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Satoru Mikami and Mitsuaki Furukawa

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JICA Research Institute
10-5 Ichigaya Honmura-cho
Shinjuku-ku
Tokyo 162-8433 JAPAN
TEL: +81-3-3269-3374
FAX: +81-3-3269-2054

Outsourced Technical Cooperation Reconsidered: Agency Problems in the Support of Decentralized Public Service Delivery in Sierra Leone

Satoru Mikami[*] and Mitsuaki Furukawa[†]

Abstract

Technical cooperation at the implementation stage is indispensable for translating the effects of fund flows by way of budgetary support into the actual delivery of public services on the ground. An increasing demand for the streamlining of development aid, however, dictates that donors should contract out technical cooperation to local technical assistants in the name of efficiency and ownership. Anecdotal evidence, however, suggests that outsourced technical cooperation tends to be ineffective due to the structured corruption embedded in the culture of the recipient countries. This paper tries to reveal the agency problems in aid implementation by qualitatively and quantitatively examining records and outputs of public financial management by local governments in Sierra Leone - a fragile and conflict-affected state with a dire need for improved public service delivery. Partial, if not definitive, evidence of the ineffectiveness of outsourced technical cooperation in comparison to directly administered technical cooperation has been found; this warrants further investigation.

Keywords: public service delivery, accountability, agency problem, moral hazard, technical cooperation, Sierra Leone

[*] Corresponding author. Associate Professor, Department of Comprehensive Policy Making, Faculty of Law and Letters, Ehime University, and JICA Research Institute (mikami.satoru.ut@ehime-u.ac.jp).
[†] Chief Representative, JICA South Sudan Office (Furukawa.Mitsuaki@jica.go.jp).

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1. Introduction

The purpose of this paper is to examine the extent to which donors can (or cannot) use technical cooperation that is contracted out to local technical assistants (LTAs) to pursue efficiency and effectiveness in building the capacity of recipient countries at the policy implementation stages. The question of outsourcing/indigenization is important because the use of "local" human resources is increasingly recommended within the aid community. This recommendation is made against the backdrop of the need to improve the fiscal balance in donor countries on the one hand and the search for "business continuity planning (BCP)" within development aid during potential globalized crises on the other hand.[1] Given the multitude of potential intervention points generated by the accelerated drive for decentralization and for a bottom up approach on the ground, cost-consciousness in technical cooperation is a must for aid practitioners, especially during the policy implementation stages. However, pursuit of efficiency at the expense of aid effectiveness can be like the tail wagging the dog. Anecdotal evidence suggests that the indirect monitoring of local government staff by LTAs, who belong to the same culture of corruption and cannot easily be separated from those being monitored, is dysfunctional. Additionally, empirical findings regarding corruption based on observation studies and laboratory/field experiments support the necessity of intrinsic motivation in corruption control. Therefore, donors need to carefully formulate the optimal mixed strategy for monitoring the principal-agent relationship in aid policy implementation.

In Sierra Leone, nationwide technical cooperation for decentralization provided by the World Bank has been contracted out to LTAs in all districts, while direct monitoring and mentoring have been administered by the Japanese International Cooperation Agency (JICA) in two districts (Kambia and Port Loko) since 2009. By exploiting the relatively simple project settings in Sierra Leone, this paper investigates whether technical cooperation that has

[1] Business continuity planning (BCP) is a business management strategy to maintain business as usual in times of crisis such as after a natural disaster and during periods of political instability.

been contracted out to LTAs can be a remedy for agency problems as effectively as the direct technical cooperation by experts from culturally different donor countries. In so doing we use both qualitative and quantitative methods: we first attempt a structured and focused comparison of Kambia and Port Loko, and the adjacent districts of Bombali and Tonkolili, based on the anomalies and irregularities in public financial management reported in the official auditing documents submitted by the Audit Service of Sierra Leone (ASSL). Using the survey data we collected in the four districts in 2013, we then statistically analyze the physical traces of past corruption left on small-scale infrastructure such as grain stores, drying floors, mechanical wells, health facilities, primary schools, and the rural road network.

However, the investigation does not necessarily provide a clear-cut answer. Auditing results from Port Loko suggest an improvement in financial management, while the results from the comparison group tend to deteriorate as time goes on; yet another treated district, Kambia, shows little sign of improvement. With regard to statistical analyses, there is no significant impact of direct monitoring which may be evidence of corrupt behavior during the construction or rehabilitation of infrastructures under indirect monitoring. These mixed results might be caused by the fact that the measurements were taken too early for the real effect. Only the quality of the rural road network shows the consistently significant impact of direct monitoring in the manner expected. This warrants further investigation.

The structure of this paper is as follows: relying on the classical principal-agent theory, the next section introduces the notion of a divergent principal-agent relationship in the public sector and explains why both decentralization and community-driven development tend to bring about transaction costs rather than the theoretically expected benefits. We then discuss the distinctive role donors can play through general budget support under such conditions and the limits of this approach during the policy implementation phase. After setting out the recent, seemingly failed efforts to tackle this problem, the case of Sierra Leone is presented in the third section as one of the classic cases. A hypothesis is then posited which states that indirect

monitoring is ineffective in deterring the misuse of aid money by colluding local decision-makers, contractors, and monitors. In the fourth section we try to substantiate the hypothesis qualitatively through a structured and focused comparison of the auditing reports of districts which have and have not been directly monitored by Japanese aid workers. After reporting on our inconclusive results, in the fifth section we introduce our own quantitative research strategy which is based on a small-scale infrastructure survey conducted in 320 villages. The sixth section reports the results of statistical analyses that reveal partial evidence of the ineffectiveness of indirect monitoring. The final section discusses the implications and provides a number of conclusions.

2. Theoretical and Empirical Review

In this section we conceptualize the problems in the implementation stages of development aid as an agency problem caused by the distinctive structure of the principal-agent relationship in the public sector. Based on the selective findings from pre-existing empirical studies, we spell out the reasons why the problem is not amenable to institutional engineering without intrinsic motivation of aid.

2.1 Agency problems in the public sector

The principal-agent relationship is characterized by information asymmetry, which can generate a “moral hazard” if a discrepancy of preference exists between the principal and the agent: the latter can take advantage of the information asymmetry at the cost of the former’s interest (Collier 2007, 3). Anticipating this moral hazard for the agent, the principal usually tries to manipulate the incentive for the agent through provisions such as a defect liability period built into the contract, thereby sacrificing a certain degree of efficiency. Alternatively, they try to prevent possible misbehavior by physically monitoring the agent with additional

cost. As long as the monitoring is conducted indirectly (meaning contracted out), however, the counter-measure brings in another principal-agent relationship that can generate moral hazards in the mind of the monitor if a discrepancy of preference exists between the principal and the monitor.

Furthermore, as succinctly noted by Barr et al. (2009), the distinctiveness of the principal-agent relationship in public service delivery consists of the fact that the agent delivers a service not to the principal with whom the agent made the contract but to a third party, the community people. This particular situation has two implications: One is that the principal needs to verify at least ex post facto whether the agent has in fact fulfilled the task because the result is not immediately apparent to them. Another is that the principal has less motivation to enforce the contract because the failure to deliver does not directly harm the principal. In such a *divergent* principal-agent relationship, the principal, who is not the direct beneficiary of the services, may have an incentive to collude with the agent rather than pay the cost of monitoring. In this way the principal is able to share the dividend of misused public money in order to directly enhance his or her own pecuniary well-being. Such predatory behavior can be minimized if actors (the principal, the agent, and the service beneficiaries) in a political system share interests, due to the closeness between actors (no discrepancy of interests), or if the principal and/or the agent are adequately held accountable to the service beneficiaries. However, while democratic accountability systems are still weak in most developing countries, public service delivery needs to achieve economies of scale in order for development to be efficient. As a consequence, predatory behavior is tend to flourish out of the discrepancy of interests between people in and out of political office.

2.2 Consequences of decentralization and community-driven development

In such already muddy conditions, another pitfall is brought in by decentralization, which is popular among developing countries, particularly in Sub-Saharan Africa, and is largely welcomed by donors like the World Bank. This may be due to its analytical convenience in development impact evaluation (decentralization increases the sample size). A textbook interpretation of the main motivation of decentralization would be the improvement of public service delivery. Decentralization is, theoretically, supposed to strengthen the accountability relationship between citizens and politicians (and their administrative arms) by bringing the two closer together. At the same time, it is expected that decentralization will reinforce another accountability relationship between politicians and service providers by minimizing information asymmetry through the reduction of physical distance.

However, apparently reckless proliferations of the units of governance (municipalities) are chiefly driven by the incumbent's political aim of retaining power under the fledging electoral democracy (Green 2010). As a result, a plethora of premature institutions become scattered throughout the country. Not infrequently, the capacity at sub-national levels of government to exercise responsibility for public services is extremely low (Ahmad et al. 2005, 2). When local governments have neither financial nor human resources independent of the central government, the abovementioned theoretical benefits of decentralization would not materialize. Decentralization results in a new group of actors being brought into the political system, thereby increasing the transaction costs only. The central government does not necessarily try to ensure delegated government functions are delivered by local governments because the performance does not directly affect the utility of central government officials.

Like decentralization, community-driven development, which is another popular trend in developing countries, ends up inserting the same divergent principal-agent relationships. By community-driven development, representatives of the community are commissioned to implement certain public services, the actual provision of which is not a main concern for the

delegating local government. Community representatives can be direct beneficiaries of the service delivery through the contractor they hire, as long as they represent a geographically small area like a village and the principal-agent relationship is normal, in other words the principal contracts an agent to deliver a service to them directly. Yet, as the represented area gets larger, covering several villages for the sake of efficiency, the principal-agent relationship once again becomes divergent, the representatives again have no incentive to enforce the contract, and they may well collude with service providers just as government officials do.

Of course, we can optimistically assume that the governments, at the central, local and even communal-level, are held accountable to the citizens through electoral democracy. High turnout rates in developing countries compared to those in developed countries might look promising in this regard. However, regardless of how peaceful the elections appear to observers, the reality of voting in developing countries is more a passive mobilization than a self-motivated protestation. Frequently, the allocation of votes is virtually fixed by the community. Once one of the two large parties nominates a candidate for an electoral district, the village people have no choice but to vote for that candidate simply because the villages have traditionally supported that particular party. Villagers vote for the party simply because they belong to the community. They have no idea how to punish their party through their ballots. Hence, the “long-route” of the principal-agent relationship described by the World Bank (2004) is a hope rather than a reality, which is exemplified by Shah and Tompson (2004) with the “big bang” decentralization in Indonesia.

2.3 The role of donors

Who then can protect the interests of public service recipients? In contrast to the indigenous government, foreign donors, especially their development cooperation arms, are more likely to share interests with the service beneficiaries in developing countries because they gain for legitimacy for using taxpayer money from developed countries by helping to reduce the

suffering of poor people in developing countries. Donors also have an enforcement measure. If the recipient government does not pursue pro-poor policies, the donors can withhold aid flows even though they cannot replace the government.[2] In that sense, donors can behave as the surrogate principal of the recipient government on behalf of citizens in developing countries. This principal-agent relationship is also structurally *divergent* in that the final recipients of the service are not the citizens of the donor country but those in the recipient countries. However, for donors who consider delivering a service to poor people in developing countries as their sole purpose, enforcement of the contract is a matter of critical concern.

In carrying out their mission, donors have several options for intervention:

Track 1: Helping poor people without the permission of the recipient government.

Track 2: Getting permission from the recipient government but implementing policies without involving the recipient government staff.

Track 3: Implementing aid in tandem with the recipient government using staff and institutions of the country.

Leaving aside Track 1 as an exception, of the two remaining tracks, Track 3 rather than Track 2 is increasingly recommended among the aid community because the collaboration with the recipient government can alleviate the suffering of the populace and, at the same time, reinforce the capacity of state institutions in the recipient country; this is indispensable for the maintenance of sustainable, self-help development after the departure of the donors. Additionally, in Track 3 donors can further choose their points of entry: collaborating with government officers in decision-making organs (for example, offering budget support to the Ministry of Finance) or collaborating with the implementing bodies (for example, technical cooperation with the sector Ministries and their branches).

[2] Hayman (2011), however, questions the effectiveness of budget support conditionality on democratic reform. Other evaluation reports regarding GBS include Koeberle et al. (2006) and Haider (2011).

2.4 Limit of General Budget Support (GBS)

In securing pro-poor policies at the decision-making level within the recipient government, donors usually directly monitor the enforcing of the contract by their counterpart because transactions with the Ministry of Finance on a quarterly basis are not costly.[3] As a result, information slack is small and the probability of contract fulfilment is high. Moral hazards may also be avoided through the transfer of the donors' preference in the course of the intense discussion between donors and elite officers in the Ministry of Finance. This method is also the simplest and hopefully the most efficient because by concentrating financial and human resources into one central government department (the Ministry of Finance), GBS intends to help reduce poverty at the national level while strengthening the state institutions in a top-down manner. Cordella and Dell'Ariccia (2003), Jelovac and Vandeninden (2008), Haaparanta (2010), and Leiderer (2012) are but a few examples of theoretical works which demonstrate the superiority of GBS over project type aid.

However, even if the Ministry of Finance fulfilled the "Memorandum of Understanding", because of the agency problems at the implementation stage, there is no assurance that policies will be administered by the local governments, contractors, and community representatives in accordance with the prescription. Using cross-national panel data Furukawa and Takahata (2013) show empirically that GBS tends to result in an increase of the health budget allocations but not in an improvement of health-related indicators. Furukawa and Mikami (2014) reveal that the durability of donor-financed deep boreholes, for example, tends to differ depending on whether the construction was supervised directly by the donor or indirectly through the Ugandan line Ministry. Awortwi (2012) also describes how local governments in Ghana fail to manage agency problems in solid waste collection services by solely relying on contract design. Gauthier and Reinikka (2007) note that "a growing body of research on service delivery demonstrates that allocating more budgetary resources may not

[3] See Faust et al. (2011) for a concise description of the classic pattern of multi donor budget support.

necessarily deliver better outcomes: budgetary resources benefit the rich; they may not reach the intended beneficiaries; and even if they do, these resources may not result in better outcomes because of poor performance by providers" (Gauthier and Reinikka 2007, 44).

Misuse of public funds during the implementation stage can stem from both the central and local levels. According to Gauthier and Reinikka (2007, 27), in Mozambique, Rwanda, Senegal, Uganda, and Tanzania leakage tends to be concentrated at the local government level, while in Chad and Ghana it is at the central government level.[4] When local officials fail to transfer the money they have received from the central government to frontline service providers such as schools and health units, they use private information on the amount of budget allocated. Likewise, in the case of public funds capture at the central level, officials in the central government ministries retain public funds without disclosing information on the volume of money earmarked for certain areas to local governments and frontline service providers (Gauthier and Reinikka 2007, 30-31; Gauthier and Wane 2008). It is important to note, however, that in this version of the story the frontline staff or community members are always described as the innocent victims who have been exploited by those in high-ranking offices.

2.5 Monitoring as a remedy

Such a Manichean conceptualization of corruption leads to a solution which relies chiefly on the provision of information to victims. Proponents of community monitoring argue that making budgetary information available to all local players is the key to redressing the leakage of public resources. In line with this theory and based on a field experiment in the Ugandan health sector, Björkman and Svensson (2009a) find that not only the attendance rates of health care staff but also the health conditions in monitoring villages significantly improved. However,

[4] Absenteeism is also a form of misuse of public money (salaries). On average, about 19 percent of teachers and 35 percent health workers are regularly absent from their workplace in developing countries (Chaudhury et al 2006, 91).

a multinational observation study reports a mixed result from community-based monitoring on absenteeism in the education and health sectors (Chaundhury et al. 2006) while a field experiment by Olken (2007), looking at the road sector, shows that top-down official auditing is superior to community-based monitoring in terms of corruption. Björkman and Svensson (2009b) also qualify their thesis based on the re-examination by including interaction terms with GINI index and Ethno-linguistic fractionalization of the community (both diminish the impact of community-based monitoring). Their findings were updated further based on a renewed experimental design (Björkman et al. 2014).

In the meantime, a field experiment in India shows that after its initial success local government-based monitoring of absenteeism is not durable (Banerjee et al. 2008). Banerjee and Duflo (2006) also report on a Kenyan case where an entrusted monitor, a school headmaster, cheated researchers and ruined the experiment, which had aimed to test the effectiveness of local monitoring in increasing the attendance rate of teachers. In this regard, Azar and Nelson Jr. (2007) relying on their laboratory experiment, insist that the "directly elected attorneys general" work more vigilantly at exposing corruption than the "appointed attorneys general." Likewise, Barr et al. (2009), who used a laboratory game involving Ethiopian nursing students as a sample, report that service providers perform better when monitored by people who are accountable to the service recipients. However, an observation study in Burundi, which compared the effectiveness of health committees elected among the communities and that of local NGOs contracted as verifiers of health facility performance, concludes that the latter is more effective than the former (Falisse et al. 2012). These results defy the Manichean interpretation of corruption and illustrate the difficulty of keeping the monitor and those being monitored separate. In such a context, many end up in a worse position than they originally were, no matter how the monitor is selected. This tendency and the pivotal role played by reciprocity and trust between bribers and public officials in establishing bribery relationships, which was shown by Abbink et al. (2002) through a laboratory experiment,

might be the two sides of the same coin: corrupt exchange of favors must rely on trust, which is expected to be stronger among parties who share the same cultural value.

2.6 Intrinsic motivation rediscovered

Based on another survey using Ethiopian nursing and medical students as a sample, Serneels et al. (2005) find that willingness to work in a rural area is chiefly determined, after all, by the intrinsic motivation to help the poor. Reinikka and Svensson (2010), exploiting an unintended randomized phase-in of untied financial aid by the Government of Uganda to non-profit religious health providers, reveal that these organizations use grants to increase their efforts at helping suffering people, such as carrying out more tests for malaria, without increasing remuneration for staff. Barr and Serra (2006) identify the effect of the internalized social norm or preference for "not engaging in bribery because it is harmful to society" and conclude that corruption is a cultural phenomenon. In the abovementioned Ethiopian nurse experiment, Barr et al. (2009, 230) also find that the more experience the service providers have, the more likely they are to engage in corrupt behavior, interpreting this as the result of socialization into "a culture of corruption." All of these empirical findings suggest the influence of culture or ethics inscribed in the culture: in certain cultural contexts both sides of the public service delivery chain may collude with each other and jointly capture public funds.[5]

If the corruption is a cultural phenomenon, direct technical cooperation by donors, or at very least monitoring by experts from different cultural origins, during the implementation stages is indispensable for securing the effectiveness of the policies induced by budget support. Paying higher salaries to LTAs and indirect monitoring cannot be a promising alternative given the mixed results of the laboratory experiments. Although Azar and Nelson Jr. (2007) show the dampening effect of higher wages on the corruptibility of public officials, the findings of Barr

[5] See Rasul and Rogger (2013) for more on the recent revival of interest in the intrinsic motivation within development studies.

et al. (2009) show only weak evidence that higher wages prevent corruption. Additionally, van Veldhuizen (2013) shows that without monitoring, the dampening effect of higher wages disappears. It should be borne in mind, however, that in contrast to direct mentoring at the decision-making level, the demand for direct monitoring during the implementation stages tends to become endless and costly; on the one hand, sub-national units proliferate due to decentralization, and on the other hand, the extended monitoring is required due to the chain of subcontracts. With increasing pressure for the reduction of the costs of aid provision and the need for BCP in aid against the backdrop of a possible imminent globalized crisis, more and more donors are driven to contract out their projects to local NGOs.[6] Cutting this Gordian knot by bypassing the government system (Track 2) would definitely undermine the long-term sustainability of self-reinforcing development even though it may contribute to the makeshift fulfilment of the Millennium Development Goals. We need to devise a solution within Track 3. To illustrate this impasse more concretely, in the next section we introduce the case of Sierra Leone.

3. The case of Sierra Leone

In this section we apply the theoretical framework developed in the previous section to the post-conflict situation in Sierra Leone. In so doing we emphasize the structure of the agency problem at the implementation stage caused by the decentralization and community-driven development, which are chipping away at the benefits of GBS. We also show the counter-measures taken by the World Bank and JICA, which both have the same purpose but rely on different methods.

[6] Ownership is another hypothesized logic behind the contracting out of aid activities to local NGOs.

3.1 GBS

The Department for International Development (DFID) is the leading GBS donor. Since FY 2002 (Right panel of Figure 1), DFID has, in principle, poured £10 million core tranche and £5 million performance tranche into Sierra Leone's national coffer. In 2006, the World Bank (under the name of the Governance Reform and Growth Grant), the EU, and the African Development Bank joined this approach, forming the Multi Donor Budget Support (MDBS) framework, which emulated a framework used in Ghana.[7] The Performance Assessment Framework (PAF) is a built-in tool of policy dialogue between the recipient government and the GBS donors. In Sierra Leone this framework originally had 31 indicators but currently has 19. Disbursements are made on a quarterly basis in a meeting between MDBS heads and the recipient finance minister, who jointly examine the progress of the PAF.

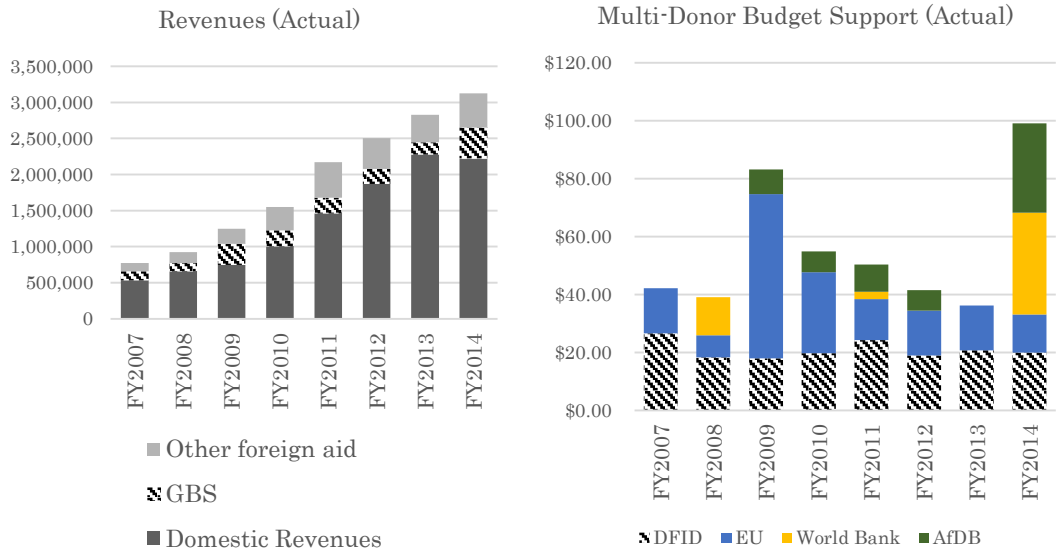

Figure 1. General Budget Support in Sierra Leone
Source: Sierra Leone's Budget profile published by the Ministry of Finance and Economic Development. The data for FY 2014 is an estimate.

One of the criteria that the government of Sierra Leone (GoSL) has committed to is the ratio of spending in the areas poverty reduction, such as for education, health, and agriculture

[7] Ghanaian MDBS started in 2003 (Lawson et al. 2007).

(the so-called "Poverty Related Expenditure"). Bartholomew (2009) reports that despite the not infrequent disruptions to budget allocation for pro-poor policies due to the late disbursement and withdrawal of budget support out of concerns about fiduciary risk, recurrent expenditure on general public services saw its share more than double between 2000 and 2007. The last seven years have also seen approximately one-fourth of the total expenditure being consistently devoted to poverty reduction, while unrelated budgets like military expenditure have been kept to a low (right panel of Figure 2). As a result, Sierra Leone's Ministry of Finance and Economic Development (MoFED) has a good reputation among donors (Viñuela and Barrie 2014).

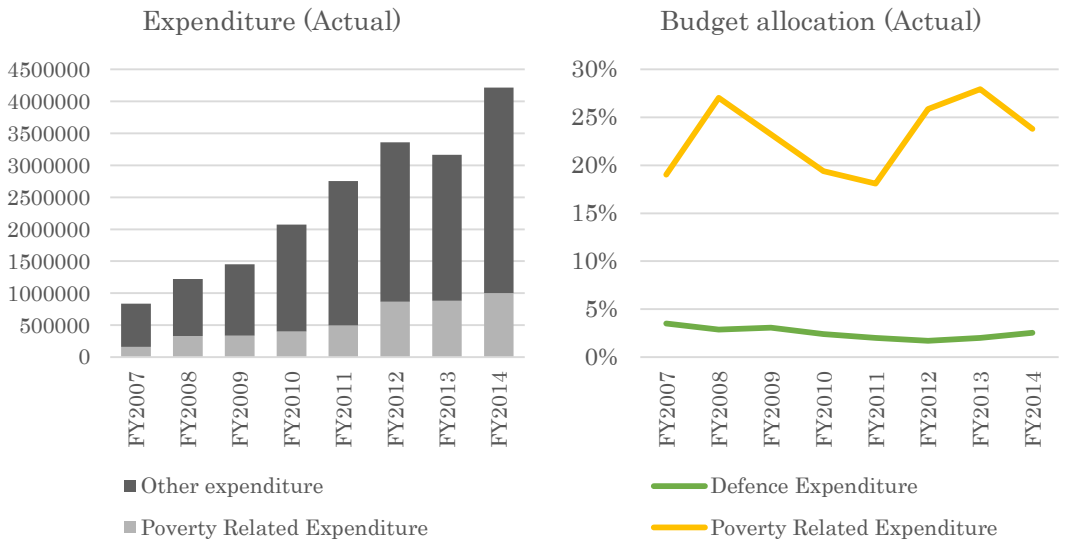

Figure 2. Flow of funds effects of GBS
Source: Sierra Leone's budget profile published by the Ministry of Finance and Economic Development. The data for FY 2014 is an estimate.

3.2 Decentralization

Like other recipients of GBS, however, Sierra Leone is faced with the limited effectiveness of the pro-poor budget. Despite the steady expansion of poverty-related expenditure over the past few decades, improvement of human development outcomes has been slow and limited. A review of GBS by DFID in 2009 deplored the fact that "(t)he main area where the impact of

budget support has been disappointing is on the quality of service delivery" and ascribed the miserable situation to "the fact that there have not been complementary interventions by donors prior to 2008 in key sectors to assist in the delivery of frontline services" and concludes that "(r)elying exclusively on budget support without other interventions in the form of TA and capacity building are not likely to be effective."(see Bartholomew 2009, 20-30).

One reason for this ineffective implementation is decentralization within Sierra Leone, which has, like many other decentralizing countries in Africa, been highly political. The policy of decentralization was initiated as historic revenge by the SLPP (the Sierra Leone People's Party) against the APC (the All People's Congress), who after taking power from the SLPP, abolished the local governments that existed in 1972, as a prelude to becoming the sole legal party in 1978. The subsequent centralized one-party rule paved the way for a prolonged insurgency by the RUF (the Revolutionary United Front) from 1991 to 2001, during which time the SLPP retook power from the APC. Thus, decentralization was intended to dismantle the legacy of the APC power base and entrench the SLPP's hold on power. Due to the electoral defeat of the SLPP in 2007, however, reckless and premature proliferation of districts like what we witnessed in Uganda was able to be avoided in Sierra Leone. The administrative division which consists of twelve districts (Kailahun, Kenema, Kono, Bombali, Kambia, Koinadugu, Port Loko, Tonkolili, Bo, Bonthe, Moyamba, and Pujehun), five towns (Kenema, Koidu, Makeni, Bo, and Bonthe), and two areas (the urban and rural areas of Freetown), has been left intact since its inception. Instead, the devolution of power to these appropriately demarcated local governments, as stipulated in the Local Government Act of 2004, has been disrupted by the former dictatorial party since its return to power. This is despite the fact that the Poverty Reduction Strategy Paper II prescribed by the APC regime identified decentralization as a precondition for achieving the government's strategic priorities. By the end of 2010, only 46 of the planned 80 functions including most functions relating to the PAF, had actually been devolved to the local councils. The late arrival of quarterly transfers from the central

government disrupts the planned delivery of services (Larizza and Glynn 2014, 241). In fact, the politically turbulent situation has also been undermining the administrative capacity of local governments in Sierra Leone, even though the number of units has been kept constant.

The decentralized accountability system does not function in line with the decentralization theory. In Sierra Leone, the politicians who are popularly elected at the local level are the chairperson of the district and the councilors representing each ward within the district. The former has authority over the local government officials, but the latter does not because the local council does not function as a council. Instead, councilors are summoned monthly but have no legislative power; they only approve of the actions taken by the local government and are virtually only messengers to the communities. Additionally, "Ward committees represent an essential channel for upward and downward communication with local residents. However, they are hampered in particular by mobility constraints among their often-scattered communities" (Larizza and Glynn 2014, 229). Given the fact that due to its financial dependence on the central treasury the local government cannot make any decisions without approval from the central government, the popular election of the district chairperson, who supervises the work of local government, is yet to generate the expected "median-voter" effect on the contents of local public policies. What secures the interest of the local population, if any, are the policies prescribed by the central government that reflect the policy dialogue with the MDBS donors. Moreover, lack of manpower and means of transportation prevent local governments from effectively controlling the contractors who are supposed to deliver the services. Thus, the benefit of decentralization is not realized in this aspect. What both district chairpersons and ward councilors are struggling on the ground is to raise funds directly from international NGOs because these funds are at their disposal to procure contractors without interference from the local government (Larizza and Glynn 2014, 243). However, this does not contribute to the capacity development of the state institution.

3.3 Assistance by the World Bank

Against these backdrops, in 2004 the World Bank initiated its Institutional Reform and Capacity Building Programme (IRCBP), which aims to improve basic service delivery through the reintroduction of systems of local government. DFID and the EU provided financial support in the form of a multi-donor trust fund only. The project was primarily managed by three units embedded within government ministries but staffed by Sierra Leonean diaspora hired by the World Bank on higher salaries than those of ordinary public officials. These three Project Implementation Units (PIUs) are Decentralisation Secretatiat (Dec Sec) nested in MLGRD and Local Government Finance Department (LGFD) and Integrated Programme Administration Unit (IPAU) both nested in MoFED. By utilizing the PIUs, the World Bank has set up a financial transfer system where administrative grants and grants for devolved functions are tied to specific sector expenditure and managed separately through different bank accounts. Local councils have the right to decide how to allocate the grants received within each sector, but they need approval for their decision from the central government (Larizza and Glynn 2014, 224). The procedure can be summarized as follows: First, local councils submit a district development plan, upon which the district annual budget is formulated; once approved by the MoFED, quarterly allocations arrive to the councils' designated bank accounts of each devolved functions; no subsequent allocations will be disbursed until proper budget executions are verified by invoices; rollovers are permitted in the event of end-of-year sector balances.

In addition to the ear-marked transfer from the central coffer, which is partly supplemented by the GBS, the IRCBP also delivered Local Government Development Grants (LGDGs) using project funds to finance the construction of small-scale infrastructure such as grain stores, drying floors, mechanical wells, and primary schools. The bottom-up community development proposals are supposed to be submitted by councilors in collaboration with development committees at the ward or village level, which they themselves organize and facilitate. The intention was to quickly build confidence in the system of local government.

The project formerly continued until June 2011, but the contents were gradually taken over by another project of the World Bank - the Decentralized Service Delivery Programme (DSDP) - which was approved in October 2009.[8] The Multi-donor trust fund, which financially supported the IRCBP, was no longer in existence as DFID had lost confidence in the decentralization policy of the GoSL and pursued service delivery through UNICEF and PLAN International (the EU restarted to fund the DSDP from phase II). In the meantime, all PIUs of the IRCBP were recurrently used in the successor project. Dec Sec was primarily responsible for the project's "Component 2": capacity building and technical assistance that focused on training local council staff. For that purpose, resident technical facilitators (RTF) were dispatched to all 19 councils to coach staff and monitor council activities, and to submit monthly progress updates to the project headquarters.

The World Bank also continued to give additional grants to the local councils as they had under the IRCBP, but this money was commingled with the transfer from the central government so as not to be seen as a substitute for the transfer to local councils (World Bank 2013, 6). The four sectors that are supported through this grant are education, health and sanitation, solid waste, and water services. According to the implementation, completion, and results report of the DSDP phase I, the projects supported by the DSDP grants to local councils include: 195 projects aimed at the rehabilitation of health facilities and schools; the rehabilitation or construction of collection and dumping facilities in 79 locations; 259 hand pumps and water wells; procurement of teaching and learning materials; and medical supplies (World Bank 2013, 12).

There is no consensus on what the reputation of local councils looks like after a decade of decentralization. While Larizza and Glynn (2014) describe decentralization in Sierra Leone as a success story based on their focus group interviews, the result of the public service delivery survey in 2011 indicates that popular trust in local councils is actually declining (Government

[8] Phase I started in October 2009 and ended in June 2012, while phase II started at the end of the 2011.

of Sierra Leone 2012, 49-57). Larizza and Glynn (2014) also give a surprisingly favorable evaluation of donor-funded IPUs. They insist that:

> Dec-Sec and LGFD provided the appropriate vanguard organizational structure that, along with strong legislative momentum, acted as a solid catalyst for the institutional reform process. Moreover, because they are funded by donor projects, local technical assistant staffs have been subjected to external accountability mechanisms to monitor their performance. This in turn has facilitated the relationships of the local councils with donors. And it has enabled their support of the institutional development of local councils by channeling large amounts of financial resources, as well as by providing effective monitoring and an intensive capacity-building program (Larizza and Glynn 2014, 238-239).

The authors go on to argue that "[f]rom their inception, the new local councils had available to them the full-time advice of the council coaches (later designated as resident technical facilitators) who were hired directly by Dec-Sec. The[y] in turn were backstopped by regional coordinat[ors] and the human resources specialists at Dec-Sec" (Larizza and Glynn 2014, 240). In the meantime, contradicting evaluations can be found in the Project Completion Report written by DFID - one of the co-funders of the IRCBP (DFID 2011). As already noted, DFID in fact opted out of the multi-donor trust fund for decentralization after apparently becoming disappointed by the malfunctioning of local councils. DFID has instead been financially supporting a non-country system of public service delivery (Track 2), namely the WASH program, which is organized by UNICEF and PLAN International. DFID justifies its policy as follows: "The institutional arrangements for WASH delivery by Councils are weak and are facilitated decentralised staff from Water Supply Division (WSD) and a District Health Medical Team (DHMT). WASH planning, financial management and monitoring are weak and

councils do not have structures in place to enable an integrated and holistic approach towards water, sanitation and hygiene (DFID 2013, 4)."

3.4 Assistance by JICA

Such polarizing evaluations raise serious doubts about the effectiveness, if not efficiency, of the out-sourced technical cooperation arranged by the World Bank. Fortunately JICA also began to support decentralization, geographically focusing only on the northern districts of Kambia and Port Loko. The Project for Capacity Development for Comprehensive District Development (CDCD) was carried out in the Northern Region of Sierra Leone from 2009 to2014. Aimed at institutionalizing decentralized service delivery, the project offered district staff, such as the development and planning officer, the procurement Officer, the monitoring and evaluation officer, and the works engineer, opportunities to practice development planning based on the survey of resident's needs, the procurement of service providers following formal legal procedures, and supervising the progress of contract fulfilment, with disciplinary action if necessary. The CDCD project had two main components: support for feeder roads rehabilitation [9] and for bottom-up community development through the construction or rehabilitation of small-scale infrastructure projects such as agricultural facilities, water supply systems, health facilities, and primary schools. In that sense, thanks to aid harmonization the project had much in common with the World Bank's IRCPB and DSDP projects. Both projects tried to complement the effect of pro-poor policies secured by DFID through GBS, intervening in the implementing organ of the GoSL, and reinforcing the country system of decentralized service delivery.

[9] Roads in Sierra Leone are classified into several classes. Feeder roads, Class F, connect villages, towns, and higher class roads (A-B roads). The rehabilitation and maintenance of feeder roads has been conducted by the Sierra Leone Roads Authority (SLRA), a parastatal organization established in 1992 under the Ministry of Works, Housing and Infrastructure. The function was devolved to Local Councils according to the Local Government Act of 2004.

The similarity can be exemplified by the involvement of local councils in the maintenance of feeder roads. In addition to the CDCD project, there are several donor-funded projects which take care of rural road networks, namely, the Rural and Private Sector Development Project (RPSDP), the Agricultural Sector Rehabilitation Project (ASREP), and the Rehabilitation and Community-Based Poverty Reduction Project (RCPRP) under the Ministry of Agriculture, Forestry and Food Security. RPSDP is sponsored by the World Bank, ASREP by AfDB, and RCPRP by the International Fund for Agricultural Development (IFAD). The various procedures, such as the selection of target roads, the procurement of suppliers, or the management of construction, differ from project to project. Only in RPSDP do local councils play a role similar to that in the CDCD. They not only propose the candidate sites but also carry out the bidding process, enter into contracts with the winning bidder, receive funds from the project funders, and pay for the work under the supervision of the project coordinating unit. The Sierra Leone Roads Authority (SLRA), a parastatal organization in the roads sector, and the project coordinating unit verify the output and check for defects after the defect liability period of 90 days has elapsed. In other projects, the respective Project Administration Unit and the SLRA manage everything from procurement, the monitoring of the work by the contractor, and payments to the contractor, without actively involving local councils, who at most undertake selection of candidate sites (Audit Service Sierra Leone 2014).

One non-negligible difference between JICA's CDCD and the World Bank's projects, other than the geographical focus, was the mode of technical cooperation: the World Bank contracted out the mentoring and monitoring of local council staff to locally hired technical assistants, namely Dec-Sec and RTAs. In contrast, JICA administered technical cooperation directly through Japanese experts, who directly facilitated and monitored the local government staff by having offices in each of the local councils. This is the Japanese traditional approach to technical cooperation in bilateral aid. The approach is sometimes criticised by Nordic donors as

being inefficient.[10] However, as the first non-Western developed country the Government of Japan has a distinctive philosophy on aid: The Government of Japan believes in the importance of transferring not only knowledge and techniques but also professional pride and work ethics from the Japanese culture.[11] Therefore, they do not, in principle, contract out technical cooperation to international or local NGOs simply to reduce the costs of bilateral aid. That being said, at the multilateral aid level, the Government of Japan has been financing projects carried out under the auspices of international organizations such as UNICEF.

3.5 Possible agency problems in monitoring as a remedy for the agency problem

This sole difference between the Japanese projects and those of the World Bank, as discussed above, gave Japanese experts a rare chance to learn about the hidden realities of indirectly maneuvering donors who rely chiefly on monitoring reports submitted by LTAs. In the course of the project implementation, Japanese experts witnessed several irregularities and anomalies by councilors and officers in the delivery of services. For instance, when Japanese experts accompanied the development planning officer of Kambia while he undertook the needs assessment, he confessed to the experts that the council had never conducted needs surveys in preparing the district development plan.[12] In the procurement of a contractor for the feeder road rehabilitation, internal discussions on candidate selection were leaked before the final decision was made.[13] A number of contractors did not conform to the required specifications in the Bill of Quantities, which resulted in the poor quality of small infrastructure such as culverts and drying floors.[14] These anecdotal episodes suggest the possibility that if officers were

[10] OECD (2014), p.60. One of the reviewers was from Denmark.
[11] Japanese ODA Charter 2003 (http://www.mofa.go.jp/policy/oda/reform/charter.html) and Development Cooperation Charter 2015 (http://www.mofa.go.jp/mofaj/files/000067701.pdf). See especially the section titled “C. Cooperation aimed at self-reliant development through assistance for self-help efforts as well as dialogue and collaboration based on Japan’s experience and expertise.”
[12] Interview with a Japanese expert.
[13] CDCD Project news, no. 13 (January 4, 2011).
[14] Progress report by Japanese expert, May 2011.

monitored only by local RTFs and not by Japanese facilitators, they would prepare a district development plan without conducting a needs survey, they would award contracts through personal connections without holding public competitive bidding, and would connive in embezzlement by contractors in return for kickbacks. In fact, there is a report that the cash-for-work schemes that were implemented through the district councils have the lowest incentive for workers and are also void of engineers; this gives credence to the claims of poor workmanship that are levelled against this community-based public works schemes (Kamara et al. 2012, 27). Technical cooperation in such a cultural context places a tremendous burden on facilitators. It would be much easier for them to do as the monitored do and report to the principal that the agents have fulfilled their task. Together with the contrasting evaluations on the effectiveness of technical cooperation given to the local government by PIUs hired by the World Bank and the performance of the MoFED, which was directly monitored by DFID through the MDBS framework, the abovementioned episodes of irregularities and anomalies clearly imply the dysfunction of outsourced technical cooperation in Sierra Leone. In the following section we try to test the hypothesis that outsourced technical cooperation offered by the World Bank is less effective than directly administered technical cooperation provided by JICA. Before introducing our own analysis, however, we first search for qualitative clues using archival documents.

4. Preliminary Qualitative Analysis: Structured, Focused Comparison of Control Districts and Districts Where Intervention Occurred

Traces of corruption as a result of defunct monitoring can manifest itself in various ways. The most straightforward approach to investigation would be to search for clues of corruption in the auditing reports, which are institutionalized for that very purpose. The Audit Service of Sierra Leone (ASSL) was set up to carry out the external audits of all central and local government expenditure as well as for parastatals that receive more than 50 percent of their funding from

the GoSL. After carrying out the audits, ASSL submits reports to the Public Accounts Committee (PAC) of the Sierra Leone parliament, which has a statutory mandate to examine all reports of the Auditor General, to conduct hearings on the audit report, if necessary, and to present a report to parliament outlining their examination and highlighting the action to be taken against those who have misappropriated public funds and resources. With a view to underpinning "the provision of GBS in Sierra Leone and any future sector budget support by strengthening assurances that UK aid to reduce poverty is being spent with the greatest economy, efficiency and effectiveness" (DFID 2014c, 2), DFID has been providing intense technical assistance both to ASSL and PAC since 2004; this assistance has been carried out through specialists from an American accountancy organization (PKF) and the Norway-based development consultants, the International Law and Policy Institute. Although ASSL is itself still a fledgling organization which is learning by doing, DFID reports that in 2009, institutional performance greatly improved (DFID 2013b, 2). The annual national-level audit reports by ASSL are available online, although the reports of individual councils are not. National level reports for FY 2011 and 2012 contain a short chapter on local councils, while no reference is made to local councils in the reports for FY 2003-2010. Still, review reports by PAC, including special reports on local councils, are also available online for FY 2010, 2011, and 2012. From these reports we can replicate the detailed findings by ASSL, although the PAC report for FY 2009 is not available and the integrated report for FY 2004 to2008 by the PAC provides only general summary observations and recommendations. Furthermore, with regard to the four districts of Bombali, Tonkolili, Kambia, and Port Loko, we were able to browse hard copies of individual council reports for the FY 2005 to 2010 at LGFD of the MoFED during the field study in late 2013.[15] Relying on these materials, we first examine whether improvement occurred in districts which have been monitored directly by JICA. After that, we compare the

[15] The fact that auditing results for FY2005-2007 were consolidated into one report shows the weakness of ASSL.

results with situations in districts where JICA has not operated. We have chosen Tonkolili and Bombali as comparison cases because both belong to the same northern region and have a similar population and area size.

Appendix 1 summarizes the findings relating to the public financial management of the Kambia District from 2005 to 2012. By definition, audit reports only refer to the points where anomalies and irregularities were found in the particular fiscal year under review. Where a section is left blank this means that the point is "not mentioned." Given the fledgling nature of the auditing institution, however, it is not necessarily clear whether "not mentioned" indicates that the points were free from problems or that auditors simply overlooked the points. In any case, those inconsistencies in reporting of the financial statements which were pointed out in the years 2005 to 2010, have not been mentioned since 2011. Likewise, irregularities in relation to monthly bank reconciliations and withholding tax disappeared after 2010. On the other hand, payment without supporting documents and breaches of the procurement procedure which in 2009 and 2010 had either been undetected or had been quickly remedied have resurfaced as serious challenges since 2011. By contrast, audit reports on financial management in Port Loko suggest a clearer improvement (Appendix 2). Although inconsistencies in the financial statements were still pointed out in 2012, neither payment without supporting documents nor breach of procurement procedures have been substantiated since 2011. Monthly bank reconciliations and deduction of withholding tax seem to have been properly conducted in 2011 and 2012.

In order to examine what was happening in districts where no direct monitoring was conducted during the period from 2005 to 2012, we next examine audit reports from Tonkolili and Bombali. Appendix 3 summarizes the findings from the audit report of Tonkolili, whose baseline situation in FY 2005-2007 was seemingly better than the two districts we have just examined. Monthly bank reconciliations and a lack of logbooks for vehicles were the only two deficits that the local councils could not explain. However, financial management deteriorated

as time went on. Although in the FY 2009 and 2010 the council was somehow able to remedy any anomalies in the payments and procurements that were pointed out by the auditors, from 2011 onwards, the irregularities in the procurement process were too serious to address. Another target for comparison was Bombali, which was in as poor a condition as Kambia at the beginning of the observation period. With the exception of FY 2010 when all allegations of anomalies except for the sitting fee paid to absentee councilors could be explained, Bombali's financial management continued to be poor throughout the observation period. Inconsistencies in financial statements, payments without supporting documents, and breaches of the procurement procedure were all detected in 2012 (Appendix 4).

From the above qualitative clues, we can at least rule out the possibility that improvements found in Port Loko were simply due to the effects of time. At the same time, however, it is hard to ascribe the result to the long-term presence of JICA because Kambia, where JICA has intervened for an even longer time, showed a weaker tendency towards improvement.[16] Also, there is the possibility that what was improved in Port Loko was not the capacity to manage finances appropriately but the technique for covering up irregularities. Therefore, to measure the degree of the agency problem in monitoring without the results being manipulated by the monitored, we need a quantitative survey of the objects directly influenced by any possible agency problems. If monitoring by LTAs is less effective and the local council staff skip the needs survey when making a district development plan, the number of villages without access to public services such as a water supply system, drying floors, grain stores, primary schools, and health facilities, would increase. If monitoring by LTAs is less effective and local council staff fail to follow competitive procurement procedures, such as issuing a request for quantities and requiring a certificate of completion, suppliers who have a lesser capacity would be contracted and deliver lower quality services. Likewise, if monitoring by

[16] JICA has been intervening in Sierra Leone since 2004. The intervention focuses on the northern district of Kambia and covers the areas of health, education, agriculture, and rural water supply in collaboration with GoSL.

LTAs is less effective and local council staff connive in the breaching of the bill of quantities and the use of cheaper materials by contractor, this would in turn lead to less durable public infrastructure. In the next section we review pre-existing quantitative evidence and introduce our own survey.

5. Quantitative Research Strategy

Since it is widely recognized that the allocation budget does not tell the whole story, donors have conducted a number of surveys looking to systematically understand the situation of service delivery on the ground. However, studies that include both districts where JICA has intervened and those where they have not, are limited. Fanthrope et al. (2011), for instance, discuss the result of a survey commissioned by DFID, which targets only Bo, Bombali, Kono, and the Western Rural Area. The World Bank's Public Expenditure and Financial Accountability Performance Assessment Report examines city councils only, namely, Freetown City Council, Bo City Council, Kenema City Council, Makeni City Council, and Kono District Council (World Bank 2010). On the other hand, most studies that covered all districts terminated their observation period at a point that was too early to trace the possible impact of direct monitoring or when the latest version of the results was not yet available publicly. The four waves of the National Public Service Survey carried out by the World Bank in 2005, 2007, 2008, and 2011, cover all districts. However, the raw data for the 2011 wave is not yet available (Zhou 2009). UNICEF conducted multiple indicator cluster surveys in Sierra Leone in 2000, 2005, and 2010. The 2010 survey is too old and the next round of surveys was expected to have taken place in 2015.

One promising exception is the Public Expenditure Tracking Survey (PETS), which was introduced in Sierra Leone in 2001. The survey was continuously conducted once or twice a year and tracked the flow of publicly-funded resources such as school fee subsidies, teaching

and learning materials, essential medical drugs, and rice seed, from the center to the periphery.[17] The survey compares the value/volume of released and received resources to detect any inconsistency and discrepancy at each cross-level juncture. The rationale is that all parties concerned are supposed to transfer the same amount of resources they received to the agencies at next level of the delivery chain. Accordingly, if no leakage occurs, the transferred and received value/volumes should be the same between different levels. The innovative design of the survey, however, could not cope with the extremely poor bookkeeping and record management at schools and PHUs in Sierra Leone. Typically, local staff do not separately record the supplies from the government and the direct donations from NGOs at the lower level; this cancelled out and overwhelmed the leakage of resources, if any, and wiped out the trace of corruption. As a result, we are not able to draw any meaningful statistical inferences from on this data. Moreover, since 2012 PETS has not been conducted because the GoSL has preferred to track service delivery using the country's own system without producing any reports so far (DFID 2012, 8; DFID 2014, 13). Against this backdrop, we decided to conduct our own survey focusing on the four districts we qualitatively examined in late 2013(Kambia, Port Loko, Tonkolili, and Bombali).

As previously noted, the CDCD project had two components: support for feeder road rehabilitation/construction and support for community development through small-scale community-driven infrastructure projects. Assistance for feeder road rehabilitation was directed at the council level, while assistance for small infrastructure was directed at the ward level. All 25 wards in Kambia were targets of ward-level interventions, compared to only 7 out of 34 wards in Port Loko. Assistance for ward development was designed as having two phases: the "pilot" phase and the "model" phase. In the pilot phase, community-driven development projects were implemented in all targeted wards, while in the model phase only

[17] We were able to obtain a total of eleven PETS reports from the MoFED online; these reports are, however, no longer available online at http://mofed.gov.sl/pets.htm.

the wards who showed a higher performance had a chance to implement one more projects. Eights wards were selected from Kambia and four wards were selected from Port Loko (Table 1).

Table 1. District-level and Ward-level intervention in the CDCD project

District	Direct technical cooperation to district council staff	Ward total	Community-driven development projects		
			None	Pilot phase only	Pilot and Model phases
Kambia	Yes	25 (12)	0 (0)	17 (7)	8 (5)
Port Loko	Yes	34 (13)	27 (7)	3 (2)	4 (4)
Tonkolili	No	28 (7)	28 (7)	0 (0)	0 (0)
Bombali	No	27 (8)	27 (8)	0 (0)	0 (0)
Total		114 (40)	82 (22)	20 (9)	12 (9)

Note: The number is parentheses represents the number of selected wards.

We chose the wards in Tonkolili and Bombali as a control group because the two districts share a border with Kambia and Port Loko, and because they have similar topographical characteristics. There are 28 and 27 wards in Tonkolili and Bombali, respectively. We selected 40 wards from a total of 114 wards, which included those in Kambia and Port Loko; we then drew eight villages from each of the selected wards, totaling a sample size of 320 villages. We pursued a two-stage sample because prior to the project we had some information on the wards but none on the villages. To make this non-experimental study more meaningful, we needed a sample structure which excluded potential correlates with the treatment as much as possible, at least at the ward level.[18] For that purpose we took the following steps: Firstly, using categorical variables on ward characteristics,[19] we dropped

[18] As noted, the choice of districts in the CDCD project was not random but historically path-dependent.

[19] These are: (1) whether the main rivers and/or Class A/B roads run through the ward, (2) whether the Ward locates along the coastal areas, (3) whether the Ward shares border with the neighboring Guinea, (4) whether the Ward occupies part of one Chiefdom, straddles over multiple Chiefdoms, or correspond perfectly with one Chiefdom, (5) whether the Ward contains Chiefdom Headquarters, (6) whether the Ward perfectly corresponds to one section, consists of multiple sections or partitions sections, and (7)

exceptional cases, namely bordering wards, Chiefdom-straddling wards, one-section wards, and non-APC wards. Next, using continuous variables (area size, population size, registered voter size, registered voter density, and number of sections), we detected outliers and excluded seven wards which showed extreme values in terms of registered voter density. The reduced sample contained only six coastal wards, of which only two were in the treatment group, and no other categorical attributes showed highly skewed distributions. Accordingly, we also excluded the six coastal wards from the pool. Since the remaining 65 typical wards neither showed extreme distributions in terms of categorical variables nor contained obvious outliers in terms of continuous variables, we applied propensity score matching (the nearest neighbor) based on all of the abovementioned continuous and categorical variables so as to avoid any confounders as much as possible. One-to-one matching resulted in 18 treatment cases and 18 control cases; one-to-two matching resulted in 18 treatment cases and 36 control cases. We preferred to add four wards to the former over deleting 14 wards from the latter. Since the samples resulting from the one-to-one matching had only three Port Loko wards without ward-level intervention, we added four wards, randomly choosing out of the Port Loko wards without ward-level intervention that were dropped in the one-to-one matching but were retained in the one-to-two matching. The balances of the resulting sample of wards (n=40) are listed in Table 2. As shown there are no variable correlates with the treatment significantly at the 5 percent level. Only significance levels in terms of Class A/B roads are below the 10 percent level. The selection of eight villages from the chosen 40 wards was conducted in the field by the first author because only councilors of the ward have the village lists. When applicable, villages where the Paramount Chief resides, where the former and/or current Councilor resides, or where JICA has conducted projects, were always included. The remaining slots were allocated to each section

whether the local Councilor affiliates with APC. These categorical variables as well as the continuous variables mentioned later were constructed from the geographical information system we obtained in Freetown and election data published on the website of the National Electoral Commission Sierra Leone (http://www.nec-sierraleone.org/).

within the ward in proportion to the number of villages it contains and the assigned numbers of villages were randomly selected. The locations of the 320 villages are plotted in Figure 3.

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Table 2. Comparison of treated and control districts in terms of ward-level attributes.

	Mean						
	Treated (wards=18)	Control (wards=22)	diff	Std. Err.	[95% Conf. Interval]		*p*
Area size	0.013	0.015	-0.002	0.002	-0.007	0.003	0.407
Population size	12500.390	13120.270	-619.884	712.645	-2062.558	822.790	0.390
Number of registered voters	5838.222	6038.636	-200.414	500.551	-1213.726	812.898	0.691
Density of registered voters	625516.7	473456.7	152060.0	122519.8	-95968.35	400088.3	0.222
Number of sections	3.444	4.136	-0.692	0.543	-1.792	0.408	0.211
Dummy for Chiefdom headquarters including ward	0.333	0.318	0.015	0.149	-0.277	0.307	0.919
dummy for ward cut by main river	0.389	0.364	0.025	0.154	-0.277	0.327	0.870
Dummy for ward cut by Class A/B road	0.611	0.864	-0.253	0.136	-0.520	0.014	0.067
Dummy for section-partitioning ward	0.222	0.182	0.040	0.128	-0.210	0.291	0.751

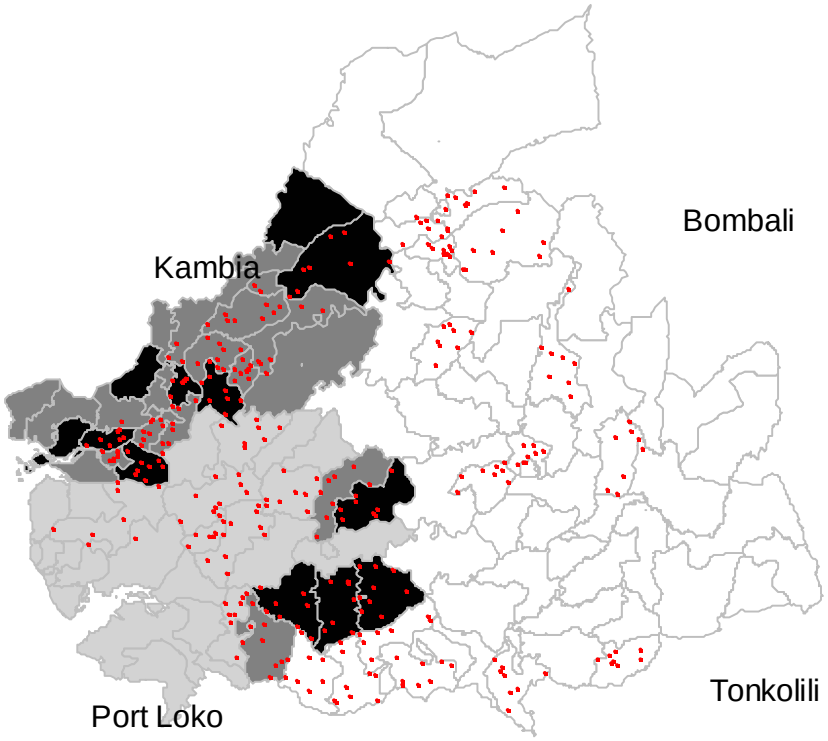

Figure 3. Level of overall intervention and the location of villages surveyed (represented by red dots).
Note: Ward boundaries are drawn. The darker areas refer to more intensive monitoring by the CDCD project.

As a litmus test for agency problems in indirect monitoring we looked at the conditions of the following public services: grain stores, drying floors, water supply systems, health facilities, primacy schools, and feeder roads. These were directly and physically verified by our enumerators using GPS and digital cameras. With regard to the grain stores, the drying floors, and the water supply systems, the following points were recorded: the number of each facility (both working and non-working) in the village; the proportion of working facilities if at least one facility exists in the village; where at least one facility exists in the village, whether the nearest facility from the interview location is working; and the number of days which have elapsed since the nearest facility broke down, if the nearest facility from the interview location is not working.[20] The information recorded on health services was the distance to the nearest

[20] Villages without these facilities are excluded from the analyses.

health facility from the village, the attendance rates of nurses at the nearest health facility, and whether the fridge in the nearest health facility was working. Additionally, after blinding the location of the facility we asked three independent experts on health services in developing countries to give relative evaluations on the quality of each health facility based on the pictures taken by the enumerators. Spearman's ρs between evaluators were .668, 684, and .579. The mean rank was calculated and used as another indicator of health facility with smaller value means better quality. Likewise, primary education services were measured by the distance from the village to the nearest primary school, the number of classrooms in the nearest primacy school, whether the nearest primary school has a latrine, whether the roof of the nearest primary school is made of zinc, the number of teachers in the nearest primary school, and the mean rank based on the evaluations of the nearest primary school by three additional independent observers with expertise in education in developing countries (Spearman's ρs between evaluators were .559, 683, and .744). Lastly, the conditions of feeder roads were measured by the average moving speeds of enumerators travelling from place to place on a bike-taxi during the survey.[21] Since feeder roads are unpaved roads, they are easily damaged by natural weather phenomena, especially during the rainy season, if the construction and rehabilitation of the roads was not conducted according to BOQ. Bumpy roads cause any form of transport, including bike-taxis, to slow down and they constrain the mobility of residents. In short, the quality of the feeder roads determines whether citizens in rural areas can have year-round, all weather access to basic needs, economic and social facilities, services, and opportunities. Using the GPS records the average moving speeds were calculated ex-post facto for each movement between interview locations (for example, the village, PHU, a primary school, or the starting point). Each ward was investigated twice by all enumerators working in pairs. Hence, the personal characters of the enumerators are orthogonal to the intervention.

[21] We could not apply the method of Olken (2007), that is, digging core samples in each road to estimate the quantity of materials used.

When enumerators went beyond the borders of the ward where the survey was conducted so as to move to the next place, any movement outside of the border was excluded from the speed calculation. Enumerators were never aware of the use of GPS records for this purpose - they were provided GPS to record the location of various facilities. In that sense we can rule out the possibility that the moving speeds were biased by the intention of enumerators.

The level of treatment communities received can be operationalized from at least three points of view: (1) whether the district to which the community belongs was given technical assistance at the council level (1=Port Loko or Kambia, 0=other districts); (2) how many times the ward to which the community belongs was given an opportunity to implement development projects (0=no project, 1=pilot project only, 2= both pilot and model project); (3) whether the community was the site of a development project (1=yes, 0=no).[22] By combining levels of all dimensions we get an overall indicator of intervention that ranges from 0 to 4. We use this integrated score as the treatment variable which is expected to have exerted some influence on the quality of the community-driven development project's output. As for feeder road quality, district level intervention (1=Port Loko or Kambia, 0=other districts) will be used as the treatment indicator given the fact that maintenance of rural road networks is an extensive service beyond ward boundaries and a distinctive task for local councils.

Control variables at the village-level include basic attributes such as the number of households; a dummy for riverine village; connections with politically influential people, such as the Paramount Chief, the Section Chief, members of parliament, or former/current councilors (dummies indicating whether these people have a residence in the village); the degree of connectivity to the outside world, such as the level of mobile phone coverage, the percentage of villagers who possess mobile phones, the existence of a telecenter, the possibility of getting phone credit, and whether there was radio coverage; and finally, the level of

[22] Only communities in Kambia or parts of Port Loko had the possibility of belonging to the wards which received ward-level small-scale infrastructure projects funded by JICA. Likewise, only communities in Kambia or parts of Port Loko had the possibility of being the site of ward-level small-scale infrastructure projects funded by JICA. See, Table 1.

economic development indicated by such things as the existence of markets and a secondary school. We also examined the influence of both the ward-level control variables which we used in selecting wards (area, population, number of registered voters, voter density, main river, Class A/B roads, and section partitioning) and those we could not use, namely the number of villages within the ward. The last variable could not be included in the selection because the information was only available in the field. In estimating the impact of intervention on the working rates of each facility, we also controlled for the number of facilities because the more facilities villagers have, the less precious the facility is for the villagers; this in turn undermines the incentive for carrying out maintenance. When estimating the possible impact of intervention on the probability that the nearest facility is working, we controlled for the time when the facility was constructed or when rehabilitation work was last carried out. When estimating the possible impact of intervention on the time period the nearest facility left broken, we controlled for the number of that type of facility in the village for the same reasons we mentioned above. These control variables were screened through stepwise deletion based on AIC, before being inserted into the regression with the treatment variable. In the analysis of the average moving speed on feeder roads, we consistently controlled for the average elevation, the average positive slope, the range of slopes, and the distance of the interval. We also created dummy variables indicating whether enumerators partially used Class A/B roads and whether they crossed the river within the interval. Descriptive statistics of dependent and control variables are summarized in Appendix 5.[23]

When the same objects were tested based on various dependent variables, the alpha levels had to be adjusted accordingly. Namely, 13 tests from all 320 villages, 3 tests from the 68 villages with a grain store, 3 tests from the 110 villages with a drying floor, and 3 tests from the 172 villages with a mechanical well. Where necessary, "adjusted *p*" is reported in the next section. By contrast, no correction is necessary for the analysis of road data because the unit of

[23] Baseline data that reflect the pre-intervention situation in each village was not available.

analysis does not overlap with any of the preceding analyses and uses a single dependent variable.

6. Results of Statistical Analyses

6.1 Grain stores, drying floors, and mechanical wells

Table 3. Effect on grain stores, drying floors, and mechanical wells.

Outcome variable	Without Control Variables			With Control Variables		
	N	Effect (SE)	*p*	n	Effect (SE)	*p*
Grain store						
Number of grain stores in the village.	320	0.126 (0.077)	0.101	314	0.042 (0.074)	0.573
Working rate of grain stores in the village.	68	-0.013 (0.027)	0.628	66	-0.009 (0.027)	0.751
Status of the nearest grain store within the village (1=working, 0=	68	0.227 (0.262)	0.385	66	0.060 (0.270)	0.824
Number of days which have elapsed since the nearest grain store within	64	-77.670 (67.890)	0.257	62	-94.110 (71.020)	0.190
Drying floor						
Number of drying floors in the village.	320	0.064 (0.056)	0.252	314	0.010 (0.060)	0.869

Working rate of drying floors in the village.	110	0.038 (0.021)	0.070	108	0.018 (0.023)	0.449
Status of the nearest drying floor within the village (1=working, 0=	110	0.620 (0.281)	0.028	104	0.621 (0.408)	0.128
Number of days which have elapsed since the nearest drying floor within	108	-143.410 (56.420)	0.012	106	-43.983 (61.816)	0.479
<u>Mechanical well</u>						
Number of mechanical wells in the village.	320	0.079 (0.038)	0.037	314	0.026 (0.038)	0.492
Working rate of mechanical wells in the village.	172	-0.038 (0.022)	0.085	163	-0.036 (0.022)	0.104
Status of the nearest mechanical well within the village (1=working, 0=	164	-0.205 (0.115)	0.073	157	-0.196 (0.135)	0.145
Number of days which have elapsed since the nearest mechanical well	154	53.070 (79.270)	0.504	150	10.553 (79.338)	0.894

Notes: Standard errors are in parenthesis. Pre-adjusted P-values are reported. Intercept and slopes for control variables are omitted.

Table 3 summarizes the results relating to the effect on grain stores, drying floors, and water supply systems. Results of simple bivariate regressions are listed on the left while the adjusted partial coefficients of treatment that control for relevant factors are reported on the right.[26] Of the 320 villages, 79 percent of them did not have a grain store. The remaining villages had up to four grain stores. Poisson regression does not detect a significant influence of intervention regardless of the inclusion or exclusion of these control variables. In the 68 villages where at least one grain store existed, the proportion of working grain stores within each of these villages was 0.824 on average. Bivariate OLS does not reveal a significant impact of intervention. The result does not change after controlling for potential confounders. When we focus on the nearest grain store from the interview location within the village, 59 out of the 68 nearest grain stores were working. Again, a logit estimate does not find any hint of the treatment impact on the probability of whether the store will be working regardless of the inclusion or exclusion of the control variables. Of the nine villages where the nearest grain store was not working, five villages could answer the time when the facility broke down. The number of days which had elapsed since the facility broke down were 518 (Kambia), 1220 (Bombali), 3074 (Port Loko), 3916 (Port Loko), and 3952 (Bombali), which seem essentially random. Even if we assign zero days to the working grain stores and estimate the impact of treatment via OLS just for reference, no significant effect on the number of days which have elapsed since the breakdown can be found regardless of the inclusion or exclusion of the control variables.

From the 320 villages, 65.6 percent did not have a drying floor. The highest number of drying floors possessed by one village was six. Neither the bivariate nor the multivariate Poisson regressions were able to detect a treatment impact on the number of drying floors. Among the 110 villages where at least one drying floor existed, the working rate of existing

[26] Results regarding control variables are not reported. Detailed results can be obtained from the corresponding author upon request.

drying floors was 0.843 on average. Although intervention shows a statistically significant positive effect on the working rate in the bivariate OLS at the 10 percent level, we need to adjust the crude significance level by considering multiple testing (adjusted p = .21). Also, even the pre-adjusted significance level well exceeds 10 percent when other factors are controlled for. The nearest drying floors were working in 98 of the 110 villages where at least one drying floor existed. Bivariate logit regression does indicate a significant positive impact of intervention on the probability of the drying floor working, even when we apply the familywise significance level (adjusted p = .084); however, it loses significance (adjusted p = .384) when estimated together with other confounders. Of the 12 villages where the nearest drying floor was not working, 10 villages could answer the time when the drying floor broke down. When we assign zero days to working drying floors and estimate via bivariate OLS, a statistically significant negative effect of the overall degree of intervention is detected (adjusted p = .036). This disappears, however, after controlling for other factors.

Of the 320 villages, 53.6 percent had a mechanical well, while 21.3 percent had an ordinary well. The number of mechanical wells possessed by one village ranged from 1 to 9 while the number of ordinary wells ranged from 1 to 120. The effect of overall treatment exhibits a statistically significant positive effect on the number of mechanical wells in the bivariate Poisson regression; however, this is not significant when we apply multiple test corrections (adjusted p = .481). The effect is not statistically significant when other factors are controlled for. The working rate of mechanical wells in the 172 villages, where at least one mechanical well was located, was 63.2 percent on average. The overall level of intervention shows no impact in bivariate analysis (adjusted p = .255) even though the crude p-value is less than 10 percent. When other factors, which are also correlated with this dependent variable, are controlled for, a statistically significant impact can no longer be found (adjusted p = .312). In the 164 villages where the nearest water supply system was a mechanical well, 102 mechanical wells were working. Again, the treatment effect is not significant in both the bivariate (adjusted

p = .219) and multivariate regressions (adjusted p = .435). In the 62 villages where the nearest mechanical well was not working, the time when the facility broke down could be specified in 52 villages. When we assign zero to the working facilities and estimate the impact of treatment on the number of days which have elapsed since the breakdown, the treatment effect is statistically insignificant regardless of the inclusion or exclusion of control variables.

6.2 Health facilities and primary schools

Table 4. Effect on health facilities and primary schools.

Outcome variable	Without Control Variables			With Control Variables		
	n	Effect (SE)	*P*	n	Effect (SE)	*p*
Health facilities						
Distance (km) from the village to the nearest health facility.	318	0.095 (0.131)	0.472	312	0.222 (0.120)	0.065
Working rate of nurses in the nearest health facility to the village.	306	0.111 (0.017)	0.000	300	0.100 (0.018)	0.000
Status of the fridge in the nearest health facility to the village (1=working, 0= not-working).	313	0.046 (0.084)	0.580	307	0.103 (0.096)	0.285
Mean rank of the nearest health facility to the village based on evaluations by independent observers.	318	0.917 (1.363)	0.502	303	-0.322 (1.355)	0.812
Primary schools						
Distance (km) from the village to the	319	-0.206	0.065	313	-0.123	0.260

nearest primary school.		(0.111)			(0.109)	
Number of classrooms in the nearest primary school to the village.	317	0.004 (0.019)	0.849	311	-0.004 (0.021)	0.862
Type of toilets in the nearest primary school to the village (1=latrine, 0= bush).	311	0.113 (0.099)	0.253	305	0.184 (0.113)	0.102
Roofing material at the nearest primary school to the village (1=zinc, 0= hatch).	312	0.048 (0.197)	0.808	306	0.180 (0.209)	0.390
Number of teachers in the nearest primary school to the village.	310	-0.024 (0.017)	0.148	304	-0.026 (0.018)	0.148
Mean rank of the nearest primary school to the village based on evaluations by independent observers.	311	-0.662 (2.683)	0.805	299	-0.673 (2.742)	0.806

Notes: Standard errors are in parenthesis. Pre-adjusted P-values are reported. Intercept and slopes for control variables are omitted.

Table 4 summarizes the results in relation to the effects of intervention on health facilities and primary schools. Again, the results of simple bivariate regressions are listed on the left while the adjusted partial coefficients of treatment controlling for relevant factors are reported on the right. The distance to the nearest health facility ranged from 0.02 to 19.2 km, with the average being 4.31 km. Neither the bivariate nor the multivariate regressions detected any significant impact of treatment on the distance to the nearest health facility (adjusted *p*-values are 1.000 and .845, respectively). The results do not differ when we use a log transformed dependent variable. In contrast, intervention exhibits a highly significant positive impact on the attendance rate of the nurses, even after multiple test correction. The result does

not change when we control for the potential confounders. The above results are robust against the exclusion of the five seeming outliers, where attendance rates of nurses exceeded one, meaning that when enumerators visited there were more nurses in attendance than the number posted to the facilities. For 56.5 percent of villages the refrigerator at the nearest health facility was working. This probability does not differ regardless of the degree of intervention even after controlling for other factors. Lastly, the mean rank of the nearest health facility ranged from 1 to 123.7, with an average of 55.67. The smaller value indicates a better evaluation. No treatment effect is found even if we control for relevant factors.

The distance from the village to the nearest primary school ranged from 0.2 to 34.2 km, with the average being 1.654km. No significant treatment effect against the distance to the nearest primary school was detected by bivariate (adjusted p = .845) and multivariate regressions (adjusted p = 1.000) controlling for other factors. One of the quality indicators of the nearest school, the number of classrooms, ranges from 1 to 16, with an average of 4.6. No impact of treatment could be found in this regard irrespective of the inclusion or exclusion of control variables. Another indicator of school quality was whether there was a latrine toilet in the school. In total, 74.9 percent of villages had a latrine toilet in the nearest primary school. This probability is not affected by the treatment according to the bivariate and multivariate logit with a series of potential confounders. As for the materials used for the school roof, in 95.2 percent of villages, the nearest primary school had a zinc roof. Again, the probability is not affected by the treatment regardless of the inclusion or exclusion of control variables. The number of teachers in the nearest primary school ranged from 1 to 27, with an average of 6.3 teachers. Both bivariate and multivariate analyses yield no sign of the influence of intervention. Lastly, the mean rank of the nearest primary school ranged from 3 to 247.3, with the average being 123.5. We do not see any significant effect of intervention regression analysis with or without control variables.

6.3 Feeder road

We recorded the average speeds of 786 intervals, amounting to a total distance of 4699.375 km. The square root of the average moving speed of the individual intervals ranged from 1.1 to 12.4, with an average of 4.9. Given that the wards were matched based on their natural conditions such as proximity to the coast line, the main river, and the national border, or the population size and density, the detrimental influence of these factors on the decay of the feeder roads is expected to be equal on average between the treated and control districts.[27] Feeder road construction or rehabilitation work by other projects like RPSDP, ASREP, and RCPRP have been conducted in all districts. Therefore, the difference, if any, between the treated and control districts in terms of the average moving speeds can be approximately ascribed to the difference in the mode of monitoring and supervision of the construction or rehabilitation process. In treated districts, at least some construction was monitored directly, whereas in the control districts construction was monitored indirectly only. When we simply compare the speeds between the treated and the control districts, the difference in mean amounts to 0.276, which is statistically highly significant (Colum 1, Table 5). This difference doubles if we insert control variables into the equation. As expected, the average speed increases if Class A/B roads are included in the interval and it decreases if the crossing over a river is included. While the average elevation does not matter, the distance does because people can move faster as the track gets longer. Both the average positive slope and the slope range exert a negative influence on the average speed; however, the size of the impact is not statistically significant at the 10 percent level (Colum 2).

Nonetheless, observed average speeds are not independent of each other but are nested within each of the four enumerator teams who marked these records. Moreover, the

[27] These variables are all insignificant when included in the following estimations, and the sign and significance of the main predictors do not change. All results are robust against the use of non-transformed dependent variables. A detailed result may be obtained from the first author upon request.

measurements were taken on 40 different days, which must have systematically influenced the records. Since the combination of enumerators was changed randomly each day, the total number of team-day was 159. The number of intervals tracked by one team per day ranged from 1 to 9, with an average of 4.8. The average number of tracks recorded by all teams per day was 19.3. To address these points we employ robust standard errors clustered at team- level and day level (Colum 3 and 4). We also apply random intercept models (Colum 5 and 6).

The coefficient of the dummy for treated districts does not lose statistical significance at the 5 percent level even if robust standard errors are used. Random intercept models estimating error terms at different levels (team and day) yield essentially the same result. The average speed in the treated districts is faster by 0.5 km/ph. When we compare Tonkolili as a reference category with each district, the differences with treated districts (Kambia and Port Loko) are statistically significant at least at the 5 percent level while the difference with untreated Bombali is not.

Table 5. Effect on feeder road

	OLS [1]		OLS [2]		OLS with Robust SE [3]		OLS with Robust SE [4]		Random Intercept [5]		Random Intercept [6]	
	Coef. (SE)	*p*	Coef. (SE)	*p*	Coef. (SE)	*p*	Coef. (SE)	*p*	Coef. (SE)	*p*	Coef. (SE)	*p*
Treated vs. control district	0.276	0.000	0.483	0.000	0.483	0.005	0.483	0.039	0.534	0.014		
	(0.110)		(0.130)		(0.170)		(0.226)		(0.216)			
Kambia vs. Tonkolili											0.816	0.005
											(0.290)	
Port Loko vs. Tonkolili											0.589	0.033
											(0.277)	
Bombali vs. Tonkolili											0.307	0.299
											(0.296)	
Class A/B road included			1.047	0.000	1.047	0.000	1.047	0.000	1.160	0.000	1.180	0.000
			(0.103)		(0.121)		(0.172)		(0.116)		(0.117)	
River crossed			-1.692	0.000	-1.692	0.000	-1.692	0.000	-1.299	0.000	-1.273	0.000
			(0.356)		(0.272)		(0.366)		(0.364)		(0.365)	
Elevation Average			0.001	0.743	0.001	0.806	0.001	0.829	0.002	0.568	0.002	0.574
			(0.002)		(0.003)		(0.003)		(0.003)		(0.003)	
Distance			0.020	0.058	0.020	0.072	0.020	0.149	0.022	0.038	0.022	0.035

			(0.010)		(0.011)		(0.013)		(0.010)		(0.010)	
Average Positive Slope			-0.160	0.125	-0.160	0.255	-0.160	0.291	-0.146	0.148	-0.143	0.159
			(0.104)		(0.140)		(0.149)		(0.101)		(0.101)	
Slope Range			-0.010	0.548	-0.010	0.588	-0.010	0.665	-0.016	0.363	-0.018	0.305
			(0.017)		(0.018)		(0.023)		(0.017)		(0.017)	
Intercept	4.723	0.000	4.338	0.000	4.338	0.000	4.338	0.000	4.185	0.000	4.025	0.000
	(0.088)		(0.221)		(0.303)		(0.382)		(0.313)		(0.335)	
Random-effects Parameters									Standard Deviation (SE)		Standard Deviation (SE)	
Day (40)									0.445 (0.084)		0.442 (0.087)	
Team (159)									0.349 (0.086)		0.355 (0.085)	
Residual									1.222 (0.035)		1.221 (0.035)	
Number of obs.	786		770		770		770		770		770	
F	6.28	0.012	25.37	0.000	21.47	0.000	12.85	0.000				
R-squared	0.0079		0.189		0.189		0.189					
Log restricted-li									-1307.		-1306.9	

kelihood	1			
Wald	158.74	0.000	160.93	0.000
LR test vs. OLS	51.17	0.000	49.74	0.000

Notes: Standard errors are in parenthesis.

7. Discussion and Conclusion

We have investigated the possible acts of corruption that agents may commit when they are only monitored indirectly. We hypothesized that contracted local monitors who do not have donor-like intrinsic motivations tend to end up colluding with the people they are monitoring. However, neither qualitative nor quantitative results yielded clear-cut answers, although there were some hints which suggest contracted out technical cooperation is defunct. We have found a consistently significant difference in the quality of the rural road networks between the treated and the control districts; however, apart from the attendance rate of nurses, we were not able to detect any significant difference in terms of the quality of small-scale infrastructure which were constructed or rehabilitated through community-driven development at the ward level. This may be caused by the relatively slow speed with which the decay of small infrastructure becomes evident, or that the ongoing decay may be difficult to discern until such time as the facility suddenly stops working. In contrast, the consequences of damage to feeder roads caused by heavy rains are relatively quick and incremental decay of feeder roads is visible on site. The mixed results of the qualitative comparison of the audit reports may also become clearer in a number of years. Therefore, the partial evidence we have found warrants further investigation into the real ineffectiveness of technical cooperation which is contracted out.

As with any public policy, development aid should be cost-effective. Furthermore,

aid should be conducive to the governance of the recipient country so as to trigger self-reinforcing development. Aid is also expected to deliver quick results. Pursuing the three objectives at the same time is a tremendously difficult task for donors. General budget support seems to be functioning even in such a fragile and conflict-affected state (FCAS) like Sierra Leone and is both cost-effective and self-reinforcing, if not instantaneous. At the central level it at least leads to pro-poor budget allocation as shown in Figure 2. The method is effective precisely because it is a variant of intensive direct technical cooperation through the built-in policy dialogues with donors. It is also manageable in terms of costs for donors precisely because the target of technical cooperation is limited to small elite circles within the Ministry of Finance of the recipient government. However, GBS alone can only go halfway: we need a complementary measure at the implementation stages to translate the intended policies in the decision-making phase into actual pro-poor service delivery on the ground.

Extending technical cooperation to the implementation organs of the state is the most straightforward logical solution. However, the cost of technical cooperation is multiplied by the number of sub-national units in the country and it is expected to skyrocket due to the recent wave of decentralization we have witnessed in Africa. The corollary of this cost issue would be the contracting out of technical cooperation to LTAs at the implementation stages; this does however, have many pitfalls because LTAs, like most of the recipient government officials, tend to lack the intrinsic motivation. Community-based monitoring, on the other hand, does not seem feasible given the political reality of FCASs on the ground. Use of performance-based rather than method-based contracts, as introduced by Stankevich et al. (2009), would also be premature. Bypassing state institutions and contracting out service delivery to the ready-made specialized agencies like UNICEF and faith-based NGOs would be more realistic. Contracting out to these organizations is expected to bring on quick results because their staff have enough capacity and are imbued with the intrinsic motivation necessary to avoid possible leakages of public funds during the implementation stages. Yet,

this option is contradictory to the aim of capacity development for state institutions, which is necessary for sustainable self-reinforcing development in the long term. Donors should decide on the optimal mixed strategy for assistance in public service delivery with these points in mind. However, the farthest way about might be the nearest way home.

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Appendix 1. Anomalies and irregularities found by ASSL regarding public financial management in Kambia, 2005-2012
The red parts refer to anomalies that the local councils were able to rectify immediately.

Kambia	2005-2007	2008	2009	2010	2011	2012
Presentation of Financial Information	Inconsistencies in reporting and presentation of financial information.	Inconsistencies in reporting and presentation of financial information.	Inconsistencies in reporting and presentation of financial information.	Inconsistencies in reporting and presentation of financial information.		
Bank account management	Monthly reconciliations of bank accounts not completed.			Bank receipt duplicates.		
Payment without supporting documents	Documents were not available for some payments.	Emergency payment for drugs has no supporting documents.	Le 5058685 (documents submitted later).	Le 21282000 (documents submitted later).	Le 14855000 (Le 8500000 remain unexplained).	Le 136568433 (Le 16800812 remain unexplained).
Procurement	Procurement procedures not followed.	Procurement procedures in respect of the certificate of completion method were not adequately and appropriately followed for goods and services amounting to Le 56583500 +Le 162474840.			Procurement procedures in respect of the Request for Quotations method were not adequately and appropriately followed for goods and services amounting to Le 13981100.	■ Procurement procedures in respect of the Request for Quotations method were not adequately and appropriately followed for goods and services amounting to Le138731600 (Le55560000 remain unexplained). ■ Le 70000000 paid for unfinished work (completed works verified).
Withholding Tax	Withholding tax not deducted amounting to Le 30595900.	Withholding tax not deducted amounting to Le 45875854.		Withholding tax not deducted amounting to Le 4590825 (paid later).		
Staff related matters	■ Internal Audit unit not established. ■ no personnel file for Payroll control. ■ Assets not declared when officers leave or assume duties. ■ Supervision of CA by chairperson not carried out.	■ Sitting fees paid to absentee councilors amounting to Le7000000. ■ Internal audit unit not established. ■ Staff performance appraisal documents not yet designed. ■ Financial officer both prepared and verified the payment vouchers. ■ Lack of control over training.	■ The work of the internal auditor could not be relied on (no capacity and no annual and monthly program of work prepared). ■ Procurement officer, not CA, approved the procurement.	Sitting fee paid to absentee councilors amounting to Le 9122500.	Internal audit unit not effective.	■ Sitting fee paid to absentee councilors amounting to Le105438677. ■ Internal audit unit not effective.

Others	■ Inventory of fixed assets register not maintained. ■ Minutes of meeting nonexistent. ■ Receipt books are missing causing money amounting to Le 74 million to go unrecorded.	■ Precept from chiefdom is unclear (Clear: 4: 6). ■ 6000 bushels of rice seed previously loaned to farmers not recovered. ■ Lack of supervision over NGOs.			■ Update of ward committee meetings to the council not completed. ■ Overdraft obtained by council without approval.	■ Drop in revenue collection. ■ Set targets contained in the performance management contract not met.

Appendix 2. Anomalies and irregularities found by ASSL regarding public financial management in Port Loko, 2005-2012
The red parts of the table refer to anomalies that local councils were able to rectify immediately.

Port Loko	2005-2007	2008	2009	2010	2011	2012
Presentation of financial information			Inconsistencies in reporting and presentation of financial information.	Inconsistencies in reporting and presentation of financial information resulting in an understatement of the expenditure in the financial statement amounting to Le 17806198.07.	Inconsistencies in reporting and presentation of financial information (cleared).	Inconsistencies in reporting and presentation of financial information.
Bank accounts management	Monthly reconciliations of bank accounts not completed.	Monthly reconciliations of bank accounts not completed.	Monthly reconciliations of bank accounts not completed (done).	Poor management of bank account reconciliation (not using council receipt).		
Payment without supporting documents		Le 116973100	Le 185030330 (Documents submitted later)	Le 78012500 (Documents submitted later)		
Procurement	Procurement procedures not followed.			Procurement documents were not available for goods and services amounting to Le 14400000 (contract agreement) + Le 697993825 (certificate pf completion). (Documents submitted later)	Procurement procedures in respect of the request for quotations method were not adequately and appropriately followed for goods and services amounting to Le 52000000. (Made available and verified)	Procurement procedures in respect of the request for quotations method were not adequately and appropriately followed for goods and services amounting to Le 66800000. (Made available and verified)
Withholding tax	Withholding tax not deducted amounting to Le 878550.					
Staff related matters	■ Internal audit unit not established. ■ Assets not declared when officers leaving or assuming duties. ■ Supervision of CA by chairperson not undertaken.	■ Internal audit unit not established. ■ Staff performance appraisal documents not yet designed.	■ Sitting fees paid to absentee councilors amounting to Le 2600000 (refunded). ■ Internal audit unit not established (established in February).	The work of the internal audit could not be relied on (no capacity and no annual and monthly program of work prepared).	Unclaimed salaries amounting to Le 668825 (verified).	
Others	■ Vehicle log books not maintained. ■ Inventory of fixed assets register not maintained. ■ No minutes of council meetings.	■ Vehicle log books not maintained. ■ Precept from chiefdom is unclear.			Inventory of fixed assets register not maintained (maintained).	

Appendix 3. Anomalies and irregularities found by ASSL regarding public financial management in Tonkolili, 2005-2012
The red parts of the table refer to anomalies that the local councils could were able to rectify immediatel.

Tonkolili	2005-2007	2008	2009	2010	2011	2012
Presentation of financial information		Inconsistencies in reporting and presentation of financial information. (No document to justify additional revenue of Le 67568745.23)	Inconsistencies in reporting and presentation of financial information.	Inconsistencies in reporting and presentation of financial information. (Le 13622900 not banked)	Inconsistencies in reporting and presentation of financial information (cleared).	Inconsistencies in reporting and presentation of financial information.
Management of bank accounts	No monthly reconciliation of bank accounts.	No monthly reconciliation of bank accounts.	No monthly reconciliation of bank accounts.			
Payment without supporting documents			Le 15400000 (Documents submitted later)	Le 31000000 (Documents submitted later)		Le 92800000 + Le 6500000 + Le 26110000 (Documents submitted later)
Procurement			Procurement procedures not followed for goods and services amounting to Le 150000000 (advance payments before contract agreements) +Le 171080600 (no Request for Quotations). (wrong documents)	Procurement procedures in respect of the request for quotations method were not adequately and appropriately followed for goods and services amounting to Le 52679200. (Documents submitted later)	The procedure for a competitive bidding process was not followed on the award of a contract for the rehabilitation of a portable water system for Le 6569000000. The progress reports and certificates of completion for goods and services by engineers amounting to Le2319357475 were not produced for inspection, in respect of various contracts.	Procurement procedures in respect of the request for quotations method were not adequately and appropriately followed for goods and services amounting to Le 183036292. (Le 23000000 remain unexplained)
Withholding Tax		Withholding Tax not deducted amounting to Le 1490000.		Withholding tax not deducted amounting to Le 8915300.		
Staff related matters	■ Internal Audit unit not established (recruited). ■ Assets not declared when officers leaving or assuming duties (declared). ■ Supervision of CA by chairperson not undertaken (done).	■ Sitting fees paid to absentee councilors. ■ Internal audit unit not established. ■ Staff performance appraisal documents not yet designed. ■ No document to justify salary fluctuations of council's staff.	■ Sitting fees paid to absentee councilors amounting to Le 7455000. ■ Overdraft of Le 14835020.80 created in salary account (wrong account used).	Sitting Fee paid to absentee councilors Le 6212500.		■ Internal audit unit not effective. ■ Responsibility allowance paid to council staff without supporting documents amounting to Le 23084500. (Documents submitted later)

Others	■ Vehicle log books not maintained. ■ Inventory of fixed assets register not maintained (maintained since 2006). ■ No minutes of council meetings (posted on notice board for 21 days).	■ Precept from chiefdom is unclear. ■ Lack of supervision over NGOs.				Set targets of the performance management contract not met.

Appendix 4. Anomalies and irregularities found by ASSL regarding public financial management in Bombali, 2005-2012
The red parts of the table refer to anomalies that the Lclal councils were able to rectify immediately.

Bombali	2005-2007	2008	2009	2010	2011	2012
Presentation of financial information	Inconsistencies in reporting and presentation of financial information.	Inconsistencies in reporting and presentation of financial information. (Receipt books were not presented for investigation).	Inconsistencies in reporting and presentation of financial information.		Inconsistencies in reporting and presentation of financial information.	Inconsistencies in reporting and presentation of financial information.
Bank accounts management	No monthly reconciliation of bank accounts.	No monthly reconciliation of bank accounts.				
Payment without supporting documents	Payment vouchers not stamped with "paid". Payment without supporting documents.	Le 1980000	Le 23120000	Le 10258000 + Le 12455000 (Documents submitted later)	Le 66947250 (Documents submitted later)	Le 173636637
Procurement	Procurement procedures not followed. Differences between the contract price and the amount paid Le 1910000 + Le 2858400.	Procurement procedures in respect of the certification for the completion of the output ere not adequately and appropriately followed for goods and services amounting to Le 231597000.	Procurement procedures in respect of the request for quotations method were not adequately and appropriately followed for goods and services amounting to Le 30500000.	Procurement procedures in respect of the request for quotations method were not adequately and appropriately followed for goods and services amounting to Le 25976800. (Documents submitted later)	Procurement procedures in respect of the request for quotations method were not adequately and appropriately followed for goods and services amounting to Le 181011000.	Procurement procedures in respect of the request for quotations method were not adequately and appropriately followed for goods and services amounting to Le 576732042. (Le 78045000 remain unexplained)
Tax withholding	Withholding tax not deducted amounting to Le 11977300.	Withholding tax not deducted amounting to Le 20111281.	Withholding tax not deducted amounting to Le 39192916.	Withholding tax not deducted amounting to Le 3675100 (paid later).		
Staff related matters	■ Internal audit unit not established (recruited). ■ Assets not declared when officers leaving or assuming duties (declared). ■ Payment to deceased officer (refunded). ■ One officer (Treasurer) carries out the complete revenue collection procedure, which inhibits the collection of third party evidence. ■ Supervision of CA by chairperson not done.	■ Internal audit unit not established. ■ Staff performance appraisal documents not yet designed. ■ No rent agreement for chief administrator's house.	■ Sitting fee paid to absentee councilors Le 38495000.	■ Sitting fee paid to absentee councilors Le 8386875.	■ Sitting fee paid to absentee councilors Le 12118750.	■ Internal audit unit not effective.

Others	■ No precept from three chiefdoms in 2005. ■ Vehicle log books not maintained (now in use). ■ Inventory of fixed assets register not maintained (in place). ■ No minutes of council meetings (posted on notice board for 21 days).	■ No precept from chiefdom. ■ Office safe out of order. ■ Lack of supervision over NGOs. ■ List of revenue collectors not available for verification.	■ Overdraft amounting to Le 6999704.57.			■ Set targets of the performance management contract not met.

Appendix 5. Descriptive statistics

Dependent variable

Level	Variables	n	Min.	Max.	Mean	Median
Village	Number of grain stores in the village	320	0	4	0.275	0
Village	Working rate of grain stores in the village	68	0	1	0.824	1
Village	Status of the nearest grain store within the village (1=working, 0= not-working)	68	0	1	0.868	1
Village	Number of days which have elapsed since the nearest grain store in the village broke down	64	0	3952	198.100	0
Village	Number of drying floors in the village	320	0	6	0.525	0
Village	Working rate of drying floors in the village	110	0	1	0.843	1
Village	Status of the nearest drying floor in the village (1=working, 0= not-working)	110	0	1	0.891	1
Village	Number of days which have elapsed since the nearest drying floor within the village broke down	108	0	5024	250.000	0
Village	Number of mechanical wells in the village	320	0	9	1.153	1
Village	Working rate of mechanical wells in the village	172	0	1	0.632	0.75
Village	Status of the nearest mechanical well in the village (1=working, 0= not-working)	164	0	1	0.622	1
Village	Number of days which have elapsed since the nearest mechanical well in the village broke down	154	0	10420	548.7	0
Village	Distance (km) from the village to the nearest health facility	318	0.02	19.2	4.313	3.99
Village	Attendance rate of nurses in the health facility nearest to the village	306	0	2.5	0.743	1
Village	Status of the fridge in the health facility nearest to the village (1=working, 0= not-working)	313	0	1	0.556	1
Village	Mean rank of the health facility nearest to the village	318	1	123.7	55.670	56
Village	Distance (km) from the village to the nearest primary school	320	0	34.2	1.654	0.77
Village	Number of classrooms in the primary school nearest to the village	317	1	16	4.584	4
Village	Latrine toilet in the primary school nearest to the village	311	0	1	0.749	1
Village	Roofing material at the nearest primary school to the village	312	0	1	0.952	1
Village	Number of teachers in the primary school nearest to the village	310	1	27	6.300	6
Village	Mean rank of the primary school nearest to the village	311	3	247.3	123.500	113
Interval	Moving speed (km/h) of individual interval	786	1.233	153.846	26.211	24.357

Control variable

Level	Variables	n	Min.	Max.	Mean	Median
Village	Number of ordinary wells in the village	320	0	120	1.300	0
Village	Number of alternative water sources	320	0	30	2.356	2
Village	Number of taps in the village	320	0	40	0.372	0
Village	Residence of paramount chief in the village	320	0	1	0.053	0
Village	Residence of section chief in the village	320	0	1	0.194	0
Village	Residence of MP in the village	320	0	1	0.019	0
Village	Residence of other prominent person in the village	320	0	1	0.084	0
Village	Residence of former councilor in the village	320	0	1	0.100	0
Village	Residence of current councilor in the village	320	0	1	0.128	0
Village	Number of households in the village	320	2	15000	259.700	78
Village	Existence of market in the village	320	0	1	0.034	0
Village	Mobile phone coverage in the village	320	0	3	1.638	1

Village	Percentage of people in the village who possess mobile phone	314	0	95	29.770	25
Village	Existence of Telecenter in the village	320	0	1	0.138	0
Village	Access to phone credit in the village	320	0	1	0.384	0
Village	Radio coverage in the village	320	6	15	14.000	15
Village	Existence of secondary school in the village	320	0	1	0.134	0
Village	Riverine village	320	0	1	0.056	0
Ward	Number of villages in the ward	320	16	125	50.400	42.5
Ward	Area size of the ward	320	0.002704	0.03831	0.015	0.01541
Ward	Population size of the ward	320	8984	17970	12840	12680
Ward	Number of registered voters in the ward	320	2883	10800	5948	5858
Ward	Density of registered voters in the ward	320	152000	2200000	541900	405000
Ward	Ward with Main River	320	0	1	0.375	0
Ward	Ward with Class A/B road	320	0	1	0.750	1
Ward	Section-partitioning ward	320	0	1	0.200	0
Interval	Class A/B road included	786	0	1	0.420	0
Interval	River crossed	786	0	1	0.019	0
Interval	Elevation average	786	1	277	65.691	66
Interval	Distance (km)	786	0.251	46.2	5.979	4.265
Interval	Average positive slope	778	0	7.4	1.483	1.4
Interval	Slope range	770	0.6	52.3	8.437	7.35

Abstract (in Japanese)

要約

一般財政支援によって、実際に公共サービスの提供が実現するためには、実施段階での技術協力が不可欠である。しかしながら援助合理化を求める動きは、効率性とオーナーシップの名の下に、技術協力をローカル・コンサルタントに外注することをドナーに迫っている。他方で、援助受け入れ国の構造的汚職により、外部委託型技術協力がしばしば無力化される事例もまた報告されている。本稿では、援助の実施における代理人問題を、シエラレオネにおける地方政府の公共財政管理の記録と成果物を定性的および定量的に調べることによって明らかにすることを試みる。その結果、ドナーが直接介入を行う技術協力に比べて外部委託型技術協力がその有効性において劣るという、決定的ではないにせよ部分的な証拠が発見される。

Working Papers from the same research project

"Role of Budget support in the Development Aid Regime"

JICA-RI Working Paper No. 48
General Budget Support in Tanzania Late Disbursement and Service Delivery
Mitsuaki Furukawa and Junichiro Takahata

JICA-RI Working Paper No. 50
Is GBS Still a Preferable Aid Modality?
Mitsuaki Furukawa and Junichiro Takahata

JICA-RI Working Paper No. 64
Is Country-system-based Aid Really Better than Project-based Aid?
Evidence from Rural Water Supply Management in Uganda
Mitsuaki Furukawa and Satoru Mikami

JICA-RI Working Paper No. 83
Aid Fragmentation and Effectiveness for Infant and Child Mortality
and Primary School Completion
Mitsuaki Furukawa