that substantially improved once donor support arrived after 2014. The National Examinations Council of Tanzania (NECTA) independently administered exams and published results, including school rankings. The administrative-bureaucratic apparatus kept track of and published information from the school via annual school surveys.

The system of accountability and incentives was not as clear as the first three. While the president could ostensibly hold ministers and high-level officials in the Education and PO-RALG ministries accountable, it became harder to hold relevant officials accountable for poor performance at the subnational level. The BRN delivery unit system had no explicit mechanism for holding subnational bureaucrats accountable. For example, teachers (the street-level bureaucrats in charge of policy implementation) were mostly incentivized through conditional "carrots" without any predictable "punishments." More broadly, at the district level and lower, BRN had very little reach. The mechanisms for problem solving and adaption were similarly mixed. On the one hand, the school improvement toolkit was meant to empower headteachers and to make them better managers. 3R training of teachers and the STEP program further promised to empower individual street-level bureaucrats. However, the administrative-bureaucratic system

remained largely top-down at the district level, with teachers and headteachers lacking any structured mechanism of giving feedback to their superiors or contributing to problem solving processes under BRN.

There was a significant donor involvement with BRN initiatives in the education sector. Donor support was particularly crucial because the BRN delivery unit approach faced an estimated 58 percent funding gap in its first year of operationalization (Janus and Keijzer 2015), a fact that caused delays in the rollout of some of the specific interventions described above.[21] Beginning in 2014 a consortium of donors under the banner of Education Program for Results (EP4R) committed funds to a multiyear effort to improve learning outcomes in Tanzania. Similarly in the water sector, the British Department for International Development (DFID) funded a payment by results (PbR) pilot scheme to facilitate the operationalization of BRN. Both water and education sectors differ from the health sector in the share of their budgets supported by donors. While the former mostly rely on government funding, in the 2011/12 financial year a staggering 48% of the health budget in Tanzania was supported by donors.[22] The varying degrees of reliance on donors added another layer of accountability in the process of policy implementation in the three respective sectors. In the case of education, donor involvement provided the resources needed to implement some of the reform efforts under BRN, while also ensuring their longevity beyond the departure of the BRN's policy champion. Notably, donor reliance also meant that specific initiatives under BRN faced an uncertain future at the end of the various donor-funded projects.

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[21] In addition to the accountability mechanism built into the BRN initiative, the PbR program incentivized LGAs to expand water supply. Each LGA would receive GB £1500 for each additional water point and £50 for each existing and functional water point. Furthermore, in recognition of the administrative-bureaucratic weakness in Tanzania's water sector, the PbR program included funding for technical assistance for PO-RALG, the Ministry of Water, Regional Secretariats, and LGAs.

[22] Health Policy Project, 2016. Available here: https://www.healthpolicyproject.com/pubs/7887/Tanzania_HFP.pdf

BRN had a very truncated timeline – a fact that was a function of Tanzania's political business cycle. The timeframe also reflected a direct tradeoff between short-term quick wins versus long-term investments in administrative-bureaucratic capacity building in the six BRN focus areas. The initiative was rolled out in early 2013 just over three years before the expiry of President Jakaya Kikwete's second term. Despite the hegemonic status and almost guaranteed incumbency of the ruling party CCM (Chama Cha Mapinduzi), it was not obvious that the BRN initiative would survive Kikwete's retirement. Indeed, it is instructive that the timeframe imposed on the targets was the 2015/16 fiscal year. As is common with delivery unit approaches (Anderson et al. 2021), the administration of Kikwete's successor, President John Magufuli, wound down the BRN initiative upon taking office .

An important feature of BRN is that several of the nine core initiatives (described below) introduced by its delivery unit survived the departure of its policy champion. While not designed in these explicit terms, these initiatives included efforts that can fit into the four delivery functions of setting priorities and targets, monitoring and data, accountability and incentives, and problem solving and adaptation. The surviving BRN initiatives were later absorbed into mainline ministry operations. The absorption was so thorough that the 2018/19 Education Sector Performance Report made no mention of BRN.[23]

As noted above, BRN involved five other sectors besides education. To understand the operationalization and impacts of BRN in the education sector, this paper considers two shadow comparative cases in the health and water sectors. Water was one of the BRN sectors while Health was not. The objective of this exercise is to evaluate whether any observable changes in beliefs and behaviors under BRN in the education sector were due to sectoral idiosyncrasies. The

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[23] Government of Tanzania (2020) Education Sector Performance Report, 2018/2019

comparison with the Health sector aims to ascertain whether administrative-bureaucratic beliefs and behaviors differed across BRN versus non-BRN sectors. Despite the limited number of respondents in the two sectors (19 each compared to 161 in education), the results shown below provide suggestive support for the inferences made regarding implementation of BRN in the education sector.

3. Evaluating the Operationalization of BRN in the Education Sector

This paper does not seek to causally identify the impacts of the BRN delivery unit approach in Tanzania. Instead, it provides a qualitative descriptive analysis of the operationalization of BRN and corresponding trends in the initiative's stated goals. To complement the analysis of the education sector, the paper also provides a descriptive comparative evaluation of the operationalization of BRN in the water sector as well as the operations of the health sector during the same 2013-2015 period in the appendix. The goal of this comparative exercise is to highlight how variation in ministerial-level organizational features influenced the implementation strategies adopted and the associated successes/failures under BRN. Surveys of officials in the water and health sectors were only conducted at the national and district levels.

The analysis below is structured as follows. I begin by describing the data used in this study before discussing specific BRN initiatives and their sustainability. I discuss specific BRN initiatives that map onto four main delivery functions – setting clear priorities and targets, monitoring and data use, accountability and incentives, and problem solving and adaptation. Thereafter I present evidence from survey data on BRN implementation and influences on

administrative-bureaucratic practices and behaviors. The survey evidence includes data collected in 2017 and 2023.

3.1 Data and Methods

The main methodological approach in this paper is qualitative and retrospective. To this end, it uses a mix of quantitative survey data, qualitative in-depth interviews, process tracing focusing on official policy documents, and administrative data. An original management survey at the national, district, and school levels provides the main evidence regarding BRN implementation. I use these data to describe the operationalization of BRN delivery functions – priorities and targets, monitoring and data collection, accountability, and problem solving – across the three levels of government. I complement these data with results from school management surveys (covering both primary and secondary schools) and baseline survey on the state of schools and the education sector conducted by under the Research on Improving Systems of Education (RISE) program.

The main original survey in this paper includes 161 respondents. The survey covered 15 officials at the national level, including current and former from important agencies like the Tanzania Institute of Education, National Examination Council of Tanzania, Ministry of Education (2), PO-RALG, Teacher's Service Commission, Presidential Delivery Bureau (3), Ministry of Education Delivery Unit (3), Members of Parliament (2). In each of 21 select districts, 5 officials were interviewed, including the District Executive, District Education Officer, Ward Councillors (2). For each of the 21 schools randomly selected from each district, the Headmaster and a Teacher were interviewed. In cases where specific departments are no longer in existence, enumerators interviewed veterans of those departments or otherwise knowledgeable current staff. The field

survey was conducted in May 2023. 161 of the 162 target respondents at the national (15), district (105) and school levels (42) were successfully interviewed.[24]

Beyond quantitative and qualitative surveys, I also rely various issues of policy documents from the Government of Tanzania and donors. As noted above, Tanzania introduced BRN while in the throes of significant changes in the education sector – both in terms of policy changes and an enormous increase in enrollment. The changes were part of wider reform efforts in the education and other sectors that began in the mid 1990s. Therefore, it is important to contextualize BRN's operationalization within the country's wider administrative-bureaucratic system and policy environment. Furthermore, the success of a delivery unit approach is crucially dependent on the policy champion's ability to expend political capital in enforcing accountability within the government – hence the need to understand the structure of the administrative-bureaucratic system in charge of education in Tanzania.

In addition to the education sector, this paper includes a descriptive comparative study of the water and health sectors during the same period of BRN implementation. Water was a BRN sector, while health was not. These two sectors provide shadow cases whose role is to contextualize changes (or not) in the administrative-bureaucratic behaviors and believes in the education sector following the operationalization of BRN. Structured qualitative surveys at the national and district levels will provide material for a comparative analysis of changes in administrative-bureaucratic beliefs and behaviors in the education, water, and health sectors during the BRN period. For both sectors, 19 individuals were interviewed at the national (4) and district levels (15). The next section presents the results.[25]

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[24] Table B3 in the Appendix describes the target respondents at the national and subnational levels.
[25] This research project was approved by Georgetown's Institutional Review Board as well as Tanzania's National Bureau of Statistics.

3.2 Implementation and Sustainability of Specific Initiatives under BRN

I begin by describing the implementation of the nine specific BRN initiatives as summarized in Table 1. The goal here is to highlight the specific ways in which these initiatives fit into the wider goals of Tanzania's delivery unit approach to reforming the education system; and the extent to which they served the purposes of setting clear priorities and targets, monitoring and data use, accountability and incentives, and problem solving and adaptation. It is worth noting that the government did not envision the nine different initiatives as constituting these four areas. The point of this exercise is to use a tractable framework to understand the processes through which the BRN delivery unit approach sought to achieve its stated objectives.

The goals, priorities and targets of the Tanzanian government were expressed in the initiative to publicly rank schools, districts and regions. Under the initiative, it would be obvious for all to see which schools, districts, and regions had not reached the target of having 80% of their students pass the PSLE and CSEE examinations. The government also set annual targets against which individual schools would be evaluated. This initiative was fully implemented and sustained, albeit with little input from lower units. The examinations were centrally designed and administered by NECTA, which also published the rankings. It was only dropped in 2022 after the government decided that school rankings were distorting incentives.

Table 1: Implementation and Survival of Big Results Now Initiatives

Initiative	Description	Implementation and Survival (post-2015)
Official School Ranking	To increased transparency in performance, the government ranked all government primary and secondary schools based on their pass rates in national examinations. Both primary and secondary schools were ranked at the national, regional, and district levels. Districts and regions were also ranked. In the rankings school were placed in red(worst), amber, or green(best) bands. Tanzania students sit the Primary School Leaving Examination (PSLE) in Standard Seven and the Certificate of Secondary Education Examination (CSEE) in Form Four.	Fully implemented through 2021. Schools and districts were ranked in three categories – red, amber, and green. The rankings were publicly available on the examination body's website (https://www.necta.go.tz/brn). Overall, the PLSE pass rate increased from 57% (2014) to 82% (2020); CSEE pass rates increased from 69.8% (2014) to 85.8% (2020).
School Incentive Scheme	To incentivize good performance, the government gave monetary and non-monetary incentives to schools that performed well or were most improved. There was no punishment for schools that did poorly or declined in their performance in national examinations at both the primary and secondary levels.	Partially implemented since 2013. The recognition of schools remains conditional on availability of (donor) funds. A subset of deserving schools received financial awards after the announcement of examination results. In 2018, 3,916 primary and 781 secondary schools which improved (together with 10 students from primary and 9 from secondary schools) were awarded monetary and non-monetary awards.
Teacher Motivation	Having identified low teacher morale as an impediment to achieving good learning outcomes, the government sought to provide both non-monetary and monetary incentives to boost teacher motivation. This included paying teachers on time and settling arrears from previous years.	This was partially implemented over the years since 2013; however, its full realization is conditional on fiscal constraints faced by the Tanzanian government. As late as 2021 the Tanzania Teachers' Union was still complaining about low pay and unsettled arrears (see here: https://www.thecitizen.co.tz/tanzania/news/national/education-special-report-unhappy-teachers-can-only-deliver-unhappy-results-contends-ttu-2509672). There was, however, substantial decline over time in non-salary financial claims that were older than three months. Claims against the government that were older than three months fell from TShs 25b in 2014 5o Tshs 5.7b in 2020.
National 3R Assessment	To be able to identify weak students early, the government implemented early learning assessments (Standard Two). The assessments focused on the 3R (reading, writing, and arithmetic) and randomized the schools that were assessed. The goal was to then help weak students improve their 3R skills, while also incentivizing all schools to improve their teaching of 3R skills.	This initiative was largely implemented and has now been institutionalized. As of 2019 early grade learning assessments were still ongoing, with results suggesting the share of students in Standard Two achieving minimum numeracy skills increasing from 8.2% (2013) to 17.15 (2019); the benchmark reading comprehension increased from 22.6% to 39%.

		3R assessments were conducted every two years (2013, 2015, 2017, and 2019). The National Examination Council of Tanzania (NECTA) has now fully institutionalized 3R assessments.
3R Teacher Training	Instead of improving generalized regular teacher training, the BRN process focused on training Standard One and Two teachers to improve their proficiency in 3R subjects. Initial plans targeted over 6,000 schools in 40 (out of 136) low-performing districts will be trained. This was scaled up to the whole country with donor funds in 2015.	This initiative was largely implemented through 2022 and is likely unsustainable without ongoing donor support. Between 2014-2016 60,000 teachers were trained (Tanzania has almost 195,000 primary school teachers). There was no assessment conducted on teachers who were beneficiaries of the 3R teacher training program.
Student Teacher Enrichment Programme (STEP)	To increase the rate of improvement among students over time, STEP trained primary and secondary school teachers on how to identify and support low performing students. Teachers were trained on how to conduct diagnostic tests to determine which students need extra coaching, as well as how to develop curriculum and conduct classes for low performing students.	This initiative was partially implemented and is likely unsustainable without ongoing donor support. Between 2014-2016 the STEP program had reached 5,500 teachers. By 2021 more than 10,000 schools had carried out STEP training. Tanzania has just over 18,500 primary schools and almost 5,300 secondary schools.
School Improvement Toolkit	Headteachers are a key part of the delivery of education services. BRN therefore sought to improve headteachers' management skills in both primary and secondary schools via a management toolkit. Headteachers would also be trained on how to achieve quality improvements in their schools.	This initiative was implemented, with nearly all schools receiving the toolkit on a recurrent basis. Implementation began in 2014 and will most likely continue due to institutionalization within the relevant ministries in charge of education (MoEST and TAMISEMI).
Capitation Grants	About 37% of capitation grants did not reach schools due to leakages. Other schools did not receive their grants on time. Consequently, BRN sought to achieve timely disbursements of capitation grants to schools and to equalize the per capita disbursement of funds per district (about $4.6 per primary student and $11.6 per secondary student).	This initiative was implemented and is most likely sustainable moving forward as part of the normal appropriation process. Between 2014/15 and 2020/2021 the average release rate of capitation grants to schools was 89%.
School Construction	To increase access to schooling, the government committed to build schools and improve the physical infrastructure in schools throughout the country.	This initiative was and continues to be implemented – in part aided by community-driven contributions to ongoing maintenance and construction in schools.

Notes: This table summarizes the specific initiatives implemented under the Big Results Now delivery unit approach, their implementation, and sustainability moving forward. BRN started in 2013, with the implementation of initiatives primarily influenced by the availability of funds. Donor assistance began in 2015 under various World Bank initiatives. Data in this table come from the Government of Tanzania and various World Bank project reports.

The measurement of performance, monitoring of specific trends, and the use of data was

present throughout the nine initiatives. The government collected data on schools through annual

school censuses. According to the World Bank, "[i]mproved results monitoring and data management was one of [Tanzania's] most successful achievements.[26] The government collected data through the basic education management information system (BEMIS) as well as Annual School Censuses. In addition, the fact that various components of the BRN initiatives were donor-funded reinforced the need to collect data for reporting purposes. It is not obvious from the available qualitative evidence and interviews that the data was always used to make decisions at the national, district, and school levels. Much of the aggregate data was largely analyzed and used at the national level – especially since the structure of BRN allowed little room for input from subnational levels on an ongoing basis.

Tanzania's government sought to create clear incentives and rewards for well-performing schools. The school incentive scheme, the teach motivation initiative, and the 3R and STEP programs designed to improve teachers' skill all sought to incentivize teachers to exert more effort towards improving learning outcomes. However, the accountability and incentive structure under BRN did not involve clear sanctions across the national, district, and school levels. The incentive scheme should therefore be understood as one involving "carrots" with no "sticks." There was no clear process under BRN for sanctioning schools that did not meet specific targets.

Aware of the structural conditions that influence school's ability to improve learning outcomes, the government of Tanzania intentionally looked to a few structural solutions and adaptations in the design of BRN. The first was an attempt to improve headteachers management (and problem solving) skills via the school management toolkit. Second, the government addressed the problem of perennial delays or non-disbursement of school capitation grants by sending

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[26] World Bank Group (2022), Tanzania Education Program for Results, Report No: IC00005307. Available here: https://documents1.worldbank.org/curated/en/099145007252213972/pdf/BOSIB0d97d4cf0090b8f6020d4fe3ae3de.pdf

resources directly to schools. Both initiatives gave ownership to the lowest level of education service delivery (the school), thereby empowering headteachers in the quest to improve learning outcomes. Third the 3R national assessment and 3R training for teachers were meant to identify weak students early and help teachers acquire the skills needed to help such students. Like other initiatives discussed above BRN's problem solving and adaptation strategies were largely top down. Schools and districts had very little input in national-level discussions regarding specific potential improvements to the manner of service delivery in the education sector.

In 2015 President Jakaya Kikwete, BRN's policy champion, retired from office. His successor, John Magufuli, had other policy priorities beyond the BRN focus sectors. As such, BRN ceased to exist as a delivery unit designed to improved learning outcomes in education. However, nearly all the BRN initiatives survived under various degrees of implementation. The departure of President Kikwete left open the question of whether the reforms started under BRN would be sustained under his successor.

Two obvious explanations emerge regarding the sustainability of specific BRN initiatives in the education sector. First, the fact that the delivery unit personnel under BRN were largely at the national level meant that subnational implementation of BRN relied on the regular line ministries of education and PO-RALG. Consequently, these initiatives were simply mainstreamed in ways that were legible to subnational bureaucrats and which marked government policy directives. For example, the disbursement of school capitation grants dovetailed with government policy of decentralization as a mechanism of improving service delivery.[27] Stated differently, it is not the case that there was a separate delivery unit in every Tanzanian local government area

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[27] See Government of Tanzania (2022), Regional and Local Government Strengthening Programme. Available here: https://www.tamisemi.go.tz/storage/app/media/uploaded-files/PROGAMU%20YA%20UIMARISHAJI%20WA%20MIKOA%20NA%20MAMLAKA%20ZA%20SERIKALI%20ZA%20MITAA.pdf

(LGA) charged with reform implementation – an arrangement that would have meant the removal of an important policy transmission mechanism following the abolition of BRN. At the subnational level, the mechanisms of policy transmission did not change with the abolition of BRN.

Second, a significant share of the BRN initiatives were funded by donors under multiyear contracts with the government. This likely helped in their survival since they did not involve significant fiscal commitments on the part of the government of Tanzania. The fact that the global education epistemic community had come to be concerned about the "learning crisis" meant that donor interest in improving learning outcomes were aligned with the original motivations for the creation of BRN. Therefore, even as reforms evolved and acquired new life after the abolition of BRN, the original focus on improving learning outcomes – including through the implementation of specific BRN initiatives – remained.

3.3. Retrospective knowledge and perceptions of BRN

How were bureaucrats at the national, district and school levels impacted by BRN? To what extent did BRN alter bureaucratic behaviors and practices when it came to the setting of priorities and targets, monitoring and data use, accountability and incentives, and problem solving and adaptation? To answer these questions, I use survey data collected in 2017 and 2023. Both sets of surveys asked respondents to recall how BRN was implemented in the three-year window between 2013-2015. As such, the data presented here should be viewed as evaluating a policy implementation exercise more than 2 to 8 years after the fact. To a large extent the data also highlight the durability of policy impact of specific initiatives implemented under the BRN delivery unit approach.

Figure 4: Clarity of Priorities and Targets

Head Teacher Awareness of School Ranking
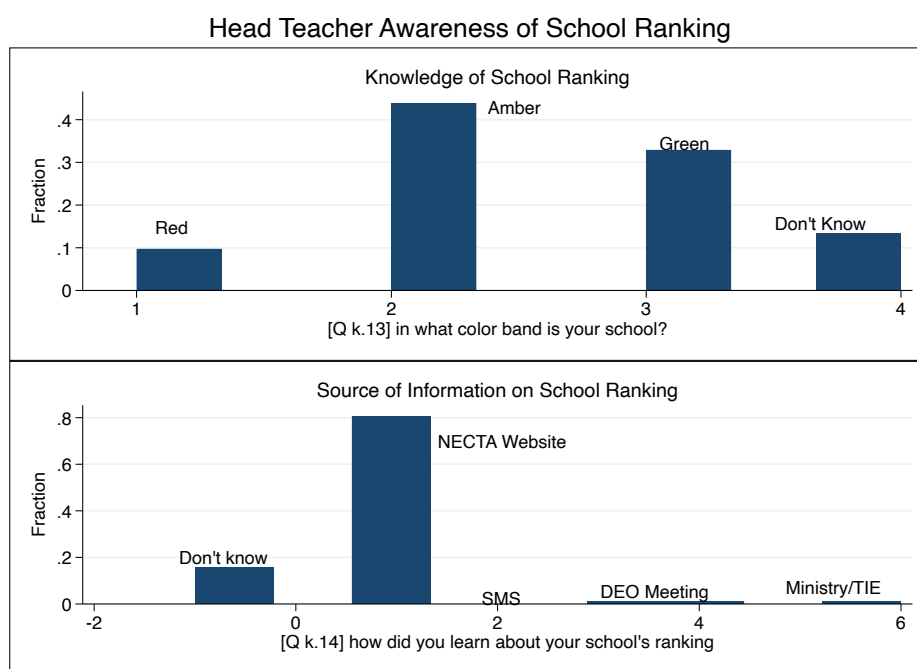
Notes: Awareness of school ranking position among headteachers surveyed in 2017 across select districts in Tanzania. The majority of headteachers knew their school's ranking by NECTA. In addition, most teachers got the ranking information from the NECTA website, and not official communication by the government through subnational education officers at the district or ward levels.

I begin by examining the implementation of BRN using surveys of key stakeholders conducted in 2017, starting at the school level. While Tanzania's delivery was primary structured at the national level, it nonetheless relied on implementation at the district and school levels and empowered headteachers via the policy of direct allocation of capitation grants to schools and the school management toolkit. As such, it is important to understand the extent to which headteachers internalized pivotal features of BRN. Figure 4 shows that headteachers largely knew about their school's ranking and that they independently got that information from the NECTA website. This finding reinforces the idea that the setting of priorities and targets was clearly understood at the school level. However, the clarity among headteachers was not matched by school management committees (bodies comprising local stakeholders that serves as a board at the school level). More

than 80% of SMC members interviewed were largely unaware of their school's ranking in the previous year. Given that pass rates and associated school rankings were the main way through which the government signaled its priorities and targets under the BRN delivery unit approach, it is fair to say that SMCs likely did not play an important role overseeing headteachers' efforts to improve learning outcomes.

**Figure 5: Chain of Command and Accountability (Examination Results)**
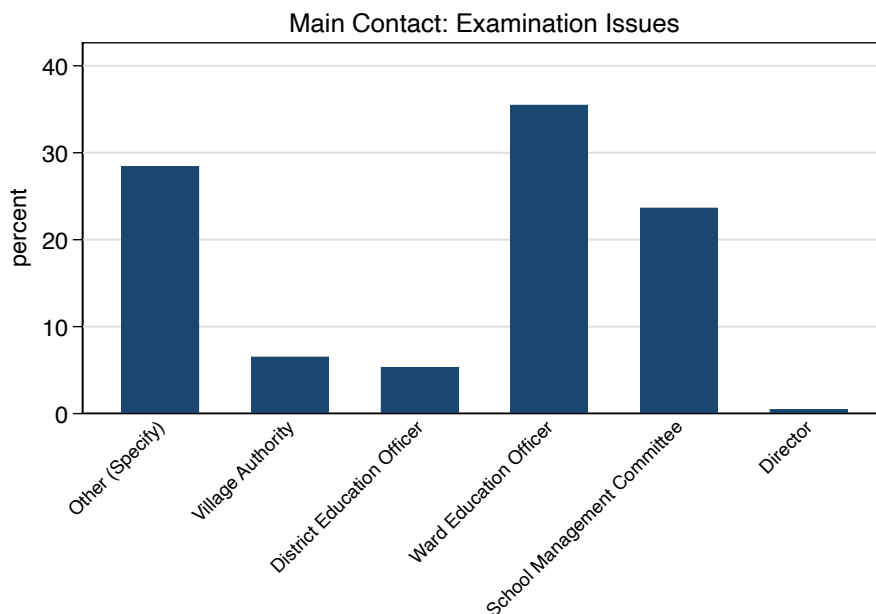
Notes: Headteachers likely first contact in case school does not perform well in national examinations. Notice the relative importance of SMCs, despite their lack of knowledge about school rankings as noted above. In general, there does not appear to be a clear understanding of who to talk to in case of problems with student performance.

In addition to SMCs lack of knowledge over school rankings, it is also apparent that headteachers lacked common knowledge over the chain of command or problem-solving strategies at the local level. Figures 5 through 7 show the distribution of officials that headteachers reported having contacted over a variety of issues. What is clear from the figures is that Tanzanian headteachers do not appear to have a common understanding of the chain of command above the school level – otherwise there would be a convergence on specific officials among headteachers

within the different issue areas. The differences in perception of the chain of command likely had an impact on perceptions of chains of responsibility allocation and accountability during the implementation of BRN.

Figure 6: Chain of Command and Accountability (Learning Outcomes)
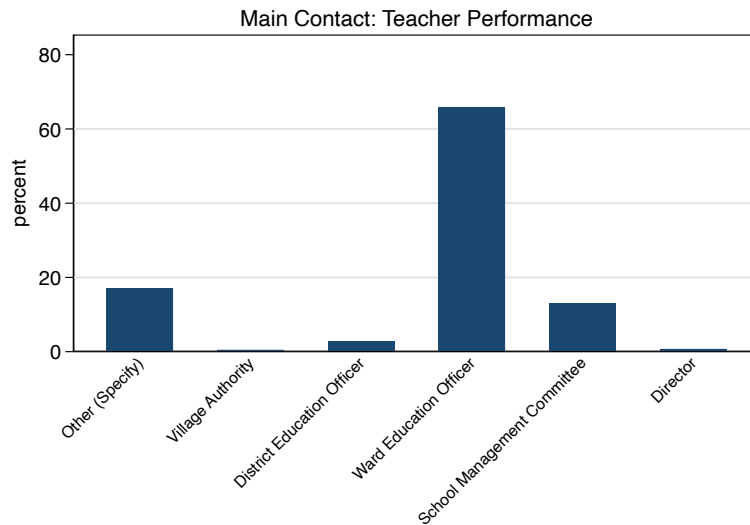
Notes: Distribution of individuals that headteachers are likely to contact regarding teacher performance. Unlike in the case of examinations, there appears to be greater convergence on the Ward Education Officers as the primary principal to contact regarding teacher performance.

Figure 7: Chain of Command and Accountability (Learning Outcomes)
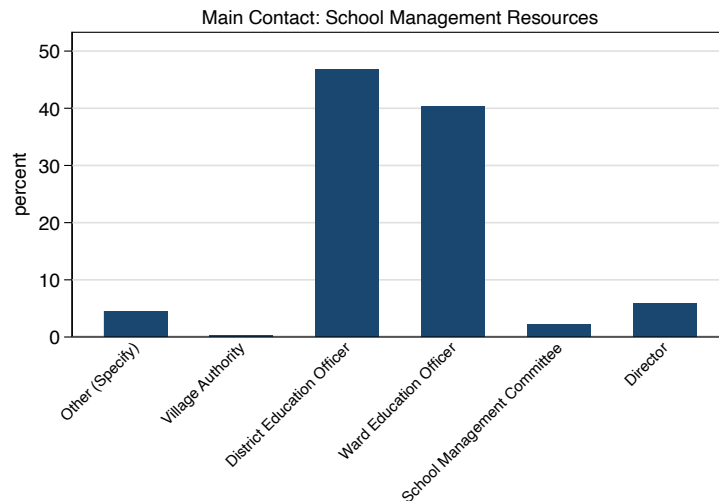
Notes: Distribution of officials headteachers call on regarding financial resources needed for general school management. District Education Officers and Ward Education Officers are almost evenly split on this survey item. This suggests a poor understating of the hierarchy of problem-solving surrounding financial resources on the part of headteachers.

3.4 Quantitative evaluation of BRN operationalization

How do current and former public officials recall the implementation of BRN? This section answers this question using the results of a short management survey covering 161 officials in the education sector and 19 officials each in the Health and Water sectors. To understand the extent to which BRN changed management beliefs and practices, the survey asked specific questions related to the setting of priorities and targets, monitoring and data, accountability, and problem solving. Respondents were asked to rate the implementation of BRN on a scale of 1-5, with 5 representing the highest level of implementation. The questions were grouped in four different categories designed to capture the delivery functions of priorities and targets, data and monitoring, accountability and incentives, and problem solving and adaptation.

For each question, enumerators asked respondents to recall the operationalization of BRN, and then directly coded the results based on the respondents' responses. For each question, the enumerators read out three intensities of implementation – from mild to middling to high – and asked the respondent to state their perception of the degree of implementation of the described delivery function. The enumerator then independently coded the response on a scale of 1-5. Table 2 below shoes the summary statistics of the 21 questions covering the 4 different categories of BRN implementation.

Table 2: Summary Statistics of Survey of Bureaucrats (National, District, and School Levels)

Implementation Categories	Variable	Obs	Mean	Std. Dev.	Min	Max
Priorities and Targets	A1	151	4.656	1.02	1	5
	A2	143	4.448	1.136	1	5
	A3	151	4.755	.643	1	5
	A4	151	4.166	1.18	1	5
	A5	151	4.424	1.146	1	5
	A6	153	4.771	.721	1	5
	A6b	149	4.644	.959	1	5
Monitoring and Data	A7	128	4.758	.801	1	5
	A8	148	3.973	1.452	1	5
	A9	140	4.493	1.083	1	5
	A10	137	4.482	1.092	1	5
	A10b	143	4.678	.931	1	5
Accountability	A11	144	3.701	1.28	1	5
	A12	147	4.741	.845	1	5
	A13	141	3.128	1.408	1	5
	A14	129	3.171	1.838	1	5
	A14b	151	4.464	1.232	1	5
Problem Solving	A15	146	4.007	1.479	1	5
	A16	149	4.745	.669	1	5
	A17	117	4.111	1.394	1	5
	A18	139	3.468	1.557	1	5

Notes: Table presents summary statistics of management survey questions administered to respondents across national, district, and school levels in May 2023. All 21 questions were categorized into different focus areas of BRN implementation. The column of observations does not sum up to 161 respondents in situations where respondents could not answer the specific question asked.

Figure 8: Retrospective perceptions of BRN implementation across national, district, and school levels.

Retrospective Evaluations of BRN Implementation
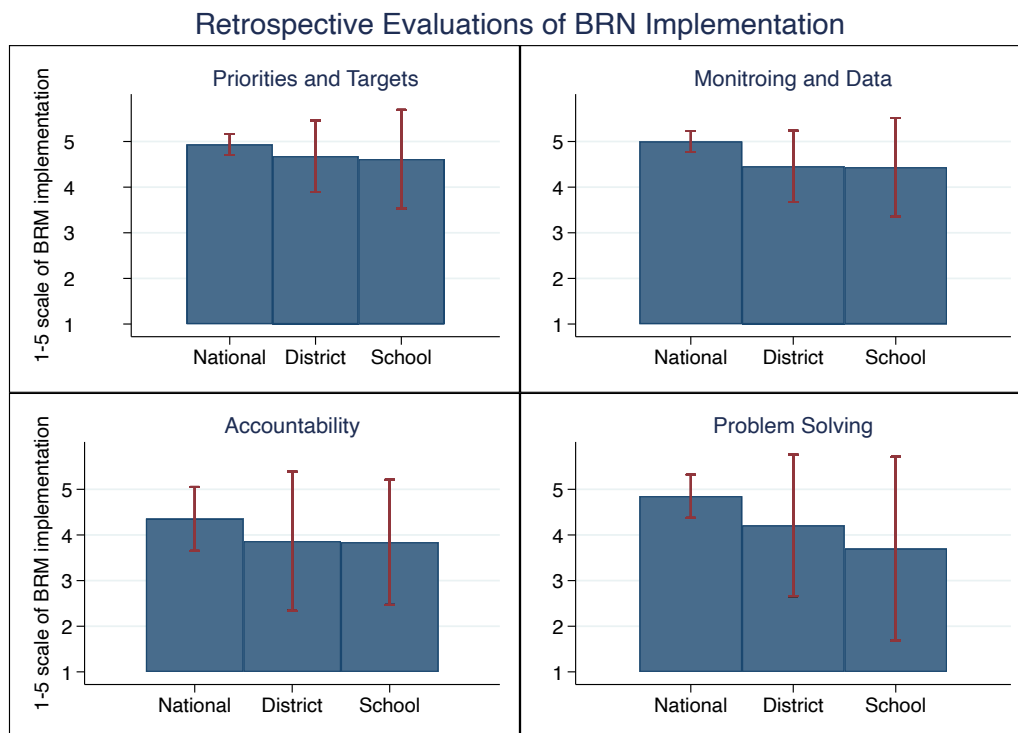
Notes: Graph bars illustrating mean rating of extent of BRN implementation across three levels of government. The red error bars represent 95% confidence intervals. For each category of delivery unit impacts, there are no statistically differences across the national, district, and school levels.

An overriding question regarding BRN implementation was the extent to which its initiatives percolated to subnational levels. As noted above, BRN was primarily implemented at the national level. Therefore, the survey targeted officials at the national, district, and school levels and asked respondents the same questions at each level. Figures 8 through 10 show the results – simple comparison of means with 95% confidence intervals illustrated by the red bars. The results suggest that there were no statistically significant differences in recalled perceptions of BRN implementation across the three levels of government. However, the survey also provides suggestive evidence that perceptions of the extent of BRN implementation was strongest at the national level and weakest at the school level. Furthermore, the specific area of accountability

showed the lowest means in the evaluation of BRN implementation efforts. This might be due to the fact that BRN was limited to the national level and that at the subnational level the government heavily relied on "carrot" incentives to induce better performance with little tools available to severely sanction poor performers.[28]
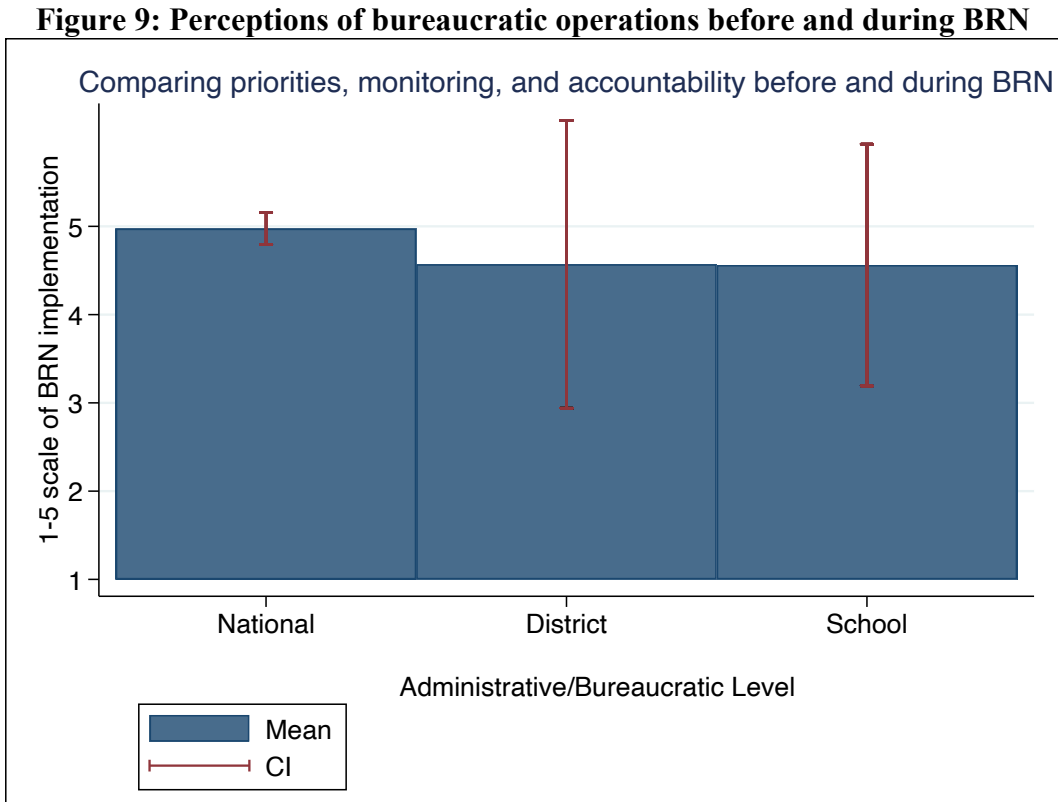
Figure 9: Perceptions of bureaucratic operations before and during BRN

Notes: Figure shows means (and 95% confidence intervals) of perceptions of bureaucratic practices before and during BRN. Three survey questions A6b, A10b, and A14b explicitly asked respondents to compare bureaucratic practices before and during BRN. The results suggest that there is no statistically significant difference in recall of BRN implementation across the national, district, and school levels.

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[28] This might also have been a function of the government's own realization of the constraints faced by teachers and their superiors – including large classroom sizes, limited resources, and the fact that the access expansions in the previous decade had not been accompanied by commensurate increases in resource allocation.

Figure 10: Perceptions of BRN implementation in rural and urban areas
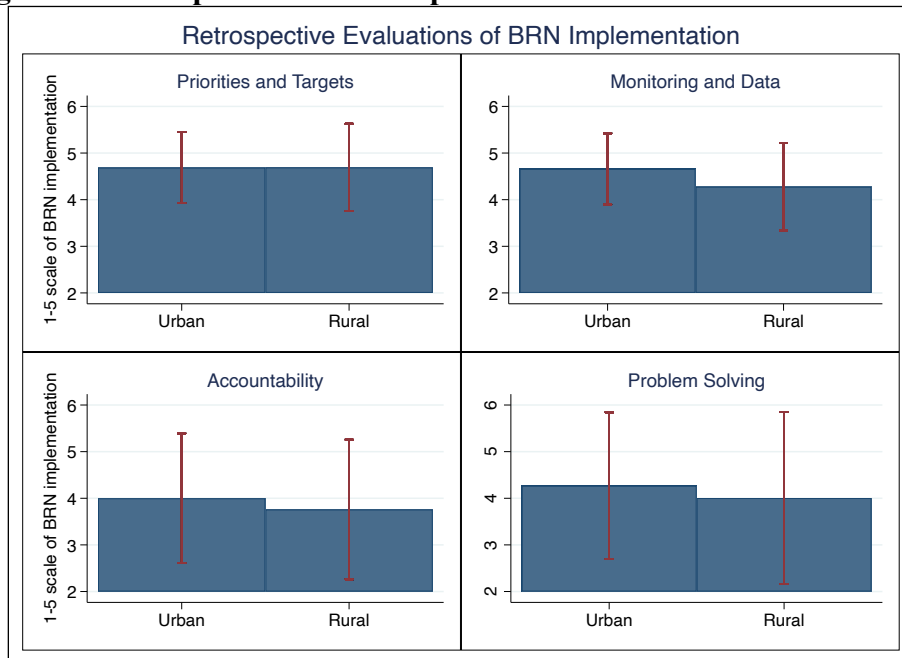
Notes: Figure shows means (and 95% confidence intervals) of perceptions of bureaucratic practices in urban and rural areas. There are no statistically significant differences in perceptions of BRN implementation between rural and urban areas.

Figures 9 shows respondents' retrospective evaluation of the extent to which BRN changed bureaucratic behaviors and practices. Here, too, the differences across the three levels are not statistically significant. However, the national government officials appear to have been more likely to report assurance that BRN significantly changed bureaucratic behavior. Finally, Figure 10 compares the averages in rating of BRN implementation across urban and rural districts. About 61% of respondents in the survey were domiciled in urban areas. Overall, the differences in ratings of BRN implementation among urban and rural respondents are not statistically significant.

The data suggests that the implementation of BRN and its impacts on the bureaucratic behaviors and practices were mixed. The qualitative evidence presented and discussed in Table 1 show the variegated implementation of the nine different initiatives under BRN. Similarly, the descriptive data from surveys suggest that while BRN was a top-down initiative, it did not yield

any readily discernible statistically significant differences in perceptions across the national, district, and school levels.

The observations above are supported by ordered logit regression analyses of differential perceptions of the degree of BRN implementation across the national, district, and school levels. To reiterate, these results are not causally identified. Rather, they provide suggestive evidence of the correlation between officials' status in the education administrative-bureaucratic apparatus and their respective perceptions of the degree of BRN implementation. For each aggregate delivery function, I run ordered logit regressions with the outcome being the average score (1-5) of the indicator. The idea is to compare the likelihood of selection of higher or lower ratings of the degree of BRN operationalization conditional on being an official at the national, district, or school levels. In all the regressions, the comparison group is the national level of officials.

The results in Table 3 show that across the four focus areas of priorities and targets, monitoring and data, accountability, and problem solving, officials interviewed at the district and school levels were much more likely to report weaker implementation of BRN. The observed differences across the different levels are statistically significant at conventional levels.

Table 3: Ordered Logit Regressions (Outcome: Perceptions of BRN Implementation)

	(1) Priorities & Targets	(2) Priorities & Targets	(3) Monitoring & Data	(4) Monitoring & Data	(5) Accountability	(6) Accountability	(7) Problem solving	(8) Problem Solving
District Level	-1.638***	-1.982***	-3.044***	-2.804**	-1.214**	-1.127**	-2.018***	-1.963***
	(.615)	(.633)	(1.079)	(1.092)	(.51)	(.53)	(.713)	(.732)
School Level	-1.897***	-2.377***	-3.066***	-2.715**	-1.409**	-1.195*	-3.042***	-3.084***
	(.681)	(.713)	(1.115)	(1.144)	(.591)	(.64)	(.784)	(.819)
Urban		-.749**		.872**		.488		.192
		(.36)		(.401)		(.406)		(.37)
Evaluation (National)		-.43		-1.121		-.965		-.955
		(.551)		(.694)		(.714)		(.641)
Evaluation (District)		.361		.785		.63		.901
		(.493)		(.622)		(.637)		(.584)
Observations	125	125	101	101	104	103	104	104
Pseudo R²	.03	.031	.05	.057	.017	.021	.04	.045

Notes: Ordered Logit results with National Level respondents as the default group – compared against respondents from the district and school levels. The outcome variable is perceptions of the degree of implementation of priorities and targets (1-2), monitoring and data (3-4), Accountability (5-6), and problem solving (7-8) following the introduction of the Big Results Now delivery unit in education. Evaluations of national and district governments are based on perceptions of the performance of the respective levels' education officials. Urban districts include those with town or municipal councils. Standard errors are in parentheses.
*** p<.01, ** p<.05, * p<.1

Table 4: Ordered Logit Regressions (Outcome: Perceptions of Improvements Under BRN)

	(1) Improved Priorities & Targets	(2) Improved Priorities & Targets	(3) Improved Monitoring & Data	(4) Improved Monitoring & Data	(5) Improved Accountability	(6) Improved Accountability
District Level	-14.404	-15.785	-14.932	-15.799	-1.42	-1.59
	(783.908)	(1464.638)	(991.035)	(1399.526)	(1.062)	(1.075)
School Level	-14.402	-15.891	-14.373	-15.39	-1.13	-1.477
	(783.908)	(1464.638)	(991.035)	(1399.527)	(1.116)	(1.144)
Urban		-.171		-.279		-.482
		(.467)		(.521)		(.441)
Evaluation (National)		-.784		-1.661**		-.436
		(.706)		(.822)		(.643)
Evaluation (District)		1.029		1.316*		.595
		(.648)		(.691)		(.581)
Observations	149	149	143	143	151	150
Pseudo R²	.026	.042	.035	.065	.012	.023

Notes: Ordered Logit results with National Level respondents as the default group – compared against respondents from the district and school levels. The outcome variable is perceptions of improvement in priorities and targeting (1-2), monitoring and data (3-4), and Accountability (5-6) following the introduction of the Big Results Now delivery unit in education. Evaluations of national and district governments are based on perceptions of the performance of the respective levels' education officials. Urban districts include those with town or municipal councils. Standard errors are in parentheses.
*** p<.01, ** p<.05, * p<.1

Table 5: Ordered Logit Regressions (Outcome: Perceptions of BRN Implementation)

	(1) Priorities & Targets	(2) Priorities & Targets	(3) Monitoring & Data	(4) Monitoring & Data	(5) Accountability	(6) Accountability	(7) Problem Solving	(8) Problem Solving
Middle District	.792*	1.068**	.771*	.689	.33	.106	-.219	-.309
	(.412)	(.422)	(.457)	(.48)	(.465)	(.479)	(.449)	(.455)
Upper District	.269	.658	.129	-.165	-.431	-.731	-.257	-.406
	(.413)	(.446)	(.451)	(.498)	(.431)	(.466)	(.432)	(.448)
Urban		-.96**		.876**		.677*		.382
		(.382)		(.431)		(.41)		(.379)
Evaluation (National)		-.318		-1.31*		-1.23*		-.713
		(.554)		(.7)		(.747)		(.654)
Evaluation (District)		.193		.898		.938		.727
		(.501)		(.628)		(.675)		(.593)
Observations	112	112	91	91	91	90	94	94
Pseudo R²	.008	.024	.009	.03	.006	.019	.001	.006

Notes: Ordered Logit results with respondents from lower-ranked districts as the default group – compared against respondents from middle and upper ranked districts. The outcome variable is perceptions of the degree of implementation of priorities and targets (1-2), monitoring and data (3-4), Accountability (5-6), and problem solving (7-8) following the introduction of the Big Results Now delivery unit in education. Evaluations of national and district governments are based on perceptions of the performance of the respective levels' education officials. Urban districts include those with town or municipal councils. Standard errors are in parentheses.
*** p<.01, ** p<.05, * p<.1

Table 6: Ordered Logit Regressions (Outcome: Perceptions of Improvements Under BRN)

	(1) Improved Priorities & Targets	(2) Improved Priorities & Targets	(3) Improved Monitoring & Data	(4) Improved Monitoring & Data	(5) Improved Accountability	(6) Improved Accountability
Middle-Ranked District	.936*	1.054*	.14	.225	.13	.1
	(.549)	(.57)	(.566)	(.595)	(.503)	(.526)
Upper-Ranked District	.648	.752	.265	.364	-.002	.01
	(.529)	(.579)	(.587)	(.646)	(.492)	(.55)
Urban		-.424		-.447		-.494
		(.506)		(.546)		(.462)
Evaluation (National)		-.696		-1.642**		-.508
		(.69)		(.821)		(.648)
Evaluation (District)		.916		1.277*		.638
		(.636)		(.699)		(.598)
Observations	136	136	129	129	137	136
Pseudo R²	.018	.036	.001	.036	0	.014

Notes: Ordered Logit results with respondents from lower-ranked districts as the default group – compared against respondents from middle and upper ranked districts. The outcome variable is perceptions of improvement in priorities and targeting (1-2), monitoring and data (3-4), and Accountability (5-6) following the introduction of the Big Results Now delivery unit in education. Evaluations of national and district governments are based on perceptions of the performance of the respective levels' education officials. Urban districts include those with town or municipal councils. Standard errors are in parentheses.
*** p<.01, ** p<.05, * p<.1

Next, I evaluate differential perceptions of improvements in administrative-bureaucratic practices across the areas of priorities and targeting, monitoring and data, and accountability. The

results are shown in Table 4. While the results are not statistically significant at conventional levels, they nonetheless suggest that officials at lower levels of government were less likely to view BRN's implementation as having improved administrative-bureaucratic practices.

In Tables 5 and 6 I examine whether there were differential perceptions of the operationalization of the BRN initiatives across districts conditional on their ranking. Here I find that respondents in middle-ranked districts were more likely to report perceiving improves in priority setting and targets. All other outcome variables are not statistically significant at conventional levels. This result is suggestive of the fact that middling districts were the ones most likely to see improvements in learning outcomes, hence the respondents recall of deeper operationalization of BRN.

4. Comparing Education, Health, and Water Sectors

In addition to surveying stakeholders in the education sector, I also interviewed select officials in the Health and Water sectors in order to have a baseline understanding of perceptions of management practices. Water was a BRN sector in 2013 while Health was not. The point here was not to provide a detailed comparative analysis of the three sectors. Rather, it was to gauge whether respondents gave differential responses conditional on whether the sector had BRN reforms (Water) or not (Health) and how they compared with the education sector. For each of these sectors, I interviewed 19 officials – 4 at the national level and 15 at the district level.

While the sample sizes are too small to support statistical comparisons, the qualitative data provides suggestive evidence that in both the Health and Water sectors perceptions of bureaucratic practices mirroring the four delivery functions were likely to be stronger at the national level –

similar to the finding in the education sector. In other words, national officials in both sectors were more likely to give higher scores for perceived implementation of mechanisms for setting priorities and targets, data collection and monitoring, accountability and incentives, and problem solving and adaptation. This is suggestive evidence of an overall divergence in perceptions of bureaucratic effectiveness between national and subnational officials in Tanzania.

5. Conclusion

This paper has examined the operationalization of Tanzania's Big Results Now (BRN) delivery unit in the education sector. At the outset, BRN had a policy champion in an incumbent president and had clear sets of priorities and targets. In addition, due to robust donor support, BRN was able to collect significant amounts of data that informed decision making at the national level. BRN was also very much a top-down initiative that largely existed at the national and ministerial levels and did not reach subnational levels. Consequently, government district officials and teachers lacked the means to influence BRN policy priorities and operationalization, despite being the main conduits of its implementation. As a result, both accountability and problem-solving capacities at subnational levels were severely limited.

The findings herein suggest that, with the right type of design, delivery unit approaches can influence the behavior and practices of bureaucrats even in subnational jurisdictions that may be outside the ambit of delivery units. For example, the impacts of Tanzania's delivery unit were felt at the school level even though it was, by design, largely situated at the national level. The public rankings of schools placed enormous pressure on teachers, to the extent that some schools chose to hold back weaker students from sitting the national examinations in order to improve their

overall performance (Cilliers, Mbiti, and Zeitlin 2020). Furthermore, the evidence on specific initiatives of BRN that survived the departure of BRN's policy champion suggests that programmatic interventions under delivery units are more likely to be sustainable if they rely in mainline ministries for their implementation (and are not administered directly by delivery units). Such processes serve to normalize and routinize delivery unit inspired behaviors and practices, thereby increasing their likelihood of institutionalization.

Donor financing can help ensure effective implementation and sustainability. First, donors may play the important role of locking in government commitments to reform efforts – especially if they can leverage access to financial resources to influence the policy choices of politicians. Second, donors can have an ideational influence by increasing the salience of specific observable outcomes. In the case of Tanzania, donors explicitly implemented a pay-for-results scheme in which the government's access to financing was conditional on specific performance indicators – several of which built on BRN initiatives. The other channel through which donors influenced the government was through the normalization of focusing on learning outcomes, in addition to increasing access. Global attention to the "learning crisis" ensured that Tanzanian policymakers remained aware of the need to invest in the improvement in learning outcomes. Doing so reinforced BRN's original goal of increasing pass rates in national examinations.

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Delivery Units and the Elusive Quest to Improve Learning Outcomes in Tanzania

APPENDIX

Appendix A:

This section summarizes the nine-point initiatives that informed the operationalization of BRN in Tanzania's education sector. The operationalization of the initiative relied on multiple agencies of the Tanzanian government and donors.

Tanzania's delivery unit approach had a hybrid structure, relying on both existing and new units within the executive branch. New units included the following:

i. BRN labs: Experts and stakeholders tasked with sector-level prioritization, problem solving, and development of detailed implementation plans with measurable key performance indicators (KPIs);

ii. The Transformation and Delivery Council: To provide strategic direction and oversee the BRN labs;

iii. The President's Delivery Bureau: Independent unit within the Office of the President charged with identifying NKRAs and impactful programs, supporting ministries, and monitoring and reporting on the implementation of approved programs.

iv. Steering Committees: Chaired by respective NKRA minister and tasked with problem solving at monthly meetings. Reports outstanding problems to the transformation delivery council.

v. Ministerial Delivery Units: Established within each NKRA and report to the minister. Work closely with project owners in implementation agencies.

This paper focuses on the education sector and will analyze the BRN delivery unit approach in historical context. Throughout its history, Tanzania has gone through multiple stages of education reform efforts. The first major wave begun the late 1960s, culminating with massive improvements in enrolment in the early 1980s. However, the rest of the 1980s saw significant declines in enrollment rates, occasioned by government divestment from education and other social sectors. The late 1990s saw another major wave of investments in education, with a focus on increasing primary school enrollment. The relatively successful increases in primary school enrollment

created significant demand for secondary education. Therefore, in 2005 the government embarked on a project to build secondary schools all over the country – effectively quintupling the number of secondary schools in the country. However, the increase in student enrollment was accompanied by a marked decline in pass rates, a course proxy for learning outcomes. It is around this time that the government launched the BRN initiative, which also included targeted reforms in the education sector. The organizational structure of the delivery approach is shown in Figure 1.

The BRN delivery approach can therefore be viewed as a top-down approach. The Cabinet relied mostly on bureaucratic elites and external advisers to devise the approach's implementation strategy. The six core areas were identified on the basis of "objective needs" and political considerations – maximal impact, measurability, and potential for quick wins being the dominant criteria. Instead of building a political coalition around the initiative, the president issued an executive administrative rule (statutory instrument). This means that the BRN approach was not anchored in an enabling legislation and did not necessarily elicit the explicit buy-in from key constituencies within the ruling Chama Cha Mapinduzi or Parliament. Within the bureaucracy, BRN established a reporting mechanism in which the head of the ministerial delivery unit report directly to the Minister in parallel with the Permanent Secretary (senior-most bureaucrat). The creation of this parallel system resulted in minimal organizational reorganization of the pre-existing agencies and departments within the six line ministries.

The BRN delivery unit approach had specific time-bound goals accompanied with efforts to improve performance and accountability within the mainline administrative-bureaucratic apparatus. The most important changes created by the BRN delivery approach included i) the ministerial-level accountability mechanism comprising the Ministerial Scorecard and the Presidential Dialogue ii) the ministry delivery units which created a parallel reporting channel within the six ministries that were identified as NKRAs, iii) identification of specific measurable outcomes, and iv) transparency regarding the specific outcomes within each ministry.

In the education sector, BRN's primary objective was to improve observable learning outcomes by stemming the rapid decline in learning outcomes in both primary and secondary schools. Beginning in the early 2000s, Tanzania rapidly increase access to both primary and secondary education. But the increase in the number of students was not matched by a proportional increase in capacity, teachers, and other resources. The result was a sharp decline in learning outcomes. In 2012 the average pass rates for primary and secondary schools were 30% and 35%, respectively.[29]

The implementation of BRN began with an eight-week lab session involving over 250 participants from the public and private sectors, as well as international development experts and partners. During this phase, Tanzania also adopted a *Delivery System* and *Performance Management Framework* at the ministerial level. Line Ministers were then tasked to lead their respective NKRAs and signed performance contracts. The two key components of the implementation effort included the President's Delivery Bureau (PDB) and the Ministerial Delivery Unit (MDU). The creation of these units was done through a presidential statutory

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[29] Basic Education Statistics in Tanzania (BEST) and the National Examination Council of Tanzania (NECTA). See also here: http://documents.worldbank.org/curated/en/147121468312011600/pdf/845450PJPR0P14010Box385244B00OUO090.pdf

instrument (in June 2013), and not legislation. Within line ministries, each MDU was to be headed by a Head of MDU (HMDU) who reported directly to the Minister and operated parallel to the Permanent Secretary (chief bureaucrat in each ministry). Each MDU had Project Managers working with specific Project Owners within existing departments and agencies within the six line ministries.

Performance monitoring and evaluation was designed to be conducted at the ministerial level. The two main components included a *Ministers Scorecard* that detailed each minister's key performance indicators[30]; and the Presidential *Performance Dialogue* that created a platform for the Minister to meet the President, the Prime Minister, and the Presidential Delivery Bureau Chief Executive Officer to review the scorecard. The idea was that after the Performance Dialogue the president would either reward or punish each of the six ministers. The performance reporting mechanism include an Implementation Tracking Tool, a Key Performance Indicators Dashboard that standardized reporting and milestones across NKRAs, and the Presidential Performance Dialogue. MDUs provided weekly and monthly updates that fed into the dashboard.

Coordinating institutional platforms included weekly MDU meetings, an NKRA Steering Committee (whose meetings included the minister, HMDU, the national PDB director, and ministerial departments and agencies), the Inter-Ministerial Technical Committee (Permanent Secretary level) which met each week, and the Transformation and Delivery Council (with monthly meetings) headed by the president and which also includes ministers, permanent secretaries, and representatives of departments and agencies within the NKRAs.

As part of the BRN delivery approach, the government of Tanzania stated specific targets for each of the NKRAs. These included a mix of short-term and long-term goals. In the education sector, the government's headline long-term target was to increase the pass rates in primary and secondary schools (O-levels) up to 80% by 2015. The short-term targets included four specific outcomes – increasing transparency with regard to student performance and the ranking of schools (traffic light system), financial and non-financial incentives for teacher performance, support for teachers and students (including training for teachers and remedial classes for students), and improvement in the working conditions for teachers. The headline goals for the other sectors are also listed in Table I. Variation in the types of goals (measurability, observability, and political salience) across the six sectors provide opportunities for interesting comparative analyses of BRN approaches and effects across ministries.

In 2015 President Jakaya Kikwete stepped down having served his second and final term. Under his successor, John Pombe Magufuli, the BRN delivery approach collapsed, with all operations reverting to the line ministries. In addition to the comparative approach outlined above, this project will also examine what happened to specific outcomes and targets identified as part of the BRN following Kikwete's retirement. The longitudinal within-sector comparison over time will further illuminate on the specific ways in which BRN's delivery approach alternative incentives for effort and performance in Tanzania. Headline figures suggest that education is no longer a focal priority

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[30]   See   the   first   year   scores   here: http://www.tzdpg.or.tz/fileadmin/documents/dpg_internal/dpg_working_groups_clusters/cluster_1/agriculture/3._A g_BRN/Annual_report_release_-_docs/2._BRN_brochure.pdf

sector under the current administration. For example, in the fiscal year 2017/18, the education budget declined both in absolute terms (more so adjusted for inflation) and as a share of budget (17.2 to 14.8%), with infrastructure spending taking the biggest share of the national budget (10.8-17.5%). With regards to learning outcomes, pass rates have been on a steady increase since the nadir of 2012. In 2018 77.2% of Standard VII pupils passed the national examination, an improvement of 4.96 percentage points from the previous year.[31] Similarly, the pass rate at the secondary school level (O-levels) improved from 77.09 percent in 2017 to 78.38 percent in 2018.[32] That said, these improvements call for further scrutiny. After 2012 the government changed both the exam structure (inclusion of more multiple choices) and the ranking of students (increased categories). Both changes made it impossible to assess the inter-temporal changes in learning outcomes based on the national examination results.

Table I: Outcomes Across the Six National Key Results Areas

Agriculture (Ministry of Agriculture, Food Security and Cooperatives)	Education (Ministry of Education and Vocational Training)	Energy (Ministry of Energy and Minerals)	Resource Mobilization (Ministry of Finance)	Transport (Ministry of Transport)	Water (Ministry of Water)
25 commercial farming deals for paddy and sugarcane 78 professionally managed collective rice irrigation and marketing schemes 275 collective warehouse-based marketing schemes to provide farmers with access to market	Transparency in assessing student and school performance Incentives to encourage better performance Support for teachers and students Improvement of teacher conditions Increase of pass rates to 60% in 2013 and 80% in 2015	Double base generating capacity in 2015/16 14 new generation projects and 590k new connections Sectoral reforms Increase annual consumption to 237 KWh per capita from 97KWh by 2015/16	Implement TZS 6 trillion worth of project through private funding by 2015/16 Cap non-BRN expenditure budget for 2014/15 and 2015/16 to 17.7 trillion Reduce budget deficit (before grants) to TZS 4 trillion by 2015/16 Raise revenues through NKRA initiatives to TZS 3.9 trillion by 2015/16 Facilitate legislative changes related to resource initiatives by 2013/14	Increase cargo throughput at Dar es salaam port from 12.1 million tons in 2012 to 18 million tons in 2015/16 Increase railway freight hauling capacity from 0.2 million tons (2012) to 3 million tons (2015/16) Reduce road travel time from Dar es Salaam to Mwanza/Rusumo/Kabanga) from 3.5 days (2012) to 2.5 days (2015/16)	Increase access to clean water from 40% (2014) to 67% by 2015/16

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[31] "2018 Standard Seven Exam Results Released, Performance Up by 4.96 percent (sic)" The Citizen, October 23, 2018. See here: https://www.thecitizen.co.tz/news/2018-Standard-Seven-exam-results-released--performance-/1840340-4818404-ykgfvs/index.html

[32] "Ilboru student emerges top performer in 2018 CSE results," The Citizen, January 24, 2019. See here: https://www.thecitizen.co.tz/News/Ilboru-student-emerges-top-performers-in-2018-CSE-results/1840340-4949286-dd0sid/index.html

Notes: Table shows the different headline targets stated by the government of Tanzania across the six national key results areas (NKRAs). The NKRAs were identified on the basis of maximal impact among citizens, measurability of improvements, and potential for rapid improvements in Tanzanians' quality of life. Different ministries identified as NKRAs had varying levels of specificity in the identification of outcomes and implementation strategies.

Figure A1: The Nine Point Agenda to Achieve Targeted Goals Under BRN

Transparency	Incentives	Support
1. **Official School Ranking** – rank 100% of all schools in the annual official school ranking 2. **National 3R Assessment** – conduct a random sample based 3R assessment	3. **School Incentive Scheme** – Reward 4,000 most improved schools every year with monetary & non-monetary incentives and recognize top 200 performers	4. **School improvement toolkit** – create and distribute toolkit and train 19,000 school heads 5. **3R Teacher Training** – train 12,300 Standard I and II teachers 6. **STEP (Student Teacher Enrichment Program)** – Train 17,000 primary and 8,00 secondary teachers to support remedial students 7. **Basic Facilities Construction** – construction of facilities in 1,200 secondary schools 8. **Capitation Grants** – Ensure 100% timely delivery of books and materials to students 9. **Teacher Motivation** – Recognize teachers though non-monetary incentives, ensure 0 outstanding claims 3 months after due date

Figure A2: A schema of the goals, operationalization, and outcomes under BRN
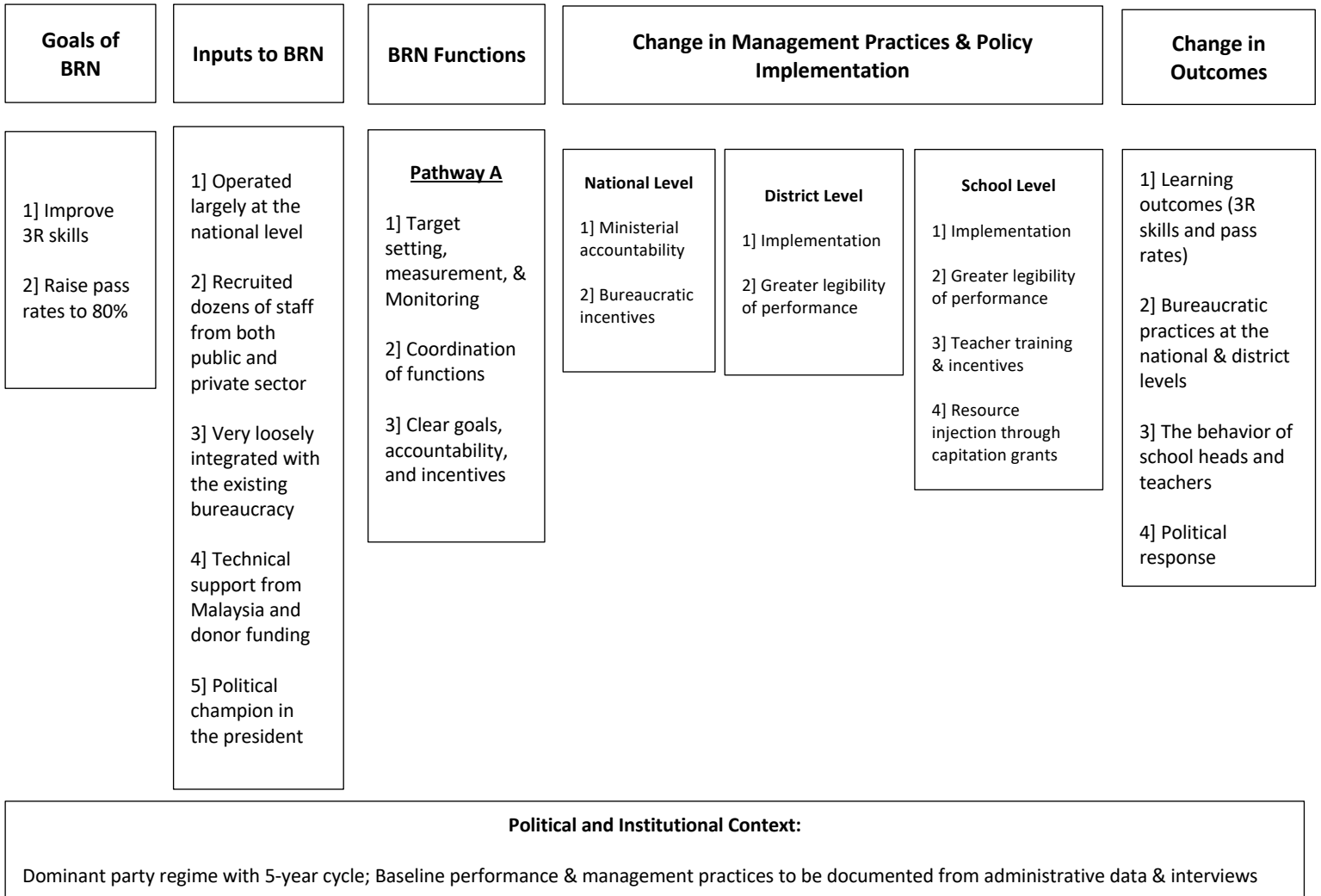
Goals of BRN	Inputs to BRN	BRN Functions	Change in Management Practices & Policy Implementation			Change in Outcomes

Goals of BRN	Inputs to BRN	BRN Functions	Change in Management Practices & Policy Implementation			Change in Outcomes
1] Improve 3R skills 2] Raise pass rates to 80%	1] Operated largely at the national level 2] Recruited dozens of staff from both public and private sector 3] Very loosely integrated with the existing bureaucracy 4] Technical support from Malaysia and donor funding 5] Political champion in the president	**Pathway A** 1] Target setting, measurement, & Monitoring 2] Coordination of functions 3] Clear goals, accountability, and incentives	**National Level** 1] Ministerial accountability 2] Bureaucratic incentives	**District Level** 1] Implementation 2] Greater legibility of performance	**School Level** 1] Implementation 2] Greater legibility of performance 3] Teacher training & incentives 4] Resource injection through capitation grants	1] Learning outcomes (3R skills and pass rates) 2] Bureaucratic practices at the national & district levels 3] The behavior of school heads and teachers 4] Political response

Political and Institutional Context:

Dominant party regime with 5-year cycle; Baseline performance & management practices to be documented from administrative data & interviews
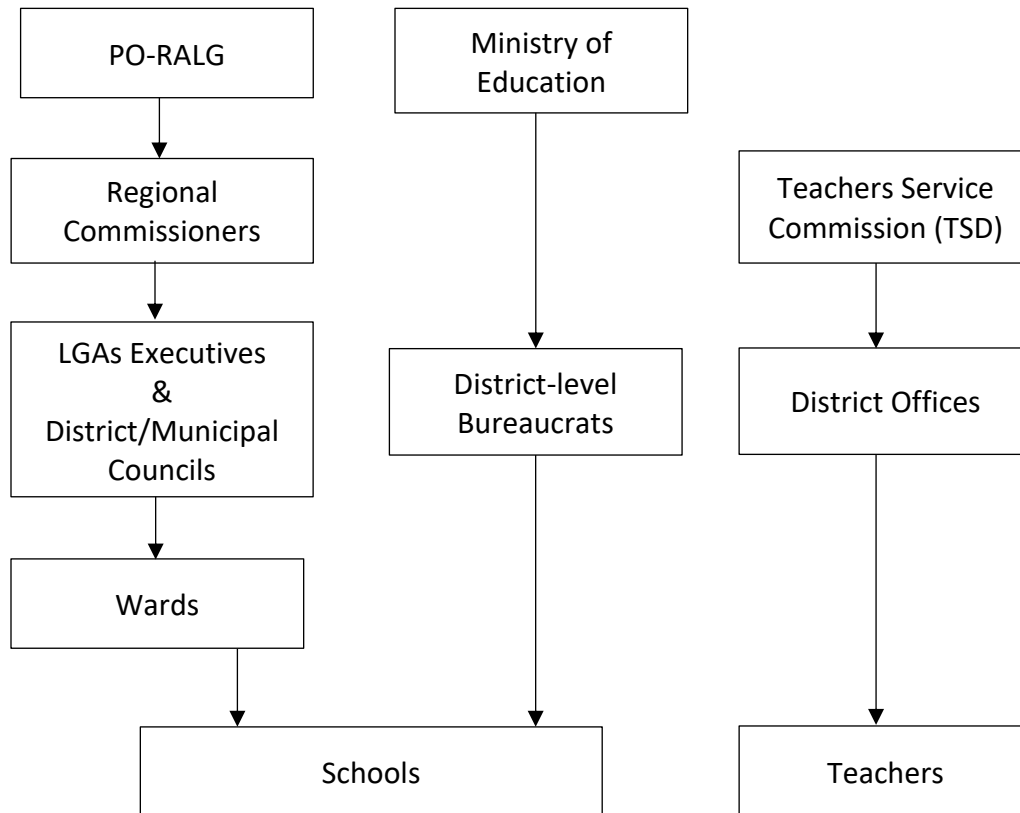
Figure A3: Administrative-Bureaucratic Structures in the Education Sector

Ministry of Education:
- Policy formulation, planning and monitoring and evaluation of basic, technical, vocational, and higher education
- Technical and Vocational Education and Training (TVET)

PO-RALG:
- Administration, delivery, and management of pre-primary, primary, and secondary education (through local government system – 185 LGAs in 26 regions)
- Teacher deployment
- School supervision and quality assurance

Teacher Deployment
- 2017 Primary Teacher Deployment Strategy

Figure A4: Administrative-Bureaucratic Structure in the Water Sector
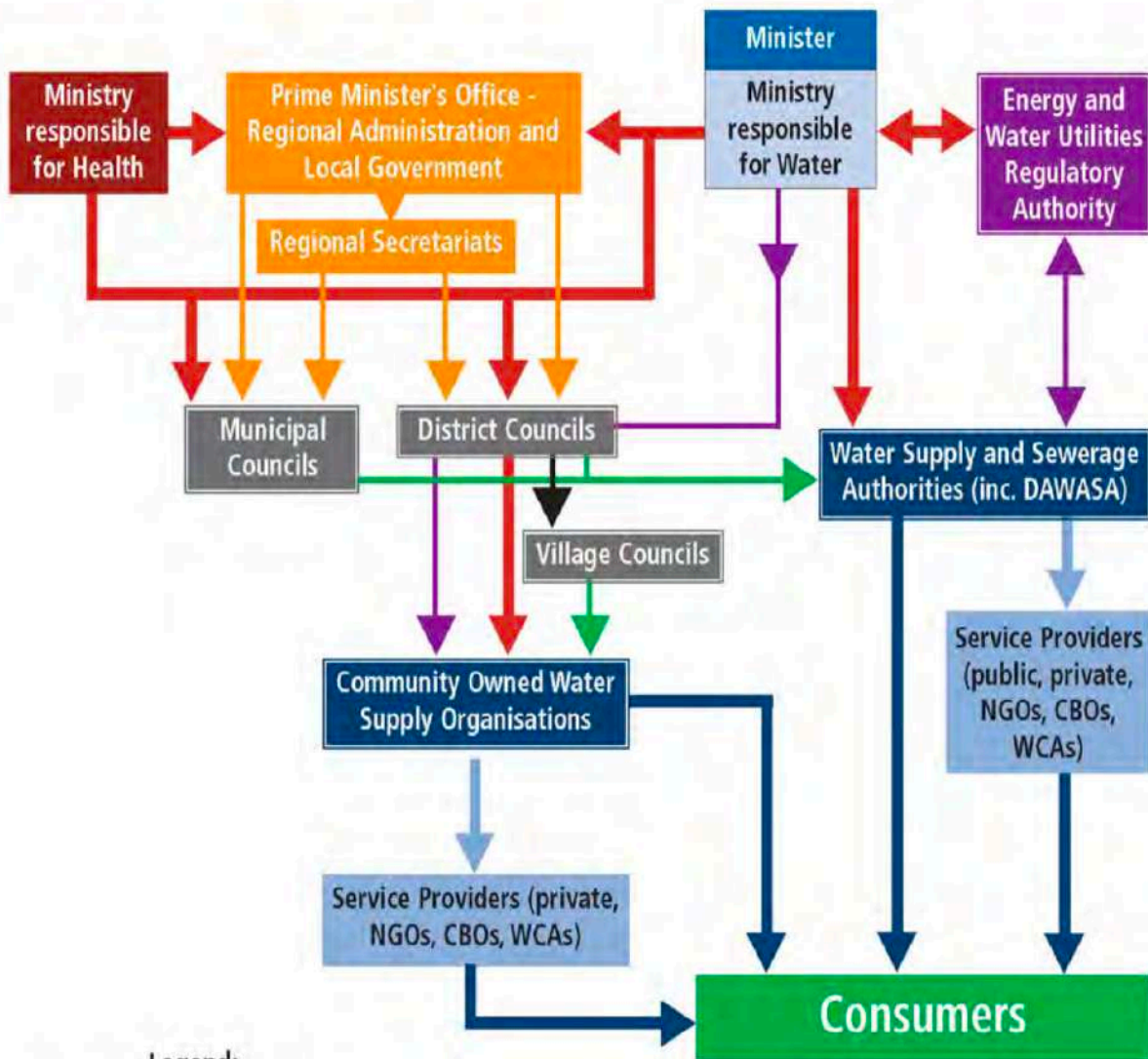
Source: URT (2008) Ministry of Health and Social Welfare, Health Sector Strategic Plan III

Appendix B:

Table B1: A Summary of the Research Questions and Data Sources Used

Q	Research Question	Data Sources	Level	Use of Data Sources
1	What type of delivery approach & specific targets – by whom, for whom, and why?	-Administrative data - Official policy documents - Recall interviews	National, District, and School levels	-Document the logics and goals of Delivery Unit initiatives at different levels - Identify key champions/nodes of the Delivery Unit at different levels
2	How did the introduction of the delivery approach change management routines and practices and each administrative level?	-Recall Interviews (both national and subnational levels) - Evaluation of large-N Management Survey (District Education Officers)	National, District, and School levels	-Assess the impact of the Delivery Unit - Compare practices across the three target sectors (education, health, and water) in order to understand how the delivery unit approach shaped practices; and if there were any features unique to the education sector
3	How did attitudes and behaviors change among managers at each level?	-Recall interviews (national and subnational levels) - Large-N Management Survey (DEOs)	National, District, and School levels	-Understand patterns of variation in management practices, and how they correlate with both inputs (budgets) and outcomes (learning outcomes, quality of schools) - Evaluate how and why attitudes and behaviors changed
4	What outputs or outcomes were realized through the introduction of the delivery approach and why? Were accountability or problem solving more effective?	-Recall interviews - Administrative data (capitation grants, learning outcomes, school rankings, school quality) - Large-N Management Survey (DEOs) - Large-N survey on knowledge of ranking	National, District, and School levels	- Evaluation of the correlation between DEO management styles and skills and learning outcomes (pass rates) - Evaluation of the correlation between delivery of capitation grants and learning outcomes - Understand the mechanisms behind specific outcomes - Assess the impact of monitoring and other incentives schemes on behaviors & attitudes
5	What institutional or political features affected adoption and operation of the delivery approach and its contributions to improvements in service delivery?	-Electoral data - Administrative data (budgets, learning outcomes, school rankings, and school quality) - Large-N Management Survey	National, District, and School levels	-Assess the impact of the strength of the ruling party on implementation at the subnational level - Evaluate how political variables interact with observed practices and outcomes (including CCM strength, ward elections, district age, individual characteristics of DEOs)

		- Recall interviews		

Table B2: Regions Covered in Retrospective Qualitative Surveys

Education Zones	Sample Regions	Sample Districts
Eastern	Dar es Salaam	Ubungo MC, Kigamboni MC, Kinondoni MC
Central	Dodoma	Chemba, Mpwapwa, Kondoa TC
Western	Simiyu	Meatu, Maswa, Bariadi TC
Northern	Kilimanjaro	Rombo, Siha, Moshi MC
Lake	Mara	Butiama, Bunda TC, Musoma MC
Southern Highlands	Katavi	Nsimbo, Mpimbwe, Mlele
Southern	Ruvuma	Namtumbo, Mbinga DC, Nyasa

Table B3: Description of Target Respondents

| Sector	Administrative/Bureaucratic Level	Interviewees Per Level
Education	National (**15 interviews**)	**15 interviews** – TIE, NECTA, Ministry of Education (2), TAMISEMI, TSC, Presidential Delivery Bureau (3), Ministry of Education Delivery Unit (3), Members of Parliament – Education Sub-Committee (2)
	District Level (**105 interviews**)	**5 interviews** – District Executive, District Education Officer, Ward Education Officer, Ward Councillors (2)
	School level (**42 interviews**)	**2 interviews** – Head Teacher, Teachers

Water	National (**4 interviews**)	**4 interviews** – Ministry of Water (2), TAMISEMI (2)
(Exclude Ruvuma and Dar es Salaam Regions)	District Level (**15 interviews**)	**1 interview** – Representative to the Water Basin Board
Health	National (**4 interviews**)	**4 interviews** – Ministry of Health (2), TAMISEMI (2)
(Exclude Ruvuma and Dar es Salaam Regions)	District (**15 interviews**)	**1 interview** – Member of the LGA Council Health Service Board/Committee

FigureB1: Tanzania's 31 Regions
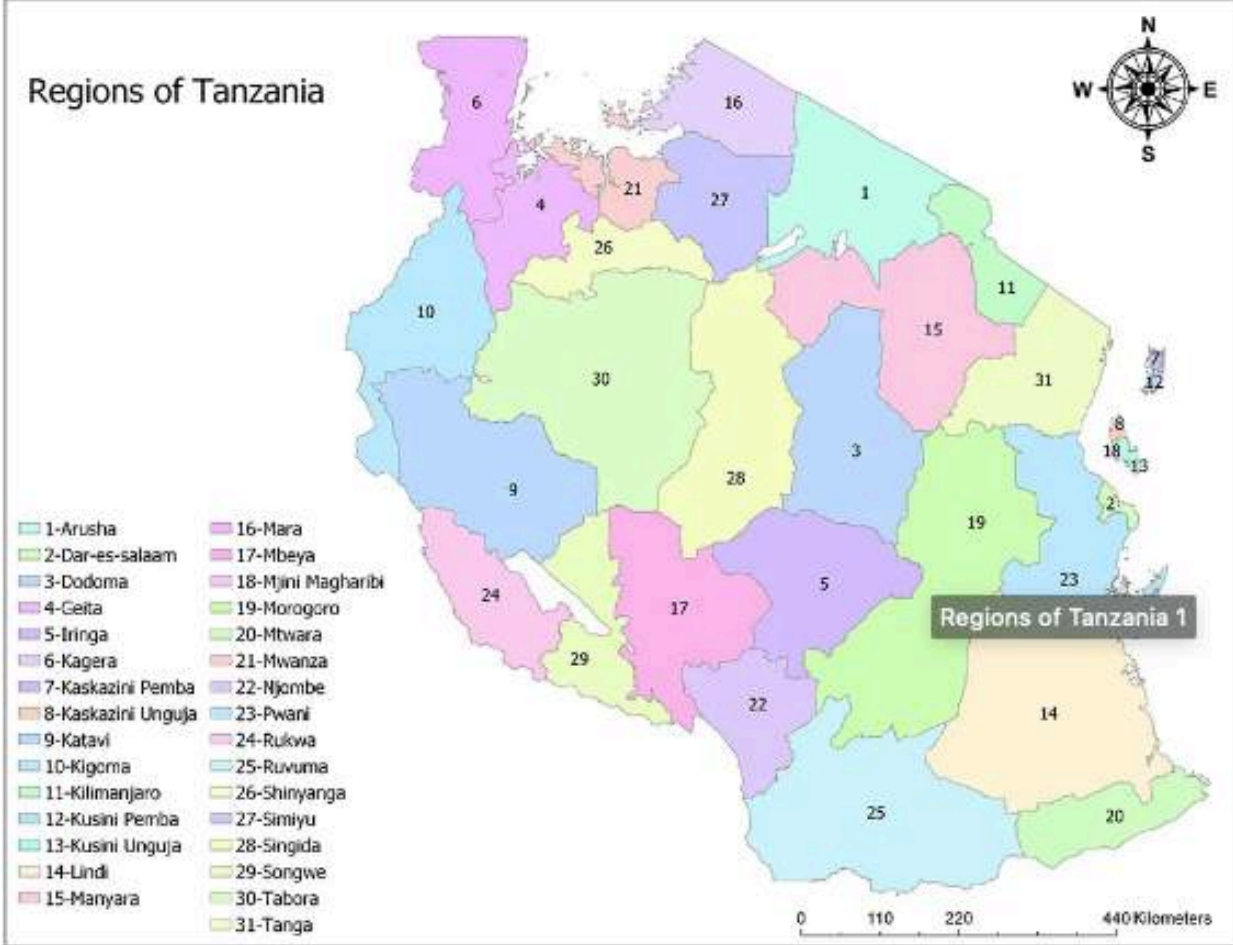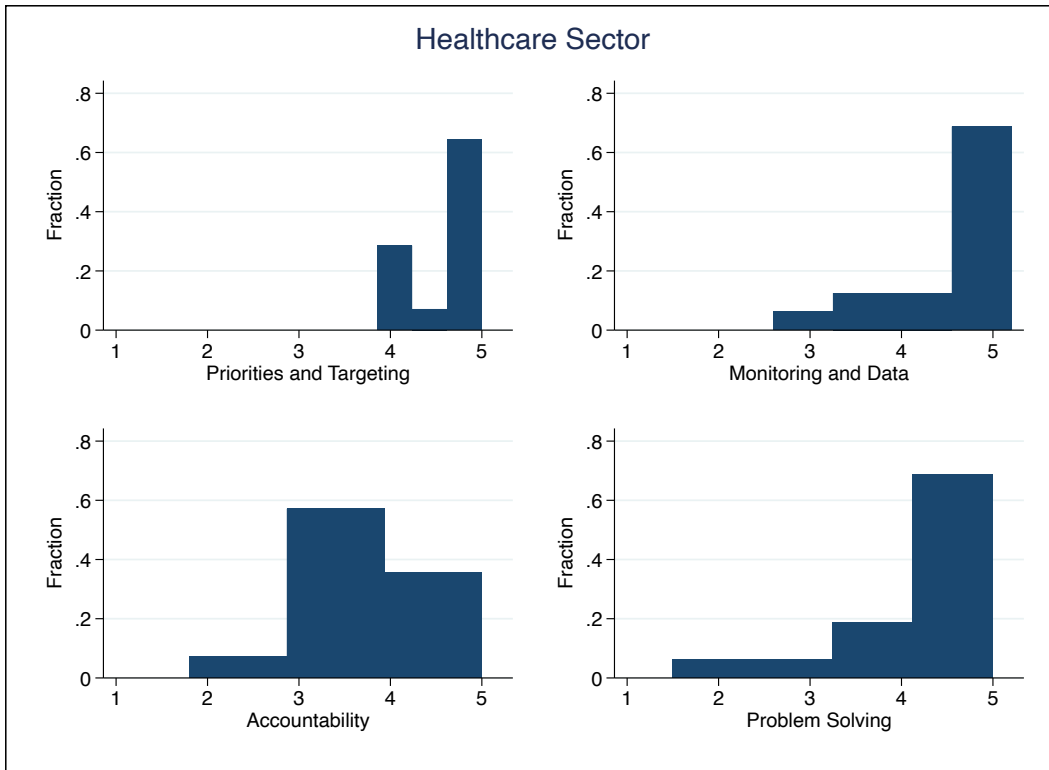
FigureB1: Distribution of scores rating health sector operations across four domains of competence.
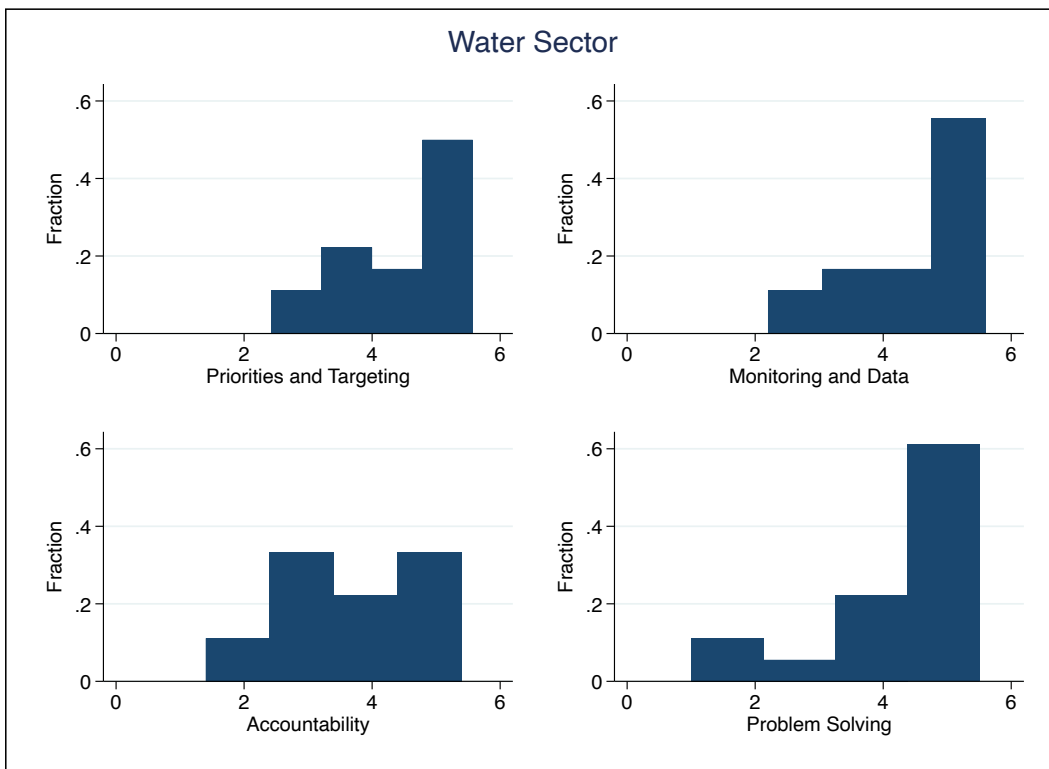
FigureB2: Distribution of scores rating water sector operations across four domains of competence. Like education, the water sector was also under BRN during the period of study.
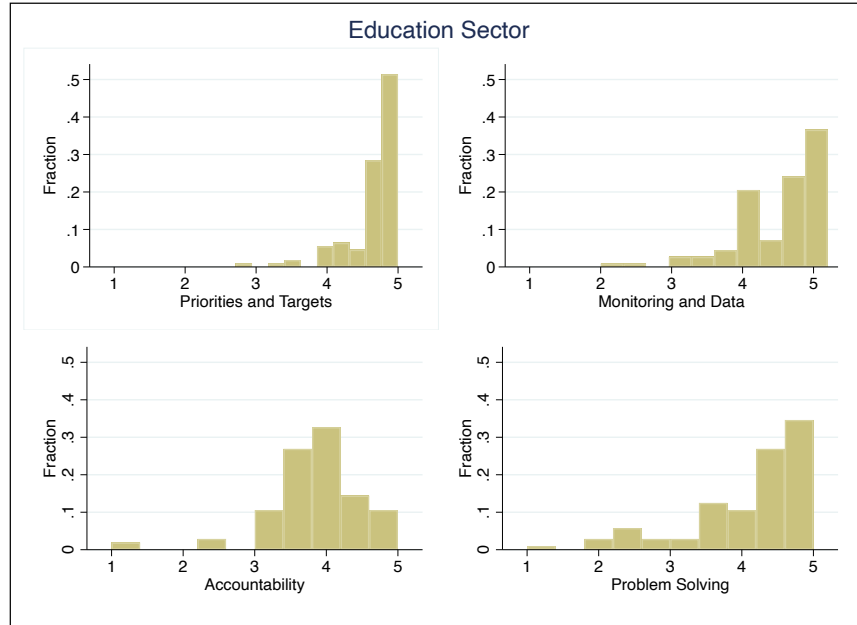
Figure B3: Distribution of scores rating education sector operations across four domains of competence. Notice the relatively lower scores for accountability, compared to priorities and targets.
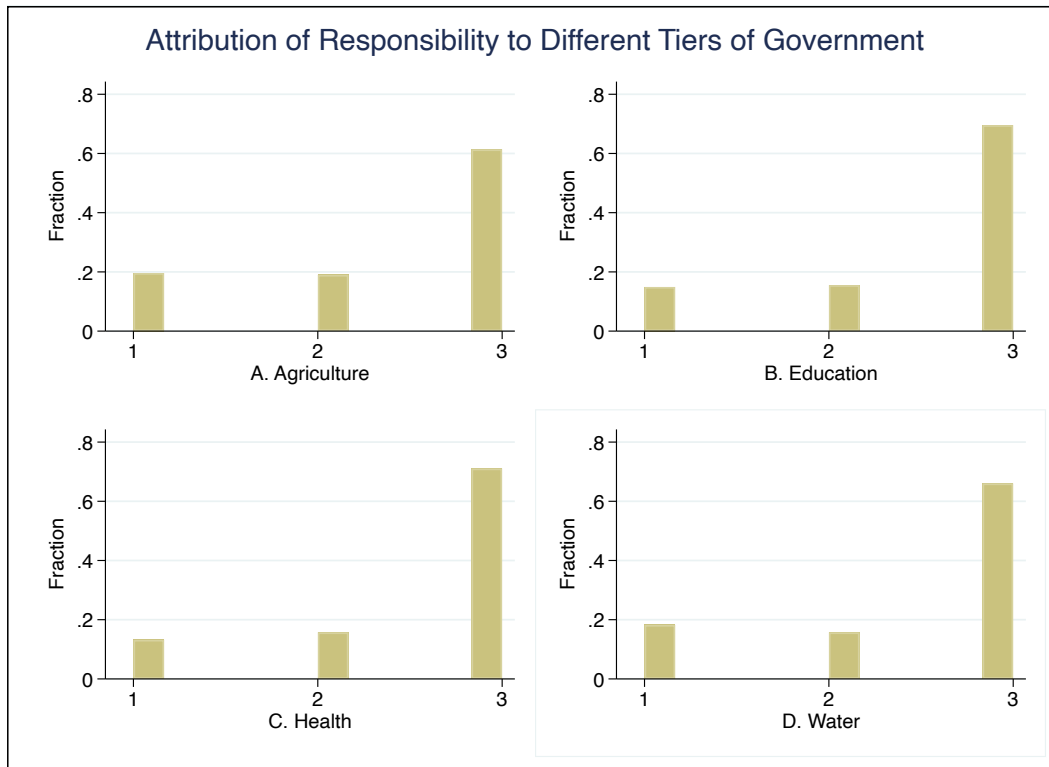

Figure B4: Attribution of responsibility to different tiers of government.
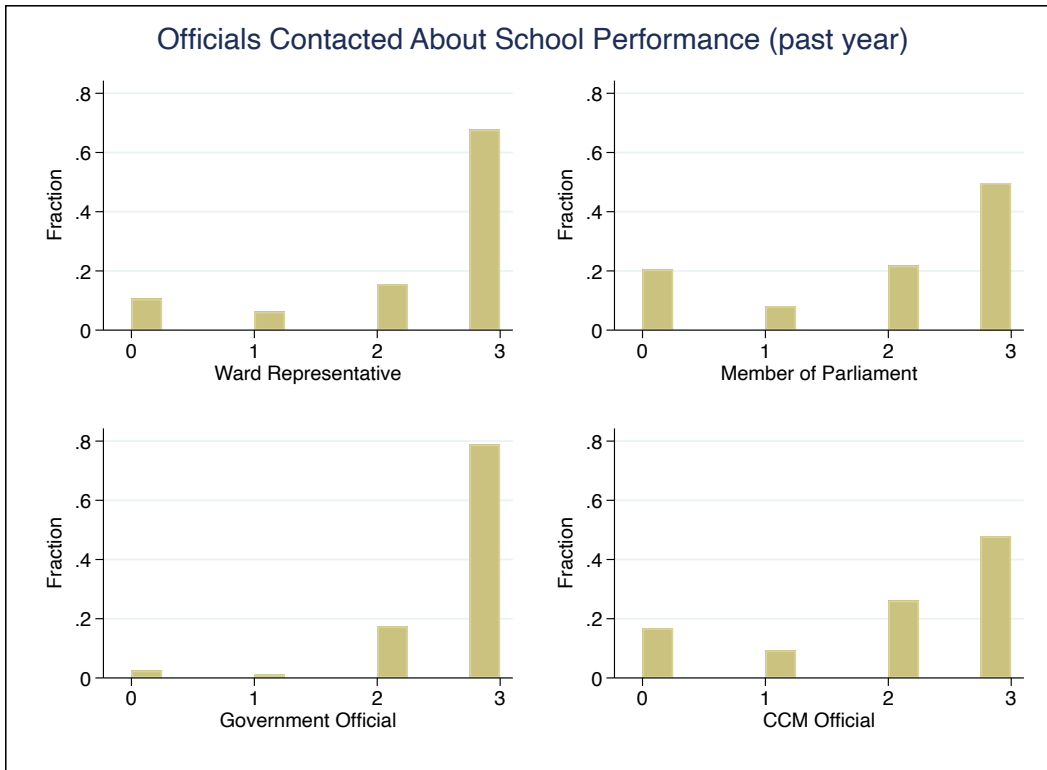
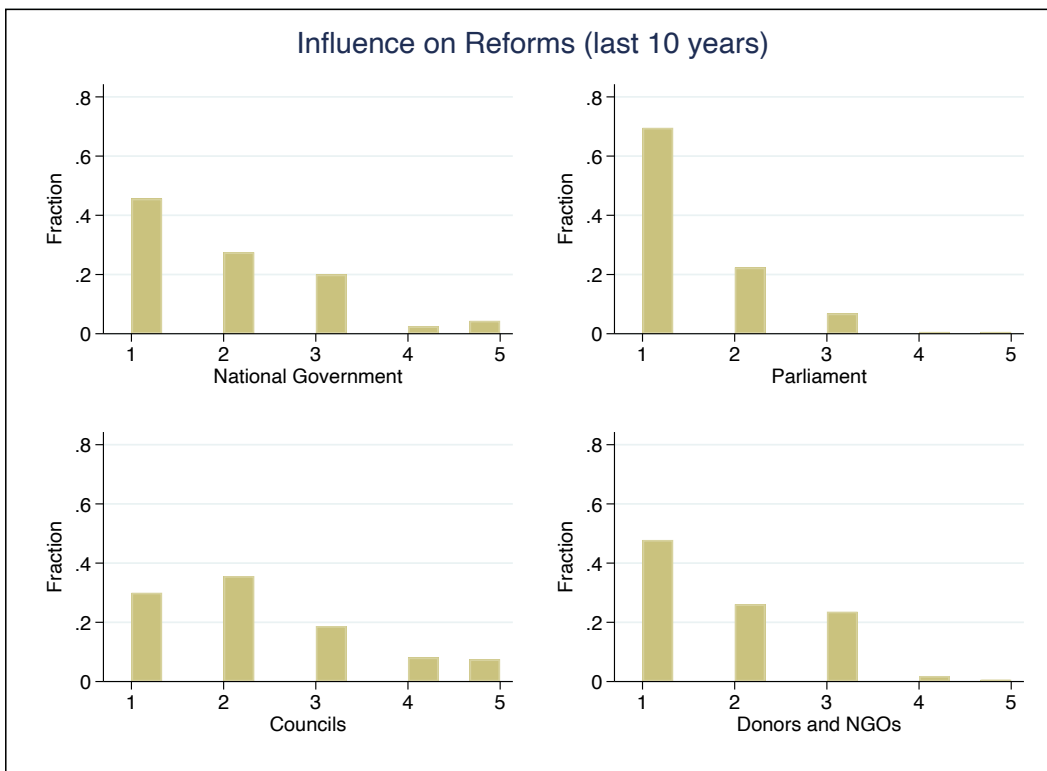Figure B5: officials contacted over the last year about school performance.

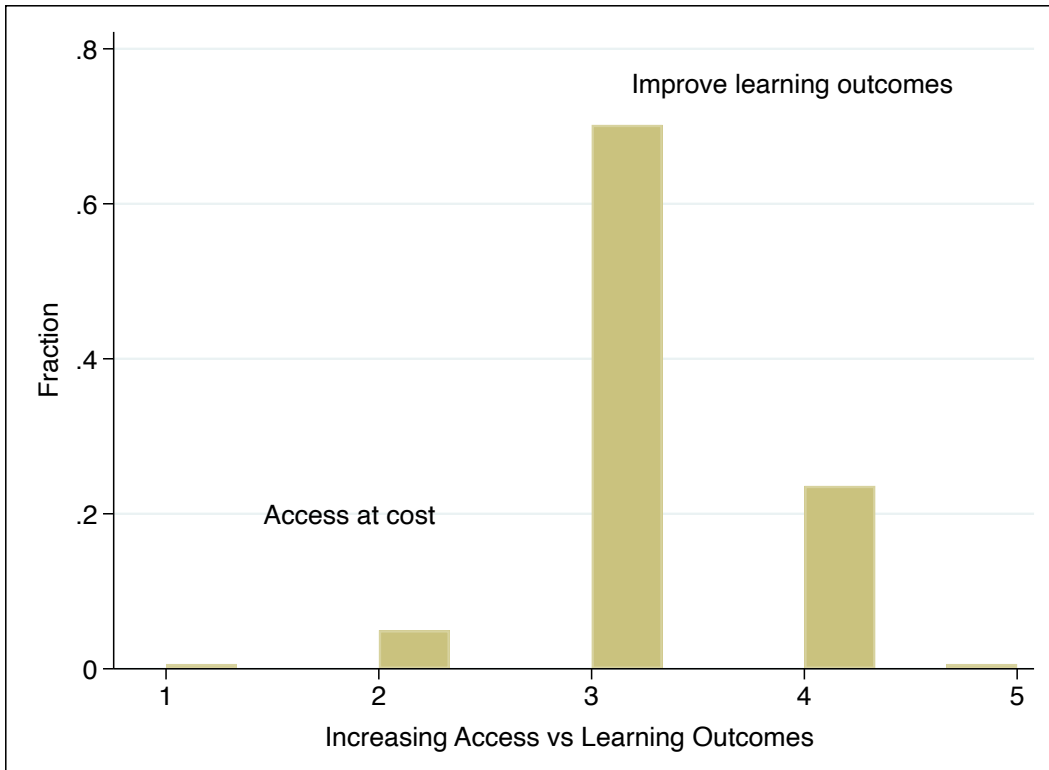Figure B6: Most influential actors in reforming the education sector in Tanzania.

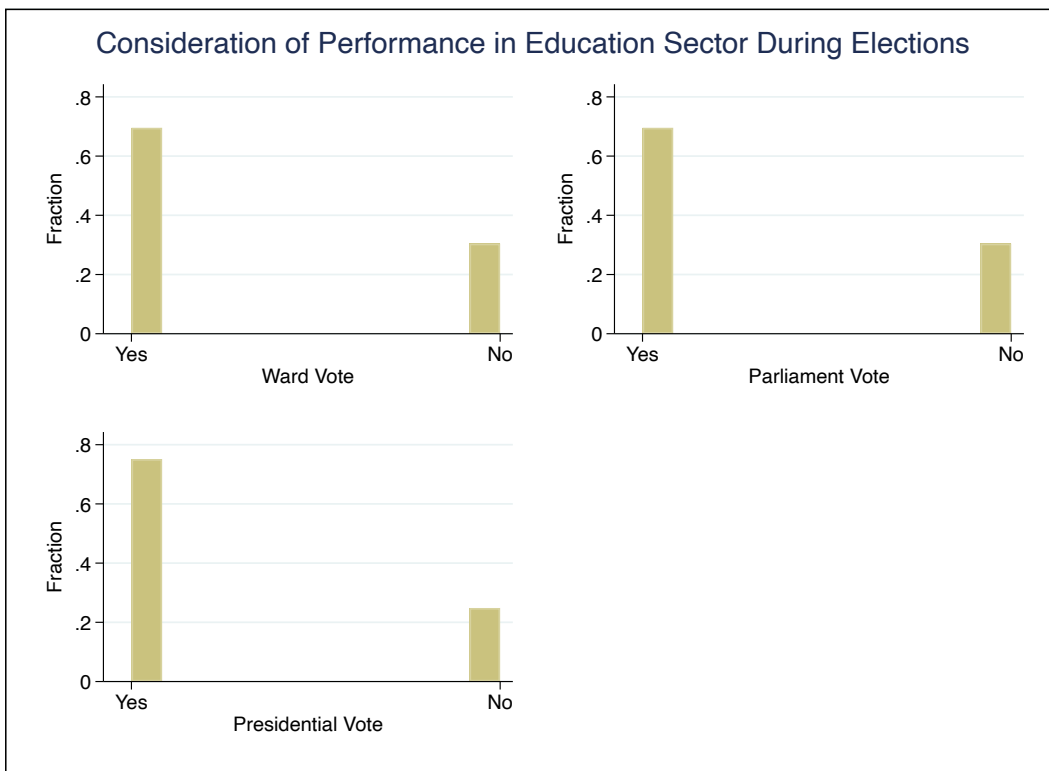Figure B7: Balancing access vs learning outcomes

Figure B8: Voters perception of the connections between electoral politics and outcomes in the education sector.