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## **Working Paper**

What can experiments tell us about how to improve governance?

WIDER Working Paper, No. 2013/077

## **Provided in Cooperation with:**

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Suggested Citation: Gisselquist, Rachel M.; Niño-Zarazúa, Miguel (2013): What can experiments tell us about how to improve governance?, WIDER Working Paper, No. 2013/077, ISBN 978-92-9230-654-0, The United Nations University World Institute for Development Economics Research (UNU-WIDER), Helsinki

This Version is available at: https://hdl.handle.net/10419/80966

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# WIDER Working Paper No. 2013/077

# What can experiments tell us about how to improve governance?

Rachel M. Gisselquist and Miguel Niño-Zarazúa\*

August 2013

#### **Abstract**

In recent years, randomized controlled trials have become increasingly popular in the social sciences. In development economics in particular, their use has attracted considerable debate in relation to the identification of 'what works' in development policy. This paper focuses on a core topic in development policy: governance. It aims to address two key questions: (1) 'what have the main contributions of randomized controlled trials been to the study of governance?' and (2) 'what could be the contributions, and relatedly the limits of such methods?'. To address these questions, a systematic review of experimental and quasi-experimental methods to study government performance was conducted. It identified 139 relevant papers grouped into three major types of policy interventions that aim to: (1) improve supply-side capabilities of governments; (2) change individual behaviour through various devices, notably incentives, and (3) improve informational asymmetries. We find .../

Keywords: randomised control trials, governance, development

JEL classification: C93, D72, D73, H41

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This study has been prepared within the UNU-WIDER project 'ReCom—Research and Communication on Foreign Aid', directed by Tony Addison and Finn Tarp.

UNU-WIDER gratefully acknowledges specific programme contributions from the governments of Denmark (Ministry of Foreign Affairs, Danida) and Sweden (Swedish International Development Cooperation Agency—Sida) for ReCom. UNU-WIDER also gratefully acknowledges core financial support to its work programme from the governments of Denmark, Finland, Sweden, and the United Kingdom.



that randomized controlled trials can be useful in studying the effects of some policy interventions in the governance area, but they are limited in significant ways: they are ill-equipped to study broader governance issues associated with macro-structural shifts, national level variation in institutions and political culture, and leadership. Randomized controlled trials are best for studying targeted interventions, particularly in areas of public goods provision, voting behaviour, and specific measures to address corruption and improve accountability; however, they can provide little traction on whether the intervention is transferable and 'could work' (and why) in other contexts, and in the longer run.

## Acknowledgements

We thank Danielle Resnick, Macartan Humphreys, and participants of the UNU-WIDER project on 'Experimental and non-experimental methods in the study of government performance' for valuable input and comments on earlier versions of this paper. The views presented here are those of the authors alone and do not represent the views or policies of UNU-WIDER.

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Typescript prepared by Lisa Winkler at UNU-WIDER.

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#### 1 Introduction

Experimental studies using randomized controlled trials (RCTs) have long been a staple of medical research. In recent years, these methods have also become increasingly popular in the social sciences. In development economics in particular, their use has attracted considerable debate with some scholars promoting them as the best means of identifying 'what works' in development policy (Banerjee 2007; Glennerster and Kremer 2011), while others voice strong concerns about their growing hegemony in the field (see e.g., Deaton 2009; Ravallion 2009).

This paper focuses on the use of such methods in identifying 'what works' for one of the major topics in contemporary studies of development policy: governance. It asks two key questions: (1) what have the main contributions of RCTs been to the study of governance? and (2) what could be the contributions, and relatedly, the limits of such methods? Despite large separate literatures on governance and on experimental methods, very little work has directly considered both together in this way. This paper draws on reviews of both literatures, including a systematic review of experimental and quasi-experimental studies of government performance that is described further below.

Broadly, this paper argues that RCTs have some, but limited utility in the study of governance. It discusses some of the key contributions that RCTs have made in the study of targeted interventions with relatively rapid results; howeverit also shows that major hypotheses about, e.g., macro-structural and cultural shifts over long periods of time, national level policy changes, and changes in political leadership are not amendable to study using RCTs.. Such limitations suggest that researchers should expect to use other methods to address these important areas in the field of development studies.

This paper is divided into four parts. The first focuses on theories of governance, highlighting several major hypotheses from the literature about how the quality of governance changes. The second focuses on how RCTs have been used in the study of governance-related topics, highlighting some of the major findings from RCTs with respect to the provision of health, education, and other public goods; improvements in the performance of civil servants; and representation, participation, and deliberative democracy. The third part of the paper brings these two sections together, exploring whether and how RCTs could be used to address major theories of governance. A final section concludes.

Discussion of experimental research, particularly in economics and political science, sometimes treat laboratory-type experiments, natural experiments, and RCTs or 'field experiments' together, irrespectively of their design features. Much of the discussion in this paper is applicable to various experimental methods, but the focus is on RCTs, which imply a slightly different approach than the others to the testing of causal hypotheses: in the simplest experimental designs, causal effects are assessed by comparing measures 'with' and 'without' an intervention. This is most straightforward in a laboratory setting where other key variables can be held constant and measures can be taken before and after an intervention. In this setting, causal inference is relatively clear: the intervention causes the difference.

Many of the phenomena that we care about, however, are not amendable to this method. Outside of the laboratory setting, field experiments using RCTs study such phenomena using similar principles; because it is not always possible to hold constant all factors, in prospective

experimental designs, with baseline and endline data, the identification of the counterfactual is achieved via random assignment to treatment, where measures from randomly selected 'control' and 'treatment' groups are taken before and after interventions, and the effect of the intervention then is the difference between 'before' and 'after' measures in the 'treatment' as compared to the 'control' groups ('difference in difference'). This basic and elegant logic underlies hypothesis testing and impact evaluation using RCTs, by ensuring that in principle any difference between the treatment and control is not systematic at the outset of the experiment.

# 2 Explaining governance

Despite a wealth of literature on governance, even its definition remains contested (Gisselquist 2012; Keefer 2009). A large amount of the literature focuses on definition, conceptualization, and measurement (see, e.g., Arndt and Oman 2006; Kaufmann, Kraay, and Zoido-Lobaton 1999; Rothstein and Teorell 2008; Thomas 2009). Without delving too much into these debates, this paper adopts a basic definition building on theories of government and the state. This work points to two major roles for public institutions in (1) providing public goods such as education, health care, water and sanitation facilities and social protection to the poor and vulnerable, and (2) aggregating interests with respect inter alia to how and which public goods are provided. The later role can be achieved both through electoral and non-electoral forms of participation and is closely linked to discussion of accountability.

Public goods are better provided collectively than individually for reasons of efficiency and necessity (Goldin 1977; Samuelson 1954). As Putnam (1993) notes in his classic *Making Democracy Work*, 'public institutions are devices for achieving purposes, not just for achieving agreement. We want government to do things, not just decide things – to educate children, pay pensioners, stop crime, create jobs, hold down prices, encourage family values, and so on' (Putnam 1993: 8-9). Individuals and groups within a polity have varying preferences about the type and manner of public goods provision and other collective issues, and a second key role of government is in somehow 'aggregating' and representing such interests to make collective decisions. In short, as Levi (2006) summarizes, 'Good governments are those that are (1) representative and accountable to the population they are meant to serve, and (2) effective—that is, capable of protecting the population from violence, ensuring security of property rights, and supplying other public goods that the populace needs and desires' (Levi 2006: 5). By extension, the quality of governance, as understood here, varies in the degree to which governments fulfil these two related roles.

Theories of government and the state suggest a number of explanations about why the quality of governance in this sense varies, both across polities and over time, highlighting a range of structural, institutional, and cultural factors, as well as individual agency. In general, this work deals with the two roles of government separately, offering explanations either for better representation and accountability (often framed in terms of the emergence of liberal democracy versus other forms of government), or for more effective public goods provision. Much work also focuses on explaining disaggregated governance outcomes, such as the provision of effective policing, secure property rights, universal health care, or high quality state-funded education.

Far from having a single model of change in government performance, different theoretical traditions offer different and sometimes contradictory explanations for key governance outcomes. One example important both for theory and contemporary politics is what

constitutes good governance in terms of providing the institutional environment most conducive to economic growth. Friedman (1962), for instance, suggests that a 'good' government serves as a 'rule maker' and 'umpire' to create and enforce minimal rules, such as property rights and a monetary framework. Disciples of Keynes (1964), by contrast, see a more extensive role for 'good' governments in fiscal and monetary policy. Similarly, there are major debates over whether more or less regulation is most conducive to private sector development, and over the form that regulation should take (see Kirkpatrick 2012).

One of the major structural factors highlighted in explanations of variation in the quality of governance is 'modernization' or the level of development. Max Weber, for instance, suggests that modernization leads to fundamental changes in the nature of authority, from traditional and charismatic towards rational-legal (the rule of law) (see Weber 2009). Modernization theory of the 1950s and 1960s highlighted how economic growth led to fundamental structural changes in the economy and society, such as the growth of the middle class and middle class ideology, and the emergence of 'cross pressures', that led to greater popular participation in government and created the foundations for the emergence of democracy (see Lipset 1981). Later work has also highlighted modernization as a key factor in democratic governance, but challenged the specific mechanism proposed by the modernization theorists. Przeworski and Limongi (1997), for instance, argue that it is not that modernization leads to the emergence of democratic governance, but that democracy is more likely to endure (once it is born for other reasons) in countries at higher levels of economic development – in particular, they found, in countries with annual per capita incomes higher than US\$6,000 (in 1985 dollars) (see also Przeworski et al. 2000).

Other structural arguments highlight modernization and the class structure, positing different mechanisms. Moore (1966), for instance, argues that 'the ways in which the landed upper classes and the peasants reacted to the challenge of commercial agriculture were decisive factors in determining the political outcome' (Moore 1966: xxiii). As agrarian societies transformed, resulting bourgeois revolutions led to capitalist liberal democracy (e.g., England, France, and the United States), abortive bourgeois revolutions led to fascism (e.g., Japan), and peasant revolutions led to communism (e.g., Russia and China). Focusing also on France, Russia, and China, Skocpol (1979), by contrast, highlights the autonomous role of the state in relation both to domestic class and political forces and to other states. In all three cases, she argues, social revolutions led leaders to strengthen, centralize, and rationalize state organizations (public institutions). The different character of resulting political regimes is explained by variation in the socioeconomic legacies of the old regimes, international circumstances, and the ideology and process of state-building after the revolution. Another structural argument highlighting the same factors is proposed by Luebbert (1991), who explains four different regime types in interwar Europe as resulting from the path taken from preindustrial politics to the crises of the 1920s and 1930s and particular constellations of urban-rural coalitions: a centre-right coalition and the early inclusion of the working class led to liberal democratic governance (Britain, Switzerland, France), for instance, while an alliance of the urban working class and the middle peasantry led to social democracy or democratic corporatism (Norway, Sweden, Denmark, Czechoslovakia). Other structural arguments highlight still other factors, such as the ethnic structure of society (e.g., Horowitz 1985), geography (e.g., Herbst 2000), and the strength of society relative to the state (e.g., Migdal 1988), which may affect how difficult it is to govern a particular polity.

Institutional explanations for governance outcomes are among the most diverse, highlighting a range of institutions and mechanisms. Indeed, social scientists often define institutions so

broadly – as formal and informal rules, norms, and organizations – that some of the 'structural' explanations reviewed above and the cultural explanations reviewed below are sometimes treated in this camp (see Steinmo 2008).

Since the 1990s, new institutionalist economics inspired by North (1990) and others has been particularly important in the thinking on governance underlying work by the World Bank and other multilateral development banks, which has focused on how the 'rules of the game' shape economic development (Grindle 2010). The World Bank's 2012 strategy on governance, for instance, highlights its role in helping countries to 'put in place institutions and systems that can become the foundations of sustainable growth' (World Bank 2012). It highlights both the need to strengthen the capacity of institutions to enforce regulations, provide public services, and manage resources effectively, and to adopt the 'right' institutions (e.g., regulations favourable to private sector development).

One of North's (1990) key arguments that is echoed in many institutional explanations is the effect of institutional 'lock in' or path dependence that makes changing institutions costly, even when they are inefficient. North argues, for instance, that it was rather haphazard institutional choices that put England on a path toward efficient market economy, with relatively strong property rights, an impartial judicial system, and a fiscal system with expenditures tied to tax revenues, where other countries adopted different (and ultimately less effective) institutions that placed them on different paths.

Other institutionalist work adopts more historical or sociological perspectives. Focusing on governance with respect to health care policy, for instance, Immergut (1992) argues that the structure of political institutions in Sweden, France, and Switzerland influenced whether they developed comprehensive national health care or more fragmented insurance programmes. Political institutions and procedures, rather than the demands of social groups, set the terms of political negotiations, leading to divergent outcomes.

Institutionalists have also been vocal supporters of constitutional engineering and revision of electoral systems as a means of improving representation, accountability, and governance more generally, particularly in divided societies (see Sartori 1997, Reilly 2001). Many advocate for similar reasons for the reorganization of the state along more decentralized or federal lines. Consociational theory, for instance, proposes that governance in a state divided along ethnic, religious, or communal lines can be stable if democracy has four key institutional characteristics: a 'grand coalition' formed by the political leaders of various factions; a 'mutual veto', necessitating consensus among groups for political decisions; 'proportionality', in that each group occupies a share of government posts proportional to its share of the population; and 'segmental autonomy', allowing autonomous rule for different groups (Lijphart 1977). The Netherlands, Switzerland, and Belgium offer positive examples, while critics highlight the failure of the consociational model in Lebanon. More recently, consociational recommendations were partially adopted in South Africa's democratic transition and 1994 constitution, including a grand coalition government and proportional representation (Horowitz 1992).

Cultural factors are also highlighted in explanations for governance variation. Tocqueville's classic exploration of the role of political culture in explaining democracy in America is one example (see Tocqueville 2003). One of the major works on democratic governance in recent years, Putnam (1993) also highlights the role of political culture in explaining variation in government performance across Italian regions, noting that 'Tocqueville was right: Democratic government is strengthened, not weakened, when it faces a vigorous civil

society' (Putnam 1993: 182). Putnam takes advantage of a unique situation in which 15 new regional governments were established simultaneously in 1970 with similar constitutional structures and mandates, but some performed better than others. In explaining why, he argues that while socioeconomic factors certainly play a role (explaining, for instance, why northern regions on average performed better than southern regions), the level of social capital – patterns of civic engagement and social solidarity –is far more important in 'making democracy work'. Social capital works largely to facilitate resolution of collective action dilemmas, making it easier to carry out public projects and facilitating stronger public engagement and oversight. Although social capital can be built in the short-term, he argues, it is not easy. He argues that in Italy this variation in social capital has long roots stretching back to early medieval history, in which northern regions had stronger traditions of self-government and horizontal collaboration and relied less on vertical hierarchy than southern regions.

Finally, a significant body of work focuses on the role of individuals, and especially political leaders, in effecting governance outcomes. Although his name has come to be associated with a particular style of (ruthless) leadership, Machiavelli famously highlighted the potentially decisive role of leaders ('princes'). In *Machiavelli's Children*, Samuels (2003), for instance, explores the role of political and business leaders in 19th and 20th century state-building in Japan and Italy. Jackson and Rosberg (1982) map the roles and influences of different leadership styles across Sub-Saharan African countries, highlighting four broad models: prices and oligarchic rule (Senghor in Senegal, Kenyatta in Kenya, Tubman and Tolbert in Liberia, Selassie in Ethiopia, Sobhuza II in Swaziland, and Nimeiri in Sudan), autocrats and lordship (Houphouët-Boigny in Côte d'Ivoire, Ahidjo in Cameroon, Bongo in Gabon, Banda in Malawi, and Sese Seko in Zaire), prophets (Nkrumah in Ghana, Touré in Guinea, and Nyerere in Tanzania), and tyrants and abusive rulers (Macías in Equatorial Guinea and Amin in Uganda).

Major theories of public policy similarly identify the key role of individuals. Kingdon's (1995) model of policy-making, for instance, posits three 'streams of processes': problems, policies, and politics. 'Policy windows', which may arise predictably (such as during a vote on legislation) or suddenly (when problems arise), are periods during which the three streams are combined and issues may rise on the policy agency. 'Policy entrepreneurs' take advantage of policy windows to push their agendas and particular policy solutions.

In summary, the study of how and how well governments govern is central to the study of politics, and the field offers a variety of structural, institutional, cultural, and other arguments to explain both variation in the quality of 'governance' broadly defined and particular aspects of it. The brief discussion here is by no means exhaustive, but intended to provide a broad introduction to major arguments in the literature.

# 3 Findings from experimental work

In one of the earliest reviews on the use of field experiments to study contemporary governance issues, Humphreys and Weinstein (2009) identify four major questions in which researchers have primarily focused, namely: (1) what is the role of political institutions in the process of decision-making and policy implementation? (2) How do social norms and informal institutions affect individual and collective action? (3) What is the impact of information and incentives on political behaviour, notably accountability? And (4) how can violence and conflict be prevented? The authors cover a limited number of studies and

acknowledge that 'there has not yet been a significant accumulation of knowledge from the use of field experiments in the political economy of development [...] For this reason, we focus more on the promise of the field than on its achievements' (Humphreys and Weinstein 2009: 370).

In a subsequent review of experimental research on governance, Moehler (2010a) focuses on the related question of whether field experiments can 'be productively employed to study the impact of development assistance on democracy and governance outcomes?' (Moehler 2010a: 30). She highlights several key weaknesses of field experiments, but is generally sanguine about the possibilities: 'The enterprise of DG field experiments', she notes, 'will be constrained more by mundane challenges to successful research design and implementation than by the inherent limitations of field experiments' (Moehler 2010a: 42). Her review identifies 41 randomized field experiments of interest in the developing world, including 11 dealing with elections, ten with community-driven development, nine with government performance in public service delivery, three with the use of quotas, and seven with other topics. The majority of the reported studies (22) were conducted in Africa, and nine in India.

More recently, Olken and Pande (2011b) conducted a narrative although not a systematic review of the literature, following a principal-agent approach to governance. They include in the review 16 studies that adopt rigoruous experimental and non-experimental methods to establish causality in the analysis of policies that aim to improve governance in developing countries. More specifically, they divide the literature into two broader areas: (1) participation and participatory institutions to exercise greater control over politicians, and (2) the roots of corruption and the incentives and institutional features that can prevent rent-seeking behaviour and leakages.<sup>1</sup>

In order to address any potential threat of publication bias, a *systematic* review of published and unpublished papers using rigorous experimental and quasi-experimental methods to study governance was conducted as part of the research for the study of which this paper is a part (Gisselquist, Niño-Zarazúa, and Sajuría forthcoming). It identified 139 relevant papers. According to our classification, which is derived from the basic definition of governance adopted in this paper, we identify three major types of policy interventions that overall cluster around the provision of public goods and aggregating interests, and aim to (1) improve supply-side capabilities of governments, and the social and political institutions that facilitate that process; (2) change individual behaviour through various devices, notably incentives, and (3) improve informational asymmetries.

Our typology varies from the ones described above in the sense that the first set of factors, focus on the 'supply'-side dimensions of policies, affecting how public institutions themselves supply goods and social services. Improved governance in that context involves changes both to what is provided (e.g., books and classrooms) and the quality of services (e.g., via a reduction in absenteeism by teachers). The second and third set of factors directly influence the 'demand'-side for government-provided goods and services, i.e., how the population (usually individuals, households, and occasionally communities) interact with public institutions. Demand-side interventions are found to either provide incentives (often cash), or better information about the provision of goods and services, both with the objective of changing demand-side behaviour.

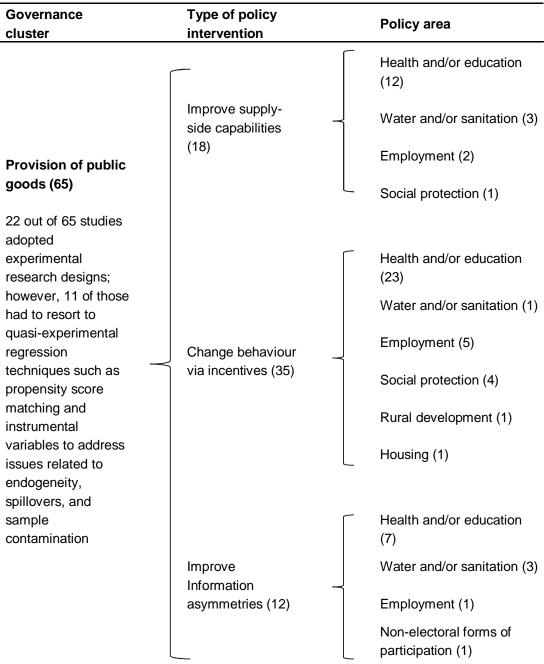
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<sup>1</sup> For a review on the specific topic of corruption, see Olken and Pande (2011a)

As shown in Table 1, the largest number of papers identified under the governance cluster of 'aggregating interests' focus on institutions and corruption, while 27 studies address issues related to participation, including voting behaviour and eight adress non-electoral forms of participation. Similarly, under the 'provision of public goods' cluster, we find that the largest number of studies (42) focus on health care and education policies, whereas other studies focus on issues related to employment, water and sanitation, and housing. The largest number of studies in our sample was conducted in the USA and India (see Table A1 in the Appendix)

Table 1: Experimental and quasi-experimental studies to study governance

Governance cluster	Type of policy intervention	Policy area
		Accountability and corruption (2)
nterests (74)  19 out of 74 studies adopted experimental		Democracy (1)
Aggregating	Improve supply- side capabilities	Ethnicity (2)
interests (74)	(29)	Institutional building (18)
49 out of 74 studies adopted experimental research designs;		Non-electoral forms of participation (3) Voting behaviour (3)
however, more than half had to resort to quasi-experimental regression		Accountability and corruption (5)
techniques such as propensity score	Change behaviour	Institutional building (6)
matching and instrumental variables to address issues related to endogeneity,	via incentives (20)	Non-electoral forms of participation (4)  Voting behaviour (5)
spillovers, and sample contamination	Improve information asymmetries (25)	Accountability and corruption (1) Institutional building (4) Non-electoral forms of participation (1) Voting behaviour (19)



Note: number of reviewed studies in brackets.

Source: compiled by authors.

Several recent studies also review related findings from RCTs with respect to development more generally. Banerjee and Duflo (2012), for instance, draw largely on the results of their work at the MIT Poverty Action Lab to propose new solutions to global poverty, highlighting the role of 'ideology, ignorance, and inertia' in explaining why aid is not always effective. In particular, many of their solutions point to how the poor lack critical information and hold incorrect beliefs (e.g., about the benefits to education) that help to perpetuate their poverty.

They highlight findings from RCTs dealing with hunger, health, education, family planning, risk management, microfinance, and entrepreneurship. Karlan and Appel (2012) build a similar argument about solutions to global poverty, also drawing heavily on findings from RCTs. The 'seven ideas that work' that they highlight are: microsavings, reminders to save,

prepaid fertilizer sales, deworming, remedial education in small groups, chlorine dispensers for clean water, and commitment devices (Karlan and Appel 2012: 272-275).

In summary, a number of findings emerge from review of the literature on RCTs that are relevant to explaining variations in the quality of governance. As Banerjee and Duflo's (2012) and Karlan and Appel's (2012) books suggest, many of these relate to the ways in which governments (or donors) can improve the provision of basic public goods, particularly in the areas of health care, sanitation, and education. A number of these studies deal with the impact of projects on providing specific goods or services. In their study of the Primary School Deworming Project in Kenya, for instance, Miguel and Kremer (2004) find that the programme not only improved students' health in both treatment schools and neighbouring schools, but also reduced school absenteeism by a quarter (although there was no evidence of an effect on academic test scores). In demonstrating the impact of expanded insurance coverage on improved health outcomes among children, Quimbo et al. (2011) draw on the Quality Improvement Demonstration Study in the Philippines to show that zero co-payments and increased enrolment were associated after release from the hospital with reduced likelihood of wasting and of having an infection (9-12 and 4-9 per cent respectively). Kremer, Miguel, and Thorton (2009) evaluate the impact of a merit scholarship programme in Kenya in which girls who scored well on exams had school fees paid and received a grant, finding that the programme had an effect not only on improved student test scores, but also on teacher attendance.

A number of studies explore the impact of public information campaigns on public goods provision. Pandey, Goyal, and Sundararaman (2009), for instance, evaluate the impact of a community-based information campaign across three Indian states consisting of eight or nine public meetings to disseminate information to communities about its state-mandated roles and responsibilities in school management. They find the largest impacts on teacher effort, and more modest improvements on student learning and the delivery of benefits to students (stipends, uniforms, and mid-day meal). Also in India, Pattanayak et al. (2009) explore the impact of the intensified 'information, education, and communication' campaign carried out in Orissa as part of the nationwide Total Sanitation Campaign to change rural household attitudes about the use of latrines. The study found that latrine ownership rose significantly in treatment villages and remained the same in control villages.

Pattanayak et al. (2009) further address the question of whether social and emotional costs ('shaming') or financial incentives ('subsidies') better influence behaviour. They find that although latrine ownership rose most among households below the poverty line and eligible for a government subsidy (5 to 36 per cent), it also rose among wealthier households not eligible for the subsidy (7 to 26 per cent), suggesting that shaming, even in the absence of subsidies, can work to change behaviour.

Conditional cash transfers as a strategy have received particular attention and been evaluated in several different contexts. A number of studies focus on Mexico's Progresa/Oportunidades programme (e.g., De La O 2008; Stecklov et al. 2007). Leroy et al. (2008) for instance, find the programme to be associated with better growth in infants below six months of age (but to have no impact for babies 6-24 months). Other studies explore the impact of conditional cash penalty programmes. One example is Dee's (2011) study of the effects in ten counties of the state of Wisconsin's Learnfare programme, which sanctions a family's welfare grant when teenagers in the family do not meet school attendance targets. Data suggest evidence in nine counties that Learnfare increased school enrolment by 3.5 per cent and attendance by 4.5 per cent.

Another set of experimental studies focus on interventions to improve the performance of public sector employees such as teachers and nurses. Multiple studies highlight the impact of financial incentives. Duflo and Hanna (2005), for instance, find that a financial incentive programme immediately reduced teacher absenteeism in rural India, which was also associated with an improvement in student test scores and achievement one year after the start of the programme. Basinga et al. (2011) find in Rwanda that adoption of performancebased payment of health-care providers ('P4P') was related to improvements in the use and quality of child and maternal care services, including a 23 per cent increase in the number of institutional deliveries and increases in the number of preventive care visits by children (56 per cent for those 23 months and younger, and 132 per cent for those 24-59 months), and improvements in prenatal quality as measured by compliance with Rwandan prenatal care clinical practice guidelines. Other studies explore the impact of relatively minor administrative reforms: Banerjee et al. (2012) test the impact of four low-cost reforms across police stations in eleven districts in Rajasthan. Results suggest that two of these reforms – freezing staff transfers between police stations and providing in-service training in investigation skills and 'soft' skills like communication and leadership - were effective in improving police effectiveness and public satisfaction, while the other two reforms – placing community observers in police stations and a weekly duty rotation – were not effective.

A growing body of experimental work also studies issues related to aggregating interests through the study of elections in new and emerging democracies. Wantchekon (2009), for instance, explores whether public deliberation – in the form of town meetings – can overcome clientelism in Benin. The experimental data show a positive effect on perceived knowledge about policies and candidates and on voter turnout, as well as increased electoral support for the candidates participating in the intervention. Collier and Vicente (2008) evaluate the effect of a campaign against political violence run by an NGO in Nigeria, involving town meetings, popular theatres, and door-to-door distribution of material. They find that this intervention served to reduce the intensity of election-related violence. Hyde (2010a) shows that the presence of election observers had an effect on election quality in the 2004 Indonesian presidential elections, measured in terms of votes cast for the incumbent. Ichino and Schündeln (2012) study the effect of domestic observers on voter registration in Ghana in 2008. They find that because parties operate over large areas, observers in one registration centre may displace irregularities to others, which suggests the need for some revisions to how such observers are deployed in many countries.

Finally, a number of studies explore topics at the intersection of representation and public service provision, with particular attention to the impact of community-based monitoring initiatives. Björkman and Svensson (2009), for instance, find in Uganda that holding meetings among community members and health workers to discuss health services and how to improve them, to compare citizen and health worker views of service provision, and to collectively discuss patient rights and provider responsibilities, led to improved health outcomes (reduced child mortality and increased child weight), as well as more community monitoring of health care a year after the intervention. Olken (2010) explores the relationship between direct democracy and local public goods provision in rural Indonesia, studying plebiscites introduced in some villages to replace a meeting-based process presumably dominated by elites. Plebiscites were associated with higher public satisfaction and perceived benefits from the project, greater willingness to contribute, and increased knowledge about the project. On the other hand, Olken's (2007) study of 'top down' versus grassroots participation in corruption monitoring in Indonesia suggests that government-led approaches may be the more effective on this issue. Increasing government audits had a significant effect

on reducing corruption in term of reducing missing expenditures and discrepancies between official project costs and independent estimates of costs, while increasing grassroots participation had little impact.

In summary, findings from RCTs highlight a range of strategies, projects, and other inventions that governments could adopt to improve public service provision and representation and accountability in particular areas. Inventions that have been explored in multiple contexts include public information campaigns, conditional cash transfers, financial incentives to improve the performance of public sector employees, community-based monitoring, and public deliberation at the local level.

# 4 The limits of experimental methods in the study of governance

The elegance of RCT findings arguably has a tendency to promote method-driven, rather than theory-driven, research: in other words, it tends to encourage work that asks what questions can be addressed with RCTs, rather than work that begins with questions that are seen as most important to answer and then proposes hypotheses and assesses whether RCTs are an appropriate method for testing them. In Section 3, we summarized some key findings based on RCTs that are relevant to governance. This section considers this summary in light of the review of theories of governance presented above, exploring the extent to which RCTs have – or could – contribute to the testing and building of hypotheses that follow from this long-standing discussion.

One related criticism levelled at experimental work is that it does not address 'big' questions and 'big' theories (Hyde 2010b). If we compare the factors explored in the RCTs with those identified in the theories of governance reviewed above, there is certainly something to that criticism. One of the major questions in the literature on government, for instance, is about the factors leading to particular regime types, a question completely absent from experimental work. Similarly, major theories of governance highlight factors like social structure that are also largely absent as an object of study in experimental evaluations.

On the other hand, proponents of RCTs make a compelling argument that their avoidance of 'grand theory' could be a strength of the literature. Banerjee and Duflo (2012), for instance, advocate a decidedly incremental and 'micro' approach. Their solutions posit that governance can be improved with small policy reforms that at the 'margin' can lead to desirable improvements in policy, and without major changes to social and political structures. Karlan and Appel (2012) contend that 'up in the realm of high-minded concepts....the air is thin and there are no poor people to be found...[development] needs to be on the ground' (Appel 2012: 37). This is in stark contrast with prominent 'grand' theories of development that emphasize the role of political institutions in the process of economic development and democratic governance (Acemoglu and Robinson 2012).

However, despite their explicit rejection of 'grand theory', it should also be acknowledged that these approaches are not absent of theoretical underpinnings, and in the case of experimental research in particular, analysis often falls clearly within the tradition of behavioural economics, drawing on its theories of individual behaviour, (ir)rational choice, and information.

Compelling as it is in some contexts, this 'micro' focus exacerbates one of the key weaknesses highlighted about experimental work: the low external validity of its findings,

despite the fact that the key strength is the high internal validity of its findings. If findings from RCTs are to be used to identify generalizeable impacts – i.e., in which specific experiments, conducted in particular situations, can help to predict the impact of similar interventions in other situations – experimental work must be able to say something about the broader context. Precisely because experimental researchers tend to adopt such 'micro' approaches to research enquiry, and eschew more high level theorizing about what within particular contexts might be unique or have influenced results, experimental studies tend to lend almost no empirically – or theoretically – grounded leverage on the question of whether similar outcomes might be expected in other contexts.

One strategy for improving external validity in experimental research involves precisely speaking to broader theoretical propositions, including drawing on structural theory (Martel Garcia and Wantchekon 2010). But a degree of uncertainty remains with regard to the underlying mechanisms that explain, under a theoretical framework, the distribution of policy outcomes for a particular group (treatment and control) vis-à-vis the distribution for the entire population. And this constraint inevitably forces us to look beyond experimental methods alone in the study of governance.

Of particular importance is in that context the fact that unlike RCTs that were undertaken for medical research, experimental designs in the field of development and governance pose significant logistical and methodological challenges that often result in the implementation of quasi-experimental regression techniques to tackle the problems of cofounding, selection bias, spillovers, and impact heterogeneity that RCTs aim to avoid in the first place (Deaton 2009). Our review of the literature reveals that more than half of the studies that adopted experimental research designs had to resort to quasi-experimental regression techniques such as propensity score matching and instrumental variables techniques to address issues related to endogeneity, spillovers, and sample contamination (see Table 1).

Furthermore, because experiments are relatively rarely replicated across multiple contexts, empirical data that help experimental researchers to address the external validity challenge are limited and often lacking in many developing country contexts. Thus, adopting more of this sort of replication is a strategy that has been recently explored and supported by private and public organizations promoting impact evaluations of development interventions, and which could in principle complement a broader theoretical view. However, as important as experimental design replication may be, researchers are faced with the ultimate challenge of overcoming external validity by the simple fact that parameter heterogeneity is commonly driven by economy-wide and institutional factors that cannot be easily controlled. This often leads to the implicit assumption of constant treatment effects across contexts in systematic reviews and meta-regression analyses.

A third limit to RCTs in the study of governance is in the type of causal factors that they can reasonably study. This constraint follows partly from the need for large numbers of units to be studied in order to gain precise estimates, which encourage researchers to focus on low level factors, rather than on factors held by higher level units, such as national institutions (Moehler 2010b). Some traction on such factors can be gained by 'scaling up' findings from low level factors. For instance, studies of deliberative democracy at the village level may be used to study deliberative democracy at the national level. However, village versus national politics are so different in other ways that this sort of scaling up clearly provides only suggestive evidence of how deliberative democracy might function.

The limits on the causal factors that RCTs can study also follow from the simple inability of researchers to manipulate some key variables identified in the literature, such as the level of development, national institutions, culture, or the quality of national leadership. Putnam's (1993) study of new regional governments in Italy, for instance, serendipitously gave him a natural experiment to exploit with RCT inspired tools, but most experimental researchers are not so lucky.

In other cases, ethical considerations may impede the study of particular factors. Wantchekon (2003), for instance, explores the impact on voting in Benin of electoral platforms highlighting either public goods provision or 'clientilist' promises to ones' ethno-region. Although he was able to work with political parties to place varied electoral platforms, he was only able to run the experiment in 'safe' districts where it was not expected to matter to election results. Furthermore, it would have been intellectually interesting if his study had more directly tested whether divisive ethnic appeals garnered more or fewer votes, but designing interventions in that way could have exacerbated ethnic tensions in a way that would simply have been unethical.

A fourth issue that limits the utility of RCTs in the study of governance is their relatively short-term window of analysis. Indeed, many theories of governance (and development) focus on 'non-linear' processes that evolve over decades, while RCTs rarely look at impacts beyond the 'linear' trajectory between two points in time, usually a few years. Take, for example, the hypothetical case of a J-shaped curve derived from the long-term relationship between economic liberalization and political stability: in the short-term, economic liberalization may lead to a sudden rupture between economic and political actors that cause an increase in political instability. An RCT may conclude that economic liberalization is bad for political stability. However, if theory predictions are correct, once markets and institutions are developed further, political stability would actually improve (Gans-Morse and Nichter 2008). Although the time horizons of RCTs could be extended somewhat, they would still not be long enough to explore many of the major theories of governance.

Fifth, RCTs are similarly limited in terms of the unit of analysis upon which they can evaluate impacts, which is generally the individual. Some studies focus on other units of analysis, such as voting constituencies or local regions, but no studies of which we are aware conduct experiments at the national level. This is simply due to the fact that the treatment effects arising from policy interventions are often small, and therefore large sample sizes are needed to conclude, with enough statistical power, that the differences between the treatment and control groups are unlikely to be due to chance. This connects to the final issue: the cost of RCTs. Randomization by group or cluster is often used in medical science to lower the cost of RCTs via phased implementation. This approach significantly decreases the cost of running studies, particularly in contexts where the outcomes of interest are easily assessed; however, even if they could be adapted to address some key theories of governance, it is not necessarily clear whether they would be more cost-effective in testing these theories than regression methods.

#### 5 Conclusion

This paper argues that RCTs have been and can be useful in studying the effects of some policy interventions in the governance area, but that their use in the study of governance is also limited in significant ways, particularly by the nature of the factors that we expect to matter most. RCTs are best for studying targeted interventions (particularly in areas of public

goods provision, voting behaviour, and specific measures to address corruption and improve accountability), where it is expected to have rapid results, but theories of government and the state suggest that what might be most important in explaining variation in governance outcomes are broad, macro-structural shifts, national level variation in institutions and political culture, and leadership.

The focus in this paper has been on the use of RCTs to test hypotheses about why the quality of governance varies. If our focus is narrower on precisely what individual, household, or community factors policy makers might affect that would matter to governance, RCTs appear to be a bit more promising. Policy makers also cannot rapidly change the macrostructure of their country; they govern within the constraints of that structure. Thus, the sorts of interventions studied by RCTs may be precisely of the sort that are most relevant to many policy makers.

However, even adopting this more narrow focus, RCTs have significant weaknesses. For one, policy makers can concentrate their efforts on changing causal factors identified in the literature, such as national institutions and social capital that RCTs cannot. RCTs provide little insight into whether such efforts would be worthwhile. In addition, the inherently weak external validity of RCTs raises major questions about whether policy makers in other contexts and constituencies should expect to see the same results from an RCT-tested intervention. In short, RCTs can tell us 'what works' in one specific context, but they can provide little traction on whether the intervention is transferable and 'could work' (and why) in other contexts.

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# Appendix

Table A1: Experimental and quasi-experimental studies to study governance

GOVERNANCE CLUSTER	Author(s)	Title	Year	Type of publication	Country	Policy area	Aim of intervention	Experi mental design?	Analytical methods 1/
	Kroon et al.	Police Intervention in Riots: The Role of Accountability and Group Norms. A Field Experiment	1991	Journal article	Germany	Accountability	Improve Information asymmetries	Yes	MANOVA
	Duflo et al.	Efficiency and Rent Seeking in Local Government: Evidence from Randomized Policy Experiments in India	2005	Working paper	India	Accountability and corruption	Improve supply- side capabilities	Yes	OLS
erests	Janssen et al.	Coordination and Cooperation in Asymmetric Commons Dilemmas	2011	Journal article	USA	Cooperation and participation	Change behaviour via incentives	Yes	OLS
Aggregating interests	Asthana	Decentralization and Corruption Revisited: Evidence from a Natural Experiment	2012	Journal article	India	Corruption	Improve supply- side capabilities	No	DiD, OLS
Aggı	Tyrefors	Do Merging Local Governments' Free Ride on their Counterparts when Facing Boundary Reform?	2009	Journal article	Sweden	Corruption	Change behaviour via incentives	No	DiD
	Bertrand et al.	Obtaining a Driver's License in India: An Experimental Approach to Studying Corruption	2007	Journal article	India	Corruption	Change behaviour via incentives	Yes	FE
	Fried et al.	Corruption and Inequality at the Crossroad: A Multi- method Study of Bribery and Discrimination in Latin America	2010	Journal article	Mexico	Corruption	Change behaviour via incentives	Yes	OLS

Olken	Monitoring Corruption: Evidence from a Field Experiment in Indonesia	2007	Journal article	Indonesia	Corruption	Change behaviour via incentives (monitoring)	Yes	OLS, FE
Azfar and Nelson	Transparency, Wages, and the Separation of Powers: An Experimental Analysis of Corruption	2007	Journal article	USA	Corruption	Change behaviour via incentives (voters)	Yes	OLS, Probit, and RE
Kalyvitis and Vlachaki	When Does More Aid Imply Less Democracy? An Empirical Examination	2011	Journal article		Democracy	Improve supply- side capabilities	No	2SLS
Glennerster et al.	Working Together: Collective Action in Diverse Sierra Leone Communities	2009	Working paper	Sierra Leone	Ethnic diversity	Improve supply- side capabilities	No	IV, OLS
Habyarimana et al.	Why Does Ethnic Diversity Undermine Public Goods Provision?	2007	Journal article	Uganda	Ethnic diversity	Improve supply- side capabilities	Yes	OLS, FE
Paul	Relief Assistance to 1998 Flood Victims: A Comparison of the Performance of the Government and NGOs	2003	Journal article	Bangladesh	Institutional building	Improve supply- side capabilities	No	ANOVA
Roy	Governance and Development: The Challenges for Bangladesh	2005	Journal article	Bangladesh	Institutional biudling	Improve supply- side capabilities	No	PCA, 2SLS and OLS
Beath et al.	Winning Hearts and Minds through Development: Evidence from a Field Experiment in Afghanistan	2012	Working paper	Afghanistan	Institutional biudling	Change behaviour via incentives (grants and councils organization)	Yes	FE and PSM
Scott	Assessing Determinants of Bureaucratic Discretion: An Experiment in Street level Decision Making	1997	Journal article	USA	Institutional building	Improve Information asymmetries	Yes	OLS
Djankov et al.	Disclosure by Politicians	2010	Journal article		Institutional building	Improve supply- side capabilities	No	OLS
Lokshin and Yemtsov	Has Rural Infrastructure Rehabilitation in Georgia Helped the Poor?	2005	Journal article	Georgia	Institutional building	Improve supply- side capabilities	No	PSM, DiD

Chattopadhyay and Duflo	Women as Policy Makers: Evidence from a Randomized Policy Experiment in India	2004	Journal article	India	Institutional building + Participation	Change behaviour via incentives (women quotas)	Yes	OLS
Wallen et al.	Implementing Evidence- based Practice: Effectiveness of a Structured Multifaceted Mentorship Programme	2010	Journal article	USA	Institutional building	Change behaviour via incentives	No	Correlational tests, and parametric stats
Olson et.al.	Governance and Growth: A Simple Hypothesis Explaining Cross-Country Differences in Productivity Growth	2000	Journal article		Institutional building + productivity	Improve supply- side capabilities	No	FE
Lassen and Serritzlew	Jurisdiction Size and Local Democracy: Evidence on Internal Political Efficacy from Large-scale Municipal Reform	2011	Journal article	Denmark	Institutional building	Improve supply- side capabilities	No	DiD and PSM
Wang et al.	Fiscal Reform and Public Education Spending: A Quasi-natural Experiment of Fiscal Decentralization in China	2012	Journal article	China	Institutional building	Improve supply- side capabilities	No	DiD, with RE and FE
Bjørnskov et al.	The Bigger the Better? Evidence of the Effect of Government Size on Life Satisfaction around the World	2007	Journal article	Worldwide	Institutional building	Improve supply- side capabilities	No	OLS and 2LSL
Pettersson- Lidbom	Does the Size of the Legislature Affect the Size of Government? Evidence from Two Natural Experiments	2011	Journal article	Finland and Sweden.	Institutional building	Improve supply- side capabilities	No	RD
Alence	Political Institutions and Developmental Governance in Sub-Saharan Africa	2004	Journal article	sub-Saharan Africa	Institutional building	Improve supply- side capabilities	No	WLS
Corazzini et al.	A Prize To Give For: An Experiment on Public Good Funding Mechanisms	2010	Journal article		Institutional building	Improve supply- side capabilities	Yes	OLS
Matkin and	Metropolitan Governance:	2009	Journal	USA	Institutional	Change	Yes	Ordered Logit

Frederickson	Institutional Roles and Inter- jurisdictional Cooperation		article		building	behaviour via incentives		
Thurmaier	Budgetary Decision-making in Central Budget Bureaus: An Experiment	1992	Journal article	USA	Institutional building	Improve Information asymmetries	Yes	OLS
Drummond and Mansoor	Macroeconomic Management and the Devolution of Fiscal Powers Why Do People Accept	2003	Journal article	International	Institutional building	Improve supply- side capabilities	No	OLS, Cluster analysis
Gibson et al.	Public Policies They Oppose? Testing Legitimacy Theory with a Survey-Based Experiment	2005	Journal article	USA	Institutional building	Improve supply- side capabilities	Yes	OLS
Olken	Direct Democracy and Local Public Goods: Evidence from a Field Experiment in Indonesia	2010	Journal article	Indonesia	Institutional building	Improve supply- side capabilities	Yes	Logit
Yip and Eggleston	Addressing Government and Market Failures with Payment Change Behaviour via Incentivess: Hospital Reimbursement Reform in Hainan, China	2004	Journal article	China	Institutional building	Change behaviour via incentives (reform)	No	DiD
Batista and Vicente	Do Migrants Improve Governance at Home? Evidence from a Voting Experiment	2011	Journal article	Cape Verde	Institutional building + accountability	Improve Information asymmetries	No	IV, FE
Grimmelik- huijsen	Linking Transparency, Knowledge and Citizen Trust in Government: an Experiment	2012	Journal article	Netherlands	Institutional building + accountability	Improve Information asymmetries	Yes	ANOVA, MANCOVA
Korberg and Clarke	Beliefs About Democracy and Satisfaction with Democratic Government: The Canadian Case	1994	Journal article	Canada	Institutional building + democracy	Improve supply- side capabilities	No	Probit
Cummings et al.	Tax Morale Affects Tax Compliance: Evidence from Surveys and an Art Factual Field Experiment	2009	Journal article	Botswana and South Africa	Institutional building (tax compliance)	Improve supply- side capabilities	Yes	Ordered Probit. Tobit, RE

Banerjee et al.	Can Institutions be Reformed from Within? Evidence from a Randomized Experiment with the Rajasthan Police	2012	Working paper	India	Institutional building	Improve supply- side capabilities	Yes	FE, DiD
Humphreys et. al	The Role of Leaders in Democratic Deliberations Results from a Field Experiment in São Tomé and Príncipe	2006	Journal article	São Tomé and Príncipe	Leadership	Improve supply- side capabilities	Yes	Leader FE
Moxnes and van der Heijden	The Effect of Leadership in a Public Bad Experiment	2003	Journal article	Norway	Leadership	Change behaviour via incentives (leadership)	Yes	Pooled OLS
Edmark	Migration Effects of Welfare Benefit Reform	2009	Journal article	Sweden	Migration	Change behaviour via incentives (benefits)	No	DiD, FE
Bowles and Gintis	Social Capital and Community Governance	2002	Journal article		Non-electoral forms of participation	Improve supply- side capabilities	Yes	OLS
Travers et al.	Change Behaviour via Incentivess for Cooperation: The Effects of Institutional Controls on Common Pool Resource Extraction in Cambodia	2011	Journal article	Cambodia	Non-electoral forms of participation	Improve supply- side capabilities	Yes	FE
Cavalcanti et al.	Public Participation and Willingness to Cooperate in Common-pool Resource Management: A Field Experiment with Fishing Communities in Brazil	2009	Journal article	Brazil	Non-electoral forms of participation	Improve Information asymmetries	Yes	OLS, ordered Logit, ANOVA
Yang and Pandey	Further Dissecting the Black Box of Citizen Participation: When Does Citizen Involvement Lead to Good Outcomes?	2011	Journal article	USA	Non-electoral forms of participation	Improve supply- side capabilities	No	OLS
Dimitropoulos and Kontoleon	Assessing the Determinants of Local Acceptability of Wind-farm Investment: A Choice Experiment in the Greek Aegean Islands	2009	Journal article	Greece	Non-electoral forms of participation	Change behaviour via incentives	Yes	RPL and MLM

Slomczynski and Shabad	Can Support for Democracy and the Market Be Learned in School? A Natural Experiment in Post- Communist Poland	1998	Journal article	Poland	Non-electoral forms of participation	Change behaviour via incentives	No	ANOVA
Gugerty and Kremer	Outside Funding and the Dynamics of Participation in Community Associations	2008	Journal article	Kenya	Non-electoral forms of participation	Change behaviour via incentives	No	OLS, Probit
Beaman et al.	Powerful Women: Does Exposure Reduce Bias?	2009	Journal article	India	Non-electoral forms of participation	Change behaviour via incentives (women quotas)	No	FE
Fearon et al.	Can Development Aid Contribute to Social Cohesion after Civil War? Evidence from a Field Experiment in Post-Conflict Liberia	2009	Journal article	Liberia	Social Cohesion	Change behaviour via incentives	Yes	PSM
Hyde	The Observer Effect in International Politics: Evidence from a Natural Experiment	2007	Journal article	Armenia	Voting behaviour	Improve supply- side capabilities	Yes	OLS
Ichino and Schündeln	Deterring or Displacing Electoral Irregularities? Spill over Effects of Observers in a Randomized Field Experiment in Ghana	2012	Journal article	Ghana	Voting behaviour	Improve supply- side capabilities	Yes	OLS, FE, IV
Hyde	Experimenting in Democracy Promotion: International Observers and the 2004 Presidential Elections in Indonesia	2010	Journal article	Indonesia	Voting behaviour	Improve supply- side capabilities	Yes	OLS, FE
De La O	Do Poverty Relief Funds Affect Electoral Behavior? Evidence from a Randomized Experiment in Mexico	2008	Conference	Mexico	Voting behaviour	Change behaviour via incentives (benefits)	Yes	DiD
Bhavnani	Do Electoral Quotas Work after They Are Withdrawn? Evidence from a Natural Experiment in India	2009	Journal article	India	Voting behaviour	Change behaviour via incentives (female quota)	No	Logit
Humphreys and Weinstein	Policing Politicians: Citizen Empowerment and Political	2007	Conference (APSA	Uganda	Voting behaviour	Improve Information	No	Ordered Probit

	Accountability in Africa		2007)			asymmetries		
James	Performance Measures and Democracy: Improve Information asymmetries Effects on Citizens in Field and Laboratory Experiments	2011	Journal article	England	Voting behaviour	Improve Information asymmetries	Yes	Probit
Collier and Vicente	Votes and Violence: Evidence from a Field Experiment in Nigeria	2008	Working paper	Nigeria	Voting behaviour	Improve Information asymmetries	Yes	DiD, FE, Probit
Esterling et al.	Means, Motive, and Opportunity in Becoming Informed about Politics: A Deliberative Field Experiment with Members of Congress and Their Constituents	2011	Journal article	USA	Voting behaviour	Improve Information asymmetries	Yes	Bayesian framework using MCMC with data augmentation
Banerjee et al.	Do Informed Voters Make Better Choices? Experimental Evidence from Urban India	2011	Working paper	India	Voting behaviour	Improve Information asymmetries	Yes	FE
Ferraz and Finin	Exposing Corrupt Politicians: The Effects of Brazil's Publicly Released Audits on Electoral Outcomes	2008	Journal article	Brazil	Voting behaviour	Improve Information asymmetries	Yes	FE, DiD, OLS, semi-parametric estimators
Chong et al.	Improve Information asymmetries Dissemination and Local Governments' Electoral Returns, Evidence from a Field Experiment in Mexico	2010	Working paper	Mexico	Voting behaviour	Improve Information asymmetries	Yes	FE, OLS
Banerjee et al.	Can Voters be Primed to Choose Better Legislators? Evidence from Two Field Experiments in Rural India	2009	Working paper	India	Voting behaviour	Improve Information asymmetries	Yes	IV, FE
Harbridge and Malhotra	Electoral Change Behaviour via Incentivess and Partisan Conflict in Congress: Evidence from Survey	2011	Journal article	USA	Voting behaviour	Improve Information asymmetries	Yes	PSM
Borges and Clarke	Experiments Cues in Context: Analyzing the Heuristics of Referendum Voting with an Internet Survey Experiment	2008	Journal article	USA	Voting behaviour	Improve Information asymmetries	Yes	multinomial Logit

Vicente and Wantchekon	Clientelism and Vote Buying: Lessons from Field Experiments in African Elections	2009	Journal article	West African	Voting behaviour	Improve Information asymmetries	Yes	OLS
Davenport	Public Accountability and Political Participation: Effects of a Face-to-Face Feedback Intervention on Voter Turnout of Public Housing Residents	2010	Journal article	USA	Voting behaviour	Improve Information asymmetries	Yes	OLS, Probit and 2SLS
Giné and Mansuri	Together We Will: Evidence from a Field Experiment on Female Voter Turnout in Pakistan	2011	Working paper	Pakistan	Voting behaviour	Improve Information asymmetries	Yes	OLS and FE
Gerber et al.	Party Affiliation, Partisanship, and Political Beliefs: A Field Experiment	2010	Journal article	USA	Voting behaviour	Improve Information asymmetries	Yes	OLS, 2SLS
Gerber et al.	Social Pressure and Voter Turnout: Evidence from a Large-Scale Field Experiment	2008	Journal article	USA	Voting behaviour	Improve Information asymmetries	Yes	OLS, FE
Guan and Green	Noncoercive Mobilization in State-Controlled Elections	2006	Journal article	China	Voting behaviour	Improve Information asymmetries	Yes	OLS
Wantchekon	Clientelism and Voting Behavior: Evidence from a Field Experiment in Benin	2003	Journal article	Benin	Voting behaviour	Improve Information asymmetries	Yes	Probit
Wantchekon	Can Informed Public Deliberation Overcome Clientelism? Experimental Evidence from Benin	2009	Working paper	Benin	Voting behaviour	Improve Information asymmetries	Yes	Probit, FE
Pande	Can Informed Voters Enforce Better Governance? Experiments in Low-Income Democracies	2011	Journal article		Voting behaviour	Improve Information asymmetries	Yes	OLS

		Impact Evaluation of School					Improve		
	Buttenheim et al.	Feeding Programmes in Lao PDR	2011	Working paper	Lao	Education	supply-side capabilities	No	DiD, PSM and FE
	Koball	Living Arrangements and School Dropout Among Minor Mothers Following Welfare Reform	2007	Journal article	USA	Education	Change behaviour via incentives	No	DiD
	Singer and Stater	Going, Going, Gone: The Effects of Aid Policies on Graduation at Three Large Public Institutions	2006	Journal article	USA	Education	Change behaviour via incentives	No	OLS
	Baulch	The Medium-Term Impact of the Primary Education Stipend in Rural Bangladesh	2010	Discussio n Paper	Bangladesh	Education	Change behaviour via incentives	No	PSM, DiD
spool	Duflo and Hanna	Monitoring Works: Getting Teachers to Come to School	2005	Working paper	India	Education	Change behaviour via incentives	Yes	OLS and 2SLS
Provision of public goods	Kremer et al.	Change Behaviour via Incentivess to Learn	2009	Journal article	Kenya	Education	Change behaviour via incentives	Yes	OLS
ion of p	Kremer et al.	Decentralization: A Cautionary Tale	2003	Working paper	Kenya	Education	Change behaviour via incentives	Yes	OLS, RE
Provis	Kim and Joo	Did PRWORA's Mandatory School Attendance Policy Increase Attendance Among Targeted Teenage Girls?	2011	Journal article	USA	Education	Change behaviour via incentives (benefits)	No	DiD
	Reinikka and Svensson	The Power of Improve Information Asymmetries in Public Services: Evidence from Education in Uganda Local Capture: Evidence	2011	Journal article	Uganda	Education	Improve Information asymmetries	No	FE, IV
	Reinikka and Svensson	from a Central Government Transfer Programme in Uganda	2004	Journal article	Uganda	Education	Improve Information asymmetries	No	FE, RE
	Dee	Conditional Cash Penalties in Education: Evidence from the Learn Fare Experiment	2011	Journal article	USA	Education	Change behaviour via incentives	Yes	FE
	Pande et al.	Community Participation in Public Schools: Impact of Improve Information Asymmetries Campaigns in	2009	Journal article	India	Education + Accountability	Improve Information asymmetries	Yes	DiD

#### Three Indian states

Patrinos and Sakellariou	Schooling and Labor Market Impacts of a Natural Policy Experiment	2005	Journal article	Venezuela	Education + Employment	Change behaviour via incentives (policy)	No	IV
Meghir et al.	Education, Health and Mortality: Evidence from a Social Experiment	2011	Working paper	Sweden	Education + health	Improve supply-side capabilities	No	CPHR, OLS
Gao et al.	How Does Public Assistance Affect Family Expenditures? The Case of Urban China	2010	Journal article	China	Education + Health	Change behaviour via incentives	No	PSM
Monstad et al.	Education and Fertility: Evidence from a Natural Experiment	2008	Journal article	Norway	Education + Health	Change behaviour via incentives (reform)	No	2SLS
Miguel and Kremer	Worms: Identifying Impacts on Education and Health in the Presence of Treatment Externalities	2004	Journal article	Kenya	Education and Health	Improve supply-side capabilities	Yes	OLS
Fan et al.	Propensity Score Techniques to Evaluate Returns of College Education	2009	Conferenc e Paper	China	Employment	Improve supply-side capabilities	No	PSM
Micklewright and Nagy	The Effect of Monitoring Unemployment Insurance Recipients on Unemployment Duration: Evidence from a Field Experiment	2009	Journal article	Hungary	Employment	Improve supply-side capabilities	Yes	CPHR, OLS
Duflo and Saez	The Role of Improve Information Asymmetries and Social Interactions in Retirement Plan Decisions: Evidence from a Randomized Experiment	2003	Journal article	USA	Employment	Change behaviour via incentives	Yes	OLS, FE and IV
van Ours and Vodopivec	How Shortening the Potential Duration of Unemployment Benefits Affects the Duration of Unemployment: Evidence from a Natural Experiment	2006	Journal article	Slovenia	Employment	Change behaviour via incentives (benefits)	No	DiD

Campolietia and Riddell	Disability Policy and the Labor Market: Evidence from a Natural Experiment in Canada, 1998-2006	2011	Journal article	Canada	Employment	Change behaviour via incentives (earning exceptions)	No	DiD
Washbrook et al.	Public Policies, Women's Employment after Childbearing, and Child Well-Being	2011	Journal article	USA	Employment	Change behaviour via incentives (policy)	No	DiD
Ziebarth and Karlsson	A Natural Experiment on Sick Pay Cuts, Sickness Absence, and Labor Costs	2010	Journal article	Germany	Employment	Change behaviour via incentives (reform)	No	DiD, PSM
Boeri and Tabellini	Does Information Increase Political Support For Pension Reform? Community Effectiveness of	2010	Journal article	Italy	Employment	Improve Information asymmetries	Yes	Probit, PSM
Zhou et al.	Stove and Health Education Interventions for Reducing Exposure to Indoor Air Pollution from Solid Fuels in Four Chinese Provinces	2006	Journal article	China	Health	*	No	DiD
Liu et al.	The Expansion of Public Health Insurance and the Demand for Private Health Insurance in Rural China	2010	Journal article	China	Health	Improve supply-side capabilities	No	DiD
Cooper et al.	Does Competition Improve Public Hospitals' Efficiency? Evidence from a Quasi- Experiment in the English National Health Service	2012	Discussio n Paper	England	Health	Improve supply-side capabilities	No	DiD, FE
Jesmin et al.	Does Team-based Primary Health Care Improve Patients' Perception of outcomes? Evidence from the 2007-08 Canadian Survey of Experiences with Primary Health	2012	Journal article	Canada	Health	Improve supply-side capabilities	No	PSM
Chadwick et al.	Effects of Downsizing Practices on the	2004	Journal article	USA	Health	Improve supply-side	No	OLS, Logit
Steinhardt et al.	Performance of Hospitals Removing User Fees for	2011	Journal	Afghanistan	Health	capabilities Change	No	DiD

	Basic Health Services: A Pilot Study And National Roll-out in Afghanistan Effect on Maternal and Child		article			behaviour via incentives		
Basinga et al.	Health Services in Rwanda of Payment to Primary Health-Care Providers for Performance: an Impact Evaluation Encouraging Maternal	2011	Journal article	Rwanda	Health	Change behaviour via incentives	No	DiD, FE
Nguyen et al.	Health Service Utilization: An Evaluation of the Bangladesh Voucher Programme	2012	Journal article	Bangladesh	Health	Change behaviour via incentives	No	DiD, FE
Thanh et al.	An Assessment of the Implementation of the Health Care Funds for the Poor Policy in Rural Vietnam	2010	Journal article	Vietnam	Health	Change behaviour via incentives	No	DiD, PSM
Schreyögg and Grabka	Co-payments for Ambulatory Care in Germany: a Natural Experiment Using A Difference-in-Difference Approach	2010	Journal article	Germany	Health	Change behaviour via incentives	No	Logit, DiD
Arntz and Thomsen	Crowding Out Informal Care? Evidence from a Field Experiment in Germany	2011	Journal article	Germany	Health	Change behaviour via incentives	Yes	DiD, FE, Probit
Thanh et al.	Does 'the Injury Poverty Trap' Exist?: A Longitudinal Study in Bavi, Vietnam	2006	Journal article	Vietnam	Health	Change behaviour via incentives (injury)	No	PSM
Quimbo et al.	Evidence of a Causal Link Between Health Outcomes, Insurance Coverage, and a Policy to Expand Access: Experimental Data from Children in the Philippines	2011	Journal article	Philippines	Health	Change behaviour via incentives (policy)	No	DiD
Trujillo et al.	The Impact of Subsidized Health Insurance for the Poor: Evaluating the Colombian Experience Using Propensity Score Matching	2005	Journal article	Colombia	Health	Change behaviour via incentives (policy)	No	PSM

King et al.	A 'Politically Robust' Experimental Design for Public Policy Evaluation, With Application to the Mexican Universal Health Insurance programme	2007	Journal article	Mexico	Health		Improve supply-side capabilities	Yes	PSM, OLS
Propper et al.	Change Behaviour Via Incentivess and Targets in Hospital Care: Evidence From A Natural Experiment	2010	Journal article	United Kingdom	Health		Change behaviour via incentives (policy)	No	DiD
Rodriguez et al.	A Randomized Experiment of Issue Framing and Voter Support of Tax Increases for Health Insurance Expansion	2010	Journal article	USA	Health		Improve Information asymmetries	Yes	ANOVA, OLS
Justesen	Democracy, Dictatorship, and Disease: Political Regimes and HIV/AIDS The Causal Relationship	2012	Journal article		Health democracy	+	Improve supply-side capabilities	No	PSM
Braakmann	Between Education, Health and Health Related Behaviour: Evidence from a Natural Experiment in England	2011	Journal article	England	Health Education	+	Improve supply-side capabilities	No	OLS and IV
Velamuri	Taxes, Health Insurance and Women's Self-employment	2012	Journal article	USA	Health Employment	+	Change behaviour via incentives (health insurance)	No	DiD
Behrman et al.	Evaluating Preschool Programs When Length of Exposure to the Programme Varies: A Nonparametric Approach	2004	Journal article	Bolivia	Health Nutrition Education	+	Change behaviour via incentives (day-care, nutrition, education)	No	PSM
Björkman and Svensson	Power to the People: Evidence from a Randomized Field Experiment on Community- Based Monitoring in Uganda	2009	Journal article	Uganda	Health participation	+	Improve Information asymmetries	Yes	FE, DiD

Poder and He	How can Infrastructures Reduce Child Malnutrition and Health Inequalities? Evidence from Guatemala	2011	Working paper	Guatemala	Health and nutrition	Improve supply-side capabilities	No	PSM
Schwartz et al.	The External Effects of Place-based Subsidized Housing	2006	Journal article	USA	Housing	Change behaviour via incentives (policy)	No	DiD, FE
Desai and Tarozzi	Microcredit, Family Planning Programmes, and Contraceptive Behavior: Evidence From a Field Experiment in Ethiopia	2011	Journal article	Ethiopia	microcredit + health	Improve Information asymmetries	Yes	DiD, IV
Banerjee et al.	Pitfalls of Participatory Programmes: Evidence from a Randomized Evaluation in Education in India	2010	Journal article	India	Non-electoral forms of participation	Improve Information asymmetries	Yes	IV, Pooled OLS
Galasso and Umapathi	Improving Nutritional Status through Behavioral Change: Lessons from Madagascar	2007	Working paper	Madagascar	Nutrition	Improve Information asymmetries	No	DiD, PSM, FE
Domínguez- Torreiro and Soliño	Provided and Perceived Status Quo in Choice Experiments: Implications for Valuing the Outputs of Multifunctional Rural Areas	2011	Journal article	Spain	Rural development	Change behaviour via incentives	Yes	OLS, RPL
De Jaeger	Residual Household Waste: From Pay-Per-Bag To Pay- Per-Kilogram. An Evaluation Study for Flanders	2010	Journal article	Flanders	Sanitation	Improve supply-side capabilities	No	DiD
Gregg et al.	Family Expenditures Post- welfare reform in the UK: Are Low-Income Families Starting To Catch Up?	2006	Journal article	United Kingdom	Social Protection	Improve supply-side capabilities	No	DiD
Leroy et al.	The Oportunidades Programme Increases the Linear Growth of Children Enrolled at Young Ages in Urban Mexico	2008	Journal article	Mexico	Social Protection	Change behaviour via incentives	No	DiD, PSM
Baird et al.	Cash or Condition? Evidence from a Cash Transfer Experiment	2010	Working paper	Malawi	Social Protection	Change behaviour via incentives	Yes	OLS, FE

de Hoop et al.	Do Cash Transfers Crowd Out Community Investment in Public Goods? Lessons from a Field Experiment on Health Education	2011	Journal article	Peru	Social Protection	Change behaviour via incentives (funding health education)	Yes	OLS
Stecklov et al.	Unintended Effects of Poverty Programmes on Childbearing in Less Developed Countries: Experimental Evidence from Latin America How Valuable Are	2007	Journal article	Latin America	Social Protection	Change behaviour via incentivess	Yes	DiD
Pattanayak et al.	Environmental Health Interventions? Evaluation of Water and Sanitation Programmes in India	2010	Journal article	India	Water and Sanitation	Improve supply-side capabilities	No	DiD
Hope	Evaluating Social Impacts of Watershed Development in India Complementarity Between	2007	Journal article	India	Water and Sanitation	Improve supply-side capabilities	No	PSM
Veettil et al.	Water Pricing, Water Rights And Local Water Governance: A Bayesian Analysis of Choice Behaviour of Farmers in the Krishna River Basin, India	2011	Journal article	India	Water and Sanitation	Change behaviour via incentives (models)	Yes	OLS, Multinomial Probit
Pattanayak et al.	Shame or Subsidy Revisited: Social Mobilization for Sanitation in Orissa, India	2009	Journal article	India	Water and Sanitation	Improve Information asymmetries	No	DiD
Kurz et al.	Utilizing a Social-Ecological Framework to Promote Water and Energy Conservation: A Field Experiment	2005	Journal article	Australia	Water and Sanitation	Improve Information asymmetries	Yes	ANOVA
Watson et al.	An Opportunistic Field Experiment in Community Water Conservation	1999	Journal article	Australia	Water and Sanitation	Improve Information asymmetries	Yes	MANOVA, OLS
Moehler	Democracy, Governance, and Randomized Development Assistance	2010	Journal article	World		Improve supply-side capabilities	Yes	Review article

Notes: 1/ Abbreviations stand as follows: Principal Component Analysis (PCA); Ordinary Least Squares (OLS); Two-Stage Least Squares (2SLS), Weighted-least-squares (WLS), Fixed Effects (FE), Random Effects (RE), Propensity Score Matching (PSM), Difference-in-Difference (DiD), Analysis of variance (ANOVA), Multivariate analysis of variance (MANOVA), Random Parameter Logit (RPL), Mixed Logit Model (MLM), Regression Discontinuity (RD), Cox proportional hazard regressions (CPHR), Random Parameter Logit (RPL).

Source: Adapted from Gisselquist, Niño-Zarazúa and Sajuría (forthcoming).