

AT THE INTERSECTION: A REVIEW OF INSTITUTIONS IN ECONOMIC DEVELOPMENT

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Abstract

We present accepted basic arguments on the role of institutions in development and then discuss the corresponding empirical evidence in support (or not) of those arguments. Methodologically, our emphasis is on experimental evidence wherever available, and thematically we focus on political and legal institutions. In the political sphere, we distinguish between rules shaping representation and accountability, and state capacity. In the legal sphere we distinguish between the profile of legally sanctioned rights (such as property rights and the role of informality) and the workings of the judiciary and the quality of enforcement. We distil the lessons learned from the literature and present open questions in each topic, thus highlighting promising avenues for future empirical research.

Institutions matter for growth and inclusive development. But despite increasing awareness of the importance of institutions on economic outcomes, there is little evidence on how positive institutional change can be achieved. The Economic Development and Institutions – EDI – research programme aims to fill this knowledge gap by working with some of the finest economic thinkers and social scientists across the globe.

The programme was launched in 2015 and will run for five years. It is made up of four parallel research activities: path-finding papers, institutional diagnostic, coordinated randomised control trials, and case studies. The programme is funded by the UK Department for International Development. For more information see <http://edi.opml.co.uk>.

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1 Introduction

The driving question throughout this review paper is as follows: What do we know about how legal and political institutions (and reforms thereof) can successfully improve development outcomes? To answer this question, we review pertinent evidence from the fields of economics and political science and draw from studies of a range of economies worldwide. When useful, we include evidence based on observational data, and whenever possible we emphasize evidence stemming from the literature exploiting quasi-experimental and experimental variation. This review is inclusive of nearly 200 publications and identifies 40 ‘open’ research questions.

What do we mean by ‘institutions’?

In this paper, we define institutions according to North’s (1991) ‘rules of the game’. This admittedly broad definition comprises a wide range of social and economic, legal and political, and normative and procedural rules, incentive structures and organizations.

To put this definition in context, consider the basic economic institutions in common across high-income and lower-income countries, including a variety of firms, contracts and wage labor schemes that all tend to exist everywhere. However, the details of their functioning and the results of these ubiquitous economic institutions differ markedly across contexts. The starting point for this review paper is to understand such differences as largely due to different legal regimes (whether in conception or *de facto* application), and in turn due to different political institutions and performance. In fact, many of the legal institutions of interest function as economic institutions.

Why examine institutions for economic development?

Many writers in economics and political science have emphasized the connection between institutions and the economic performance of societies. Some of these institutions are directly economic in nature and include social constructions as basic as firms, the wage relationship and long-term contracts (Williamson, 1985). These economic institutions owe much of their profile to the legal regimes that regulate individual and business personhood, the ability to hold and dispose of property, or to enter contracts. Therefore, legal regimes have consequences for what economic activities can take place, for how they take place, and for who may undertake them. Not surprisingly, economic agents can have strong preferences in regard to the definition of legal rules and their enforcement, as attested by the large literature on lobbying and corruption. This implies that legal regimes are endogenous to political forces, which are themselves shaped by existing political institutions. Thus, the political framework of a society acts as a meta-institution from which the others derive (Rodrik, 2000). Both the legal and political performance of societies introduce improvements through policy or institutional innovations.

Our approach

This review paper contains two main sections, respectively dealing with political and legal institutions. These constitute the two main substantive themes to be taken up by the Center

for Effective Global Action (CEGA) and its partners as part of EDI. As will be seen, research along these two themes repeatedly involves two broad classes of processes or mechanisms. One is the operation of incentives and selection forces, and the other is the diffusion of information. These are the two broad ‘analytic categories’ that tend to cross-cut the substantive themes. This is in keeping with one of the priorities of EDI, namely to illuminate the mechanisms through which institutions affect development. The cells that result from the intersection of substantive themes and analytic categories constitute the main areas of research to be reviewed, and where we expect work done under the auspices of EDI. The matrix below allows a quick visualization of the research space:

Thematic areas:	Political institutions	Legal institutions
Analytical areas		
Information diffusion	X	X
Incentives and selection	X	X

The extent to which formal institutions operate is limited in real life: people’s recognition of those institutions, conflicts with custom-based arrangements, enforcement costs, and corruption can all get in the way. Thus, an important topic within both legal and political institutions is the connection between formal institutions and informal arrangements, as well as the forces that drive changes in that connection. In the context of legal institutions, we will consider work on the use of formal property rights, titles, and the challenges involved in expanding business formalization. In the context of political institutions, we will review work on the topics of political practices and norms that either reinforce or undermine the spirit of constitutional arrangements. In other words, the sometimes complex relationship between formal and informal institutions will be taken up within the respective chapters wherever pertinent.

The plan for the paper is as follows. In the next section, we offer a quick summary of key findings and open questions. In Section 3, we review evidence on political institutions, broadly understood. In Section 4, we review work in the area of legal institutions. After reviewing the available evidence, in each of these sections we highlight what we believe to be important open questions. Section 5 offers a brief conclusion.

2 Summary of findings and open questions

In this section, we offer a short summary of the key findings of our review, as well as a selective highlight of open questions. To facilitate absorption, we present these in bullet point format. More detailed versions of these findings and related discussions are presented in the respective chapters.

In the section on political institutions we offer a review of work in two main areas: **representation and accountability** and **state capacity**. The rationale for covering these two areas is that political forces impact outcomes depending on two elements: i) the will to shape outcomes in a particular way; and ii) the means to do so. Political will depends on institutions shaping representation and accountability, and political means depend on state capacity. Within the topic of representation and accountability, we deal with **electoral rules**, **information and transparency**, and **political norms**.

The key findings on **electoral rules** are as follows:

- Electoral rules affect the composition of the electorate, and ultimately policy.
 - There is evidence of effects on voter turnout and policy; evidence is both observational (Miller, 2008; Cascio and Washington, 2013) and from quasi/natural/controlled experiments (Pande, 2003; Chattopadhyay *et al.*, 2004; Fujiwara, 2015).
 - There is evidence of effects on political selection (e.g. quality and moderation of candidates; Beath *et al.*, 2014).
 - Re-election, term limits and term length impact incentives, with effects on fiscal policy (Besley and Case, 1995), corruption (Ferraz and Finan, 2008) and effort (Dal Bó and Rossi, 2011).

Open questions on electoral rules are:

- Which electoral rules most affect corruption?
- What is the optimal term length?
- Should there be term limits (in the extreme, should there be re-election at all)?
- Are rules that broaden representation inimical to accountability and competence?
- Endogenous institutions: how do institutions originate, and does their origin affect performance?

Key findings on **information and transparency**:

- Information matters for political behaviour, in terms of:
 - Turnout and preferences (Gentzkow, 2006; DellaVigna and Kaplan, 2007; Gerber *et al.*, 2009; Giné and Mansuri, 2014; Bidwell *et al.*, 2015; Kendall *et al.*, 2015).
 - Electoral accountability (Ferraz and Finan, 2008).
 - Political strategy (see Bidwell *et al.* (2015), where more information led to more gift-giving and vote-buying).

Open questions on information and transparency:

- Does transparency, by heightening accountability, improve public good provision?
- What makes information credible and usable to citizens?
- When does transparency lead to better political selection versus a reinforcement of harmful political strategies?

Key findings on **political norms**:

- Civic education campaigns on voting process and against violence and vote-buying increase perceptions of security (Collier and Vicente, 2013) and trust in electoral authorities (Aker *et al.*, 2015).
- Social capital may drive voters' standards of accountability (Nannicini *et al.*, 2013).
- Political attitudes are shaped by education curricula (Cantoni *et al.*, 2015) and by gender representation institutions (Beaman *et al.*, 2009).

Open questions on political norms:

- What are the drivers and consequences of government legitimacy?
- How do political norms interact with formal institutions?
- What institutions can limit clientelism, patronage and dynastic politics?
- What are the effects on political participation and accountability of specific cultural traits, such as trust, respect for others, and individualism versus collectivism?

The quality of policy and of its implementation depends largely on state capacity, which in turn depends on three key elements: **state personnel**, **state resources**, and **state procedures**. We covered work in each of these areas.

Key findings on **state capacity – personnel**:

- Selection
 - Key theoretical trade-off in state hiring: competence versus motivation – this supposed trade-off does not seem acute empirically (Dal Bó *et al.*, 2013).
 - Wages help attract better people especially in difficult areas (Dal Bó *et al.*, 2013).
- Incentives: pay for performance tends to improve service delivery (Banerjee *et al.*, 2008; Basinga *et al.*, 2011) and tax collection (Khan *et al.*, 2014).
- Monitoring: can help reduce corruption through either community involvement or information (Reinikka and Svensson, 2005; Björkman and Svensson, 2009; Björkman *et al.*, 2014; Banerjee, 2010; Olken, 2007).

Open questions on state capacity – personnel:

- What are the effects of non-financial incentives?
- When does performance pay lead to multi-tasking distortions?
- Do extrinsic incentives crowd out intrinsic motivation?
- When do top-down audit-based approaches work better than community monitoring?

- Can citizen feedback platforms promote political accountability and improve service delivery?

Key findings on **state capacity – financial resources**:

- Windfalls may weaken accountability and public goods-to-resource ratios (Brollo *et al.*, 2011; Caselli and Michaels, 2013).
- Good tax design helps – particularly a VAT paper trail (Pomeranz, 2015) and third-party reporting (Kleven *et al.*, 2011).
- Campaigns toward taxpayers: exhortative messages work less well than threats of audits (McGraw and Scholz, 1991; Blumenthal *et al.*, 2001; Castro and Scartascini, 2015).

Open questions on state capacity – financial resources:

- What areas of taxation are most affected by corruption?
- How much of the revenue gap in developing countries can be closed by incentivizing tax collectors?
- When do windfalls strengthen accountability and public sector productivity?
- Is third-party reporting more or less effective under weak legal institutions?

The second main theme we reviewed involves **legal institutions**, many of which are economic in nature. For legal institutions to function well requires four elements. First, it must specify a legally sanctioned right. Second, the beneficiaries or holders of such a right must be aware of their entitlement, and be able to access the means to have their rights upheld. Third, there must be an enforcement machinery available to uphold those rights, comprising, for example, courts. Fourth, conditions must exist so that court rulings can be enforced. Here, we review the key findings in the literature for each of these components and specify open questions.

Key findings on **rights – emphasis on property and titling**:

- Effects of titling: varying results; best evidence shows property rights increase investment (Field, 2005; Ali *et al.*, 2014).
- Effects unrelated to relaxing credit constraints, but with security of tenure (Soto's (2000) hypotheses are still looking for support).
- Encouragements to formalise business (by lowering costs, offering information) are often ineffective (McKenzie and Woodruff, 2008; McKenzie and Sakho, 2010) and inconsequential for productivity and growth.
- Dual economy: informal firms likely lack the 'quality' to compete in the formal sector (La Porta and Shleifer, 2014):
 - Efforts to unleash their potential by formalising are likely to have limited effects; and
 - Prosecution may be counterproductive if the informal sector acts as an informal safety net.

Open questions on rights – emphasis on property and titling:

- Are there instances where titling/formalization relaxes credit constraints?

- If complementary reforms are needed, what are the key complementary reforms?
- There is a great deal of literature on small firm informality, registration and tax regulations, but what are the regulatory barriers for firm growth from land titling and zoning?
- What are the social costs of formalizing informal firms?
- Is the informal economy a complement or a hindrance to its formal counterpart?

Key findings on **awareness and access**:

- Presence of paralegals in treated villages helps promote knowledge of the rights of women (Mueller *et al.*, 2013).
- *Pro bono* legal assistance tends to improve outcomes for beneficiaries:
 - Eviction is less likely (Frankel *et al.*, 2001; Greiner *et al.*, 2013), there are better justice and welfare outcomes (Sandefur and Siddiqi, 2013) and better conflict resolution (Blattman *et al.*, 2014).

Open questions on awareness and access:

- How do improved legal outcomes translate into improved welfare?
- Does broader legal access affect productive activities?
- Does a more extensive 'rule of law' create aggregate (i.e. General Equilibrium) effects?
 - Methodological challenge: separating effects on preferences versus expectations.

Key findings on **courts**:

The evidence so far stems from observational studies, some relying on structural estimation approaches.

- Incentives and selection matter for the decisions judges make (Lim, 2013; Iaryczower *et al.*, 2013)
 - Elections different from appointments;
 - Media coverage matters (Lim and Snyder, 2015).
- Political pressures (re-election incentives) affect sentencing (Berdejó and Yuchtman, 2013).

Open questions on courts:

- How do career concerns affect judge incentives?
- Beyond judges, what is the role of staff and organizational support in producing timely outcomes, and how can they be improved?
- What is the impact of judicial quality on economic activity?
- Would the extant results survive randomized controlled trial (RCT) study?

Key findings on **quality of enforcement**:

- Only a subset of interventions work at improving policing (Banerjee *et al.*, 2014), and how interventions affect the power of implementing bureaucrats is key.
- Higher inspections affect regulated behaviour by firms (Duflo *et al.*, 2014), and who pays inspectors (regulator versus regulated firm) matters in terms of what they report (Duflo *et al.*, 2013). This confirms the basic notions from hierarchical agency models.

Open questions on quality of enforcement:

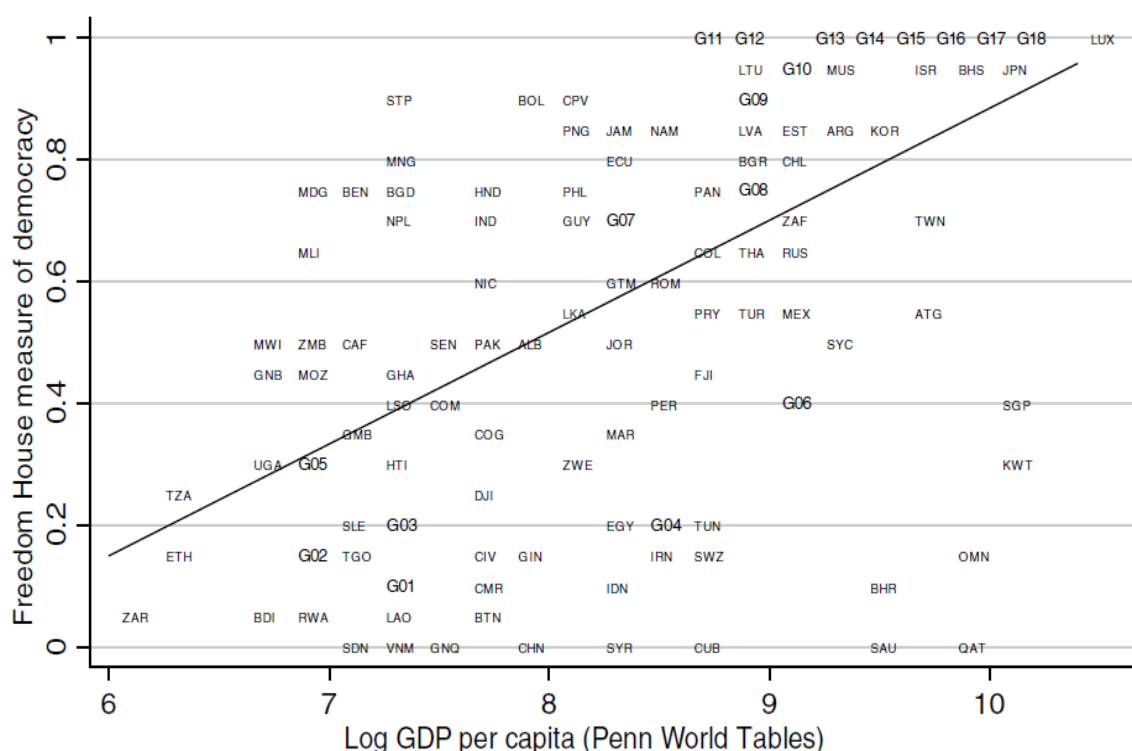
- How much do improvements in enforcement generate displacement in wrongdoing?
- Is there an interactive effect of incentives to monitors and the monitored?
- Understanding the political economy of variation in implementation across reforms pursuing a similar objective, taking into account the incentive compatibility of public middle management, their discretion and information?

3 Political institutions

There are vast differences across the world in the way political life is organized. As fundamental as political organization is for a society, these differences are far from immutable. If one were to classify countries based on their 1980 Polity scores, only 26% of countries would have appeared democratic and over 53% would have appeared autocratic. However, less than 40 years later, the world looks decidedly different: 54% of countries appear democratic and only 12% are autocracies.

Understanding why countries adopt different political institutions and the impact of these choices on economic development and well-being has been an active area of research over the last 20 years. Thus far, some basic patterns have emerged. In general, countries with 'better' political institutions also adopt more 'inclusive' economic institutions that allow for broader participation, secure property rights more effectively, erect fewer barriers to entry, and offer wider ranges of formal contracts. More specifically, there is an association between economic performance and the political regime that is in place. As shown in Figure 1 below, countries that are better off economically also tend to have political systems that are more open and democratic.

Figure 1: Association between GDP *per capita* (Penn Tables, average 1990–1999, PPP) and democracy (Freedom House)



Source: Acemoglu *et al.* (2008)

While these correlations have been documented in various studies, they do not imply causal links between political institutions and economic development. Indeed, the connection between democracy and income has been of interest to social scientists for a long time, and

arguments for causality have been made in both directions. Lipset (1959) famously offered his “modernization” hypothesis according to which rising levels of income would lead to democratization. More recently, Acemoglu et al. (2015) have argued that democratization leads to growth. Figure 2 shows the association estimated in their paper on the evolution of GDP per capita around democratization events.

Figure 2: GDP per capita around a democratization.



Source: Acemoglu *et al.* (2015)

These empirical associations, and the arguments around them, suggest that something of fundamental importance is at stake in the connection between political institutions and development; however, they do not determine directions of causality, nor unbundle the broad connections into the many component parts that are likely in operation. This observation suggests a path forward for where research should proceed: to understand the links between political institutions and growth, both in terms of causal effects as well as the details of which institutions matter and how. The task at hand is to elucidate specific mediating links between political institutions and economic performance.

The analysis of political institutions can make progress by asking about the determinants of a basic political failure: when and why do important demands from large social groups remain unanswered? In virtually every political system, social demands are largely met by a policy machine that has the state at its center. Those administering the state have both specific motives to act and the means to do so. Thus, political failures can typically be mapped into any combination of two types of problems: a lack of will or a lack of capacity to respond to demands. A lack of will to respond relates to issues of representation and accountability. These are critically affected by incentives and selection in the political arena. These are, in turn, shaped by, among other things, information and transparency, electoral

rules, and political norms. These themes are taken up in our first subsection on representation and accountability. The lack of capacity to respond to demands relates typically to state capacity. It may include issues of information about problems, or the means to resolve them. This is taken up in our second subsection.

As may be already clear, we define political institutions broadly; that is, not only as the set of rules and norms that organize political activities, but also the organizations that shape actions within the political systems, such as government, political parties, trade unions, and so on.

Representation and accountability

Political institutions matter for how power is distributed and utilised. They determine how preferences are aggregated and whose preferences end up counting in decisions on the provision of public goods and the choice of legal institutions. This is the ‘representation’ dimension of political institutions. In addition, political institutions affect the accountability regime facing elected officials. Thus, political institutions may affect policies and welfare through both the representation and the accountability channels. In this review, we will focus on three elements that matter for representation and accountability:

- Electoral rules;
- Information and transparency; and
- Political norms and culture.

For each of these elements, in the subsections below, we review the pertinent empirical evidence to ascertain how they affect the policies that get enacted.
Electoral rules

Electoral rules affect both who can participate in public affairs (be it as a voter or a representative), how electoral competition is regulated, and what type of accountability regime will be in place over representatives. We focus on how electoral rules affect three sets of outcomes, namely: citizen behavior and participation, political selection, and politician behavior.

Effects on citizen behavior and participation

At a basic level, electoral rules determine who can vote. As Lizzeri and Persico (2004) remarked, at the beginning of the 19th century most countries, including those that are fully democratic today, restricted electoral participation, if any, to a small subset of the male population. A century later, several countries had expanded suffrage to most males. In the next few decades, women would be included as well.

The most basic question is about verifying that such extensions are followed by a rapid increase in voter participation. A large strand of the literature has examined the effects of suffrage laws on voter turnout. For instance, Lott and Kenny (1999) showed that state-level voter participation among adults age 21+ increased by 44% the year after women were enfranchised in the U.S. Similarly, after the passage of the Voters Right Act of 1965 in the U.S., which outlawed hurdles to voter registration such as literacy tests, voter registration among blacks increased by much larger margins in those states had retained such hurdles up to that point (Cascio and Washington 2013).

Electoral rules also affect the way in which candidates can compete for office and this, in turn, can also affect turnout. For example, Sanz (2015) uses a regression discontinuity design to compare turnout under closed list proportional representation against an open list, plurality-at-large system where voters can vote for individual candidates from the same or different party lists. He finds that the open list system increases turnout by between one and two percentage points.

Barone and De Blasio (2013) take advantage of a natural experiment in Italy to identify the effect of electoral rules on turnout. For municipalities with fewer than 15,000 residents, the mayor and city council are elected under a single-ballot system by which the candidate receiving a plurality of votes wins election and his or her party is guaranteed two-thirds of seats on the council. Above 15,000 residents, municipalities use a dual-ballot runoff system to select the mayor, and seats on the council are awarded proportionally. The authors show that the dual-ballot system increases turnout by one percentage point, which they attribute to the positive effects on fiscal discipline, broad representation, and politician quality induced by the dual-ballot system.

A natural question is whether rules affecting turnout matter for who gets elected, and for which policies are implemented. These questions are tackled next.

Effects on political selection

Electoral rules can affect political selection both directly and indirectly. Several countries have adopted political reservations, which directly determine who can hold office. These selection effects are mechanical and follow directly from the enforcement of the reservation system, as attested in several studies. To avoid duplication, we review studies of the effects of reservations in the following subsection, when examining policy effects.

However, it should be noted that electoral rules can also impact selection indirectly, by determining how votes are aggregated. Besley *et al.* (2011) use a dataset on 1,400 world leaders between 1848 and 2004 and find that, compared to autocracies, democracies select more educated leaders. Controlling for country and year fixed effects, they find that democracies are 20% more likely to select a highly educated leader.

While the possibility of experimenting with electoral rules has been elusive, there is some recent work making just this type of contribution. Beath *et al.* (2014) performed a field experiment in Afghanistan to examine voters' trade-off between candidate quality and policy alignment. They randomly assigned regions either multiple single-member districts or a single multiple-member district for the election of village council members. Their results suggest that single multi-member districts produce council members who are better

educated and less extreme. The authors explain that ‘anticipation of bargaining over policy causes voters in elections with multiple single-member districts to prefer candidates with polarized policy positions over more competent candidates’.

Effects on political behavior and policy

Electoral rules can affect political behavior and policies through a variety of channels. One is by simply affecting the composition of the electorate directly (e.g., franchise extent); the other is indirectly, by affecting the costs of participation. In a world in which the median voter determines policy, any changes to the composition of the electorate via suffrage laws or the relaxation of voter capacity constraints can result in policy shifts. A large component of policy is redistributive. As highlighted by Bowles¹ (forthcoming), a key driver of inequality differentials across societies is not the pre-tax inequality generated by economic activity, but rather the amount of redistribution that takes place through the mediation of the political process. This motivates the need to interrogate the record on whether institutional changes that affect the composition of the electorate affect behavior and policy.

Miller (2008) examines the effect of women’s suffrage in the US. Using state-level variation in when women were given the right to vote, he demonstrates that the sudden increase in women voters led to large increases in public health spending. Miller’s conclusion is that politicians responded to the demands of a new constituency that systematically places higher priority on children’s welfare and the provision of public goods.

Fujiwara (2015) examined the effect of introducing electronic voting in Brazil. In the 1998 election, only municipalities with more than 40,500 registered voters adopted electronic voting, while the rest adopted the technology before 2002. A regression discontinuity design demonstrates that electronic voting reduced spoiled ballots and enfranchised the less-educated. An alternative design gaining identification from the phase-in across time suggests that the shift in voting patterns led to increased spending on health care, as well as increased prenatal visits and increased newborn birth weight for less-educated mothers.

The study by Cascio and Washington (2013), which we referred to earlier, proceeds by exploiting the removal of literacy tests at registration after the 1965 Voting Rights Act. The authors study whether the increase in the effective voting rights of African-Americans was accompanied by an increase in the share of public spending benefitting them. Employing a triple-difference framework over a 20-year period, they find that counties with higher black population shares in former literacy test states saw greater increases in both voter turnout and state transfers than comparison counties in non-literacy test states.

A stark example of institutional changes that affect the composition of the electorate is political reservations in India. Chattopadhyay and Duflo (2004) use political reservations for women in India to study the impact of women’s leadership on policy decisions. Since the mid-1990s, one-third of village council head positions have been randomly reserved for a woman, which allows for causal interpretation of the results. Based on a household survey, which elicited the public goods preferences of women in sample villages, the authors found

¹ Several papers are cited throughout this document as ‘forthcoming’. In most cases, these references are to a series of ‘[path-finding papers](#)’ soon to be released under the EDI programme. For more information about these documents, please contact edi@opml.co.uk.

that female representation led to policy decisions better reflecting the preferences of women. In West Bengal, this implied more investment in drinking water and roads.

Pande (2003) uses political reservations in India to examine the role of mandated political representation in providing disadvantaged groups a level of influence over policy-making. The variation used in Pande's paper is at the state level, and it exploits the fact that the extent of state-level political reservation enjoyed by a minority group varies by its population share, which is only revised during census population estimates. This creates discrete changes in representation even though the underlying population share is continuous. The author finds that political reservations favoring disadvantaged groups in Indian states have increased the redistribution of resources in favor of those groups. An example is increases in spending on education programs.

Chin and Prakash (2011) examine the impact of political reservations for disadvantaged minority groups on poverty. The analysis is basically a reproduction of Pande's (2003) study but with a different dependent variable. The paper finds that increasing the share of seats reserved for scheduled tribes significantly reduces poverty while increasing the share of seats reserved for scheduled castes has no impact on poverty. A political reservation for scheduled tribes has a greater effect on rural poverty than urban poverty, and appears to benefit people near the poverty line as well as those far below it.

Every policy has its winners and losers, and electoral rules help to aggregate – and to some extent adjudicate – such conflicts of interest. However, different electoral rules will weigh specific groups differently, and if preferences are heterogeneous then this can lead to differences in political behavior. Hinnerich and Pettersson-Lidbom (2014) compare the effects of representative and direct democracy on the redistribution of resources toward the poor. The authors use a regression discontinuity in Swedish municipalities between 1919 and 1938, exploiting a population threshold that determined whether representative government must be adopted. They demonstrate that direct democracies spend about half as much on public welfare programs, noting that 'direct democracy may be more prone to elite capture'. They suggest that in direct democracies, citizens might face more difficulty in solving their collective action problems, the chairman of the town meeting was often a member of the elite and held a large amount of agenda-setting power, and open votes allowed opportunities for intimidation. Furthermore, the authors show that additional transfers in representative democracies were only directed toward organized groups of citizens.

Olken (2010) randomly assigned 49 Indonesian villages to choose development projects either through electing representatives or through direct plebiscites. With respect to the project, villages with plebiscites reported much higher satisfaction, knowledge, perceived benefits, and willingness to contribute. The authors suggest that this effect is largely attributable to a legitimizing effect of the plebiscite process rather than a change in the nature of the projects selected, noting that the latter was mostly limited to projects chosen by women being located in poorer areas.

Electoral institutions affect policy not only through their effect on representation, but also through accountability. Some work has investigated the differences between majoritarian and proportional representation systems. Persson and Tabellini (2003) argue that

majoritarian systems enhance accountability, while Persson *et al.* (2003) offer cross-country evidence in support of that claim.

A key lever of accountability in a democratic system is the re-election incentive. A body of evidence uses the institutional variation in term limits across the states of the US to examine the effects of re-election incentives. Besley and Case (1995) pioneered this literature, showing that term limits affect the fiscal policy of US governors. In the American states between 1950 and 1986, *per capita* spending and taxes were higher under term-limited governors. List and Sturm (2006) build upon Besley and Case (1995) to provide evidence that electoral incentives influence other policies in the US, including environmental policy.

Ferraz and Finan (2011) show that re-election incentives reduce corruption. Comparing mayors who are in their first term with those who are in their second term and can no longer be re-elected, they find that second-term mayors have greater indicators of corruption. Second-term corruption is more pronounced among municipalities with less access to information and where the likelihood of judicial punishment is lower.

In a related paper, De Janvry *et al.* (2012) examine whether re-election incentives affect the performance of a decentralized conditional cash transfer program in Brazil. They too exploit the variation in re-election incentives induced by term limits. They show that while this federal program successfully reduced school dropout by 8 percentage points, the program's impact was 36% larger in municipalities governed by mayors who could be re-elected compared to those with lame-duck mayors. Moreover, first-term mayors with good program performance were much more likely to get re-elected. These mayors adopted program implementation practices that were not only more transparent but also associated with better program outcomes.

While re-election incentives have been shown to motivate politician effort, as predicted by classic agency models (e.g. Barro, 1973; Ferejohn, 1986), the possibility of 'too much accountability' has been raised as potentially undermining some minimally necessary job stability. Dal Bó and Rossi (2011) exploit two natural experiments in the Argentine legislature to assess the causal effect of term length on various measures of politicians' legislative effort. Results for separate measures as well as an aggregate index of legislative effort show that longer terms increase effort. Shorter terms appear to discourage effort not due to campaign distractions but due to an investment payback logic: when effort yields returns over multiple periods, longer terms yield a higher chance of capturing those returns and therefore incentivize effort. This suggests that some stability over time horizons may be desirable, and that too frequent electoral uncertainty can get in the way of adequately conducting state business.

Thus far, when asking whether electoral institutions affect behavior, we have focused on the behavior of representatives. But a comparable question can be asked about the behavior of voters, who make decisions on political participation, on policy, and on how to interact with each other.

Some work has examined whether local participatory institutions encourage cooperation. Fearon *et al.* (2009) analyze the impact of a community development project in Liberia that was paired with organising local democratic institutions for decisions on the project. The authors find evidence that villages randomized into treatment subsequently cooperated more

(i.e. raised more resources) in a public goods game. Some natural subsequent questions are whether an unbundled treatment that did not simultaneously affect resources would have had a similar effect. Another is whether this pattern would extend to other, at scale, community projects. Casey *et al.* (2012) conducted an RCT in Sierra Leone that also involved a community development project based on local participation. They studied a broad variety of outcomes and found effects on local public good provision and some economic outcomes, but no lasting effects on decision-making, the inclusion of marginalized groups or collective action.

One particularly intriguing question is whether some political institutions may affect the behavior of citizens not through the policies they induce but through a ‘legitimacy effect’. Dal Bó *et al.* (2010) use a lab experiment to show that a policy with the potential to increase cooperation is more effective when the policy is chosen democratically by subjects rather than being exogenously imposed. A clever experimental design circumvents the selection bias inherent in democratic selection of policy, allowing the authors to conclude that the mere fact that a policy was selected democratically can have an effect separate from the policy’s inherent content and merits. This suggests that merely allowing individuals to participate in the political process can have a legitimizing effect on the policy that is produced, regardless of whether it changes the content of policy output.

Political institutions that affect the composition of the electorate may also have effects not through the policy that is selected but through the way in which policies are implemented. The political economy of policy implementation is an area that has received limited attention. Work analyzing how the political regime affects the impact of a given intervention, for example aid, offers one line of attack.²

Open research questions

- Do electoral rules affect political selection, and if so along which dimensions of candidate quality?
- Do electoral rules affect corruption?
- What is the optimal term length for officials?
- Are term limits optimal?
- Are rules that broaden representation inimical to accountability and competence?
- Are optimal rules different depending on the level of political development?

Information and transparency

The asymmetry of information between voters and politicians lies at heart of most models of political accountability. The presumption is that politicians enjoy an information advantage over voters about either the state of the world, their true level of competence, their motives for holding office, the effects of a policy, or all of the above. Because the incentives of politicians do not always align with those of voters, the asymmetry of information may then allow politicians to act opportunistically at the expense of voters’ welfare. If this class of

² See Bourguignon and Gunning (forthcoming) for a review of work on foreign aid and development.

models approximates reality, then the potential for information and transparency to affect the political equilibrium and improve welfare cannot be understated.

But even if one were to assume that information matters, a series of practical questions remains unanswered. What type of information matters? How should this information be presented? How do we reduce the cost of acquiring this information? Are there trade-offs to be mindful of, and is there such a thing as providing too much information?

In this section we review some of the empirical evidence on the effects of information on political behavior. As in the previous section, we focus on three sets of outcomes, namely: citizen behavior and participation, political selection, and politician behavior. Here, however, we categorise the contributions to this literature depending on whether the information provided was about the actions (and/or performance) of the politicians, the politician's type or the state of the world.

Information about the actions and/or performance of politicians

There is a large body of literature examining the effects on political accountability of providing voters with information about their politicians' performance.³ While studies vary in the content of the information provided to voters, several studies have shown that providing information about how corrupt the politician is can be quite effective in promoting political accountability. For example, Ferraz and Finan (2008) exploit variation in the timing of disclosure of information on corruption involving mayors in Brazil. The exogenous timing variation stems from the lottery-based timing of audits by the federal government. They find that, conditional on the number of irregularities detected, audit findings disclosed before elections were taken into account by voters. Corrupt mayors were punished at the polls while mayors who had committed no irregularities were rewarded. These effects are stronger in municipalities in which local radio is present to diffuse this information. Several findings have been found in the disclosure of audit reports in other countries such as Puerto Rico (Bobonis *et al.*, 2015) and Mexico (Larreguy *et al.*, 2015).

Other studies, however, have documented that voters may not always react to information about the corruption of incumbent politicians. Chong *et al.* (2015) worked with an NGO to implement a door-to-door campaign and found that providing information about misuse of public funds had no effects on incumbent vote shares. Humphreys and Weinstein (2012) also implemented a large field experiment in Uganda to evaluate the impact of providing information to voters based on a detailed scorecard that reports the performance of MPs. They find that voters are sensitive to the information provided in the scorecard and update their beliefs. Ultimately though, the information had no impact on the vote shares of politicians.

What accounts for these contrasting findings? There are several possibilities, many of which have yet to be explored. One reason might have to do with voters' perception of the credibility of the source of the information and how the information is conveyed. In the case of the audit studies, the information is usually being provided by an independent federal body via media outlets. On the other hand, in some of the other studies it is NGOs or the researchers themselves that gather and distribute the information. Who the originator of the

³ We have reviewed some of the related work as part of a recent World Bank Policy Research Report (World Bank 2016). On the specific theme of media and politics, see the excellent review by Prat and Strömberg (2013).

information is and how the information is communicated to voters might be one explanation for why these effects seem to vary by context.

Some of these issues are explored in Alt *et al.* (2016), who rely on variation within the same institutional context to examine how beliefs are updated based on new information. They run a survey experiment in Denmark and find that an unemployment projection from the Danish Central Bank, which is highly credible among citizens, causes voters to update their beliefs more than receiving information from government or opposition political parties.

Voters are not the only actors who are potentially affected by an information campaign. The politicians themselves might also respond in ways that can dampen the effects of negative coverage. For instance, Cruz *et al.* (2015) find evidence that politicians respond to information disclosure by engaging in more vote-buying. They implemented a field experiment in which they provided information to voters in the Philippines about the existence and importance of a large infrastructure public spending programme one week before a municipal election. They show the intervention led to changes in voter knowledge about the programme and incumbent politicians and that incumbent politicians responded by increasing resources targeted at voters through vote-buying. That said, when looking at turnout or voting patterns, Cruz *et al.* (2015) found no significant effects.

Similar effects are found by Bidwell *et al.* (2015), who used political debates in Sierra Leone as a vehicle through which to provide information to voters. Large groups of voters were exposed to films featuring debates among candidates for Congress. The intervention relied on a mobile cinema that visited 112 of 224 randomly selected voting locations in the five weeks before the election. The authors document that politicians who participated in policy debates and had this information randomly shown across localities increase campaigning effort, as measured by gift-giving, the monetary value of gifts and the number of in-person visits.

Malesky *et al.* (2012) examine the impact of a randomized broadcast of information through an online newspaper on legislative debates, query transcripts, and scorecards of individual politicians in a non-democratic regime (Vietnam). They find insignificant effects on performance and voting, but lower reelection rates for delegates affected by the information, as they were less likely to be reappointed by the party elites. Furthermore, the results suggest delegates whose actions are publicized are more likely to shift their positions to conform to party guidelines, and that those who fail to adopt conformist positions are the most likely to be removed from office in the next elections.

Information about the ‘type’ of politicians

Information on the characteristics of politicians and what they stand for can also affect political outcomes. The impact of transparency interventions of this type has been studied across highly diverse contexts, such as those in Sierra Leone, India, Benin, Mali, Indonesia, and Sao Tomé and Príncipe (STP).

Banerjee *et al.* (2010) conducted an RCT involving the distribution of report cards to citizens living in slums in India. The information covered not only the performance of legislators but also their personal background and that of the main challengers for office. The information was provided through local newspapers. The result was an increase of two percentage

points on turnout (from a baseline slightly above 57%), a decrease in cash-based vote-buying, and a decrease in the vote shares of incumbents that were low-performing or faced high-quality challengers.

As mentioned earlier, Bidwell *et al.* (2015) used political debates in Sierra Leone as a vehicle through which to provide information to voters. Exposure to the debates affected voter knowledge and shifted voting toward the candidates who fared better during the debates. This suggests that higher transparency in general, and more policy discussion in particular, creates a 'flight to quality'. As mentioned earlier, however, increases were also observed in gift-giving and other, potentially vicious, political strategies.

Fujiwara and Wantchekon (2013) implemented a field experiment in collaboration with leading candidates of the 2006 presidential election in Benin. Their design had candidates adopt different strategies across villages. In some randomly selected villages the campaign strategy was 'non-clientelist', while in other, control, villages the strategy was the traditional one, which tends to contain clientelistic elements. The intervention in treated villages was a bundle that also included public deliberation in the form of town hall meetings. Voters reported a higher perception that the campaign informed voters about candidate characteristics and reduced support for the dominant candidate in the village. However, the bundled intervention did not appreciably impact reported turnout, vote-buying or support for candidates running the town meetings.

The role of information is not restricted to negative information that tightens accountability by inducing punishment at the polls. Kendall *et al.* (2015) show that positive information about the quality of politicians can also impact political selection. They implemented a field experiment on occasion of the mayor of the Italian city of Arezzo seeking reelection. The intervention provided information signaling the high quality of a mayoral policy. (In particular, a city development plan developed by the mayor had been ranked first by the regional government and received extra funding because of its quality). The authors show that voters update their beliefs and change their voting when provided with this positive information, but display much weaker reactions when information is provided solely on ideological policy positions.

Information about the state of the world

Gathering information is costly. Thus, even if we abstract from the information that politicians may actively want to hide (e.g. information about bad aspects of their background or record), limitations remain in terms of the information available to voters about the policies that are implemented and their effects on welfare. Several studies have shown that providing voters with more or less access to political news can influence both their level of political engagement and their political beliefs. For instance, Gentzkow (2006) documents that turnout in the US decreased with the introduction of television. Because TV crowded out other sources of news with more political content, he argues that the primary explanation for these findings is a reduction in political knowledge.

DellaVigna and Kaplan (2007) investigate the effects of the expansion of the conservative-leaning Fox Network on partisan vote shares (Fox's presence helps Republicans). Using a difference-in-differences approach, they found that exposure to Fox News increased Republican vote share by 4 percentage points in the 2000 presidential elections.

Other US-based studies focus on political choices, like Gerber *et al.* (2009), who offered free subscriptions to households to either a conservative-leaning or a liberal-leaning newspaper in the US state of Virginia and found that a newspaper subscription does not affect turnout (as reflected in voting self-reports) but the leanings of the newspaper that is received did affect self-reported support for a Democratic candidate. Moreover, subscription to either newspaper tended to decrease support for the incumbent (Republican) presidential candidate. This suggests that higher exposure of news of any kind makes voters less supportive of an embattled incumbent, as President George W. Bush was at the end of his second term, but by the same token might strengthen an incumbent who is doing well. However, there are challenges in comparing the context and findings in the US to those in other countries.

More recently, experiments manipulating information in political settings have been implemented in countries as diverse as India, China, Denmark, Mozambique and Pakistan. For example, some studies have measured positive effects on voter turnout by creating exogenous variation in the information available on the voting process.

Giné and Mansuri (2014) conducted an RCT treating rural women in Pakistan and detected large effects on female turnout as well as strong spill-over effects on neighboring, untreated women. Aker *et al.* (2015) conducted an intervention with several treatments and delivery tools, including newspapers and text messages via mobile phones, as well as the distribution of leaflets and the creation of a hotline for reporting electoral problems. The intervention offered information on the steps of voting as well as encouragement to participate. The authors detected an increase in turnout of nearly 5 percentage points as well as a reduction in electoral problems under the newspaper treatment.

The evidence reviewed so far indicates that, compatible with the agency view of delegation and accountability, transparency and information matter to how citizens engage with the political system and how well that system serves them. Two issues loom large at this point. The first is what creates incentives for the media to contribute to transparency by publishing useful information. As highlighted by La Ferrara (2016, an RA1 paper for EDI), this question has not been adequately investigated. The second issue is that the study of information and transparency typically takes as given the preferences and norms that shape individual behavior--partly because these elements are likely slow-changing relative to the drivers of preferences and norms. However, this provokes the question of whether particular interventions can affect elements such as preferences and norms and whether this matters to political and socioeconomic outcomes. We turn to this issue in the following subsection.

Open research questions

- Does information disclosure, by affecting accountability, improve public good provision?
- Does the credibility of information affect political outcomes?
- What makes information usable to citizens?
- What creates incentives for the media to provide politically valuable information?
- What determines whether higher transparency leads to better political selection versus a reinforcement of vicious political strategies by incumbents?
- Does more transparency lead to changes in political institutions and norms?

Political norms

Non-experimental work has shown that societal outcomes depend both on formal institutions and on equilibrium behaviour that, while shaped by institutions, is further affected by values and mutual expectations ('culture' and 'norms'). In fact, these 'soft' elements, which are often thought to be transmitted within the family (Bisin and Verdier, 2001; Tabellini, 2008), may greatly amplify or mitigate the effects of formal institutions (whether political or economic in nature). For example, studies have shown that cultural traits linked to national origin can affect the choice of family living arrangements and female labour participation (Giuliano, 2007; Fernández *et al.*, 2004) and that political traditions in the pre-industrial era correlate with contemporaneous political attitudes (Giuliano and Nunn, 2013). In addition, cultural traits and political preferences appear to be impacted by particular shocks to technology and human experience. Alesina *et al.* (2013) explore the origins of gender roles in relation to the introduction of the plough, while Giuliano and Spilimbergo (2014) show evidence consistent with the notion that the Great Depression shaped the political preferences of cohorts going through their formative teenage years at the time (in a more liberal-leaning direction).

An additional aspect of culture that can affect economic and political outcomes, as indicated by Roland (2016), is the contrast between individualist and collectivist mindsets. In the case of politics the connection is direct, since so much of political life depends on resolving collective action problems. In other words, political norms and culture may affect the way citizens engage with the political system. For example, political norms may be one reason why practices like clientelism take root against more programmatic forms of democracy.⁴

A common conceptual distinction links values and culture to drivers of the preferences of individuals, and norms to individuals' expectations of mutual behavior that drive equilibrium selection. It is very difficult to empirically identify expectation effects that act through equilibrium shifting versus equilibrium switching, and even to distinguish between changes in preferences and changes in expectations. Therefore, in this section we will organize evidence as pertaining to culture when it *likely* involves changes in preferences or attitudes, and to norms when it *likely* involves changes in aspirations or expectations, including trust. Such changes may be brought about by any number of interventions, such as education campaigns, institutional reforms and interventions that alter the patterns of social interaction.

We begin by asking whether civic education campaigns can alter modalities of political engagement and political outcomes. Some of the interventions reviewed before in this paper offered voters information about candidates and government performance. Some of those interventions also included treatments that aimed at changing the way citizens engaged with the political system.

For example, Vicente (2014) implemented a randomized door-to-door campaign against vote-buying during a presidential election in STP. This campaign, sponsored by the National Electoral Commission of STP, involved voter education and had a strong emphasis on voting not according to vote-buying transactions but according to one's conscience. The campaign decreased the reported perception of voting decisions being affected by money and increased the perception that voting was conducted in good conscience. More materially, it

⁴ Bardhan and Mookherjee (forthcoming) review work both theoretical and empirical on clientelism. In this section, we also comment on some of the empirical work in the area.

decreased turnout (which may reflect the presence of turnout buying) and helped the incumbent politician obtain a larger vote share by 4 percentage points. Accordingly, the interpretation of the author was that challengers must rely more heavily on vote-buying than incumbents.

The intervention by Aker *et al.* (2015), which relied on various vehicles for educating voters on voting procedures as well as enabling a hotline for reporting electoral problems, affected self-reported trust in the electoral commission (although puzzlingly the increase in the perception of the commission's neutrality was far weaker).

An extreme form of electoral problem is violence, which is often present in developing countries with unconsolidated democracies. Collier and Vicente (2013) studied the effects of a randomized anti-violence campaign conducted by the NGO Action Aid before the 2007 elections in Nigeria. They found evidence that the campaign increased perceptions of security and reduced actual events of violence as reflected in journalistic accounts.

Political participation, and resisting vote-buying and violence, all have in common that they entail incurring a private cost to provide a public benefit. In other words, they are at the heart of the collective action problem (Olson, 1965). This suggests that an important component of political culture and norms might be the inclination of citizens to mitigate the collective action problem by behaving cooperatively.

Nannicini *et al.* (2013) build upon prior work on variation in social capital across provinces within Italy that can be traced back to historical political institutions (Guiso *et al.*, 2008). Social capital is defined in the tradition of the literature as embodying norms for cooperative behavior in society that might be individually costly but are socially beneficial. Their main empirical measure of social capital is average *per capita* blood donations in the Italian provinces (following Guiso *et al.*, 2004), but the results are robust to alternative measures. They link social norms to the notion of 'civic' versus 'un-civic' voting behavior, depending on whether voters assess politicians on the basis of general public interest and punish transgressions even when they have been the recipients of private favors from the politician. They use two indicators of transgression or misbehavior of incumbents in national elections: the first is prosecutors' requests to proceed with a criminal investigation against an MP (*Richiesta di Autorizzazione a Procedere*, called RAP in most of the paper); the second is the absenteeism rate in electronic votes by MPs over the legislative term. They find that both criminal prosecutions and absences are more frequent in electoral districts with less social capital. More importantly, the electoral punishment of the incumbent's misbehavior is stronger in districts with more social capital.

Similar evidence of the interaction between social and political norms is provided by Padró i Miguel *et al.* (2015) in an extension of their study of village elections in China. They examine whether variation in social capital across villages is associated with differential impact of village elections on political accountability. Their measure of social capital is the presence of village temples, considered as a form of voluntary organization. A large body of qualitative evidence describes how Chinese village temples play a pivotal role in organizing local collective action. The authors argue that elections in Chinese villages are more effective at holding politicians accountable for public goods in villages where social capital is higher and generalized trust is high relative to personalized trust. Identification comes from time variation in the introduction of village elections, as the village had no voice in choosing when

or whether to hold elections. In particular, with a difference-in-differences strategy, they look at the presence of public goods before and after elections in various villages. The main result is that elections have very little effect in villages with low social capital and a big effect in villages with high social capital. One of their contribution is trying to distinguish kinship trust from generalized trust. As a proxy for kinship trust, they use the presence of ancestral halls, where people go to venerate the dead relatives of their extended family. The authors show that this proxy is inversely related to the smooth functioning of local democracy.

Finan and Schechter (2012) also show how social and political norms are linked, providing evidence from a field experiment in Paraguay. In Paraguay, politicians hire respected community leaders in each village to interact with voters to promote their candidacy and offer them money and other forms of aid in exchange for the promise of their vote. The authors conduct a survey with the actual middlemen who broker the vote-buying exchanges between voters and politicians. They combine survey information on vote-buying experienced in a 2006 municipal election with experimental data on individual intrinsic reciprocity. They find that political brokers target vote-buying offers to individuals who have strong norms of reciprocity. Interestingly, the results of a robust negative association between vote-buying and public services in Khemani (2015) that was discussed earlier are obtained from a country – i.e. the Philippines – that has been described as having cultural norms of reciprocity (*utang na loob*, or the obligation to appropriately repay a person who has done one a favor).

In reviewing a strand of the literature which finds persistent effects of historical institutions on the quantity and quality of public services, Banerjee *et al.* (2008) interpret the evidence as driven by variation across local areas in social cohesion. Their idea of social cohesion is the same as the notion of social capital in the literature surveyed above, i.e. the capacity of citizens to engage in cooperative behaviour. For example, they interpret the evidence in Banerjee and Iyer (2005) that variation in the colonial land revenue institutions set up by the British in India led to sustained differences in local economic outcomes as fundamentally due to social conflict (or lack of social cohesion) in ex-landlord control districts. Landlord districts had a more oppressive revenue system that gave greater power to landlords. Districts with non-landlord control had village bodies that were responsible for collecting revenue. The effects of these formal institutions persist over time even when they are no longer in existence.

Some of the research reviewed here sought to affect political attitudes through interventions that contained not only information but also exhortative components. These components often involve invoking civic duty or even values. A body of literature, mostly on tax compliance, has examined the effect of direct exhortations that contain normative standards (e.g. ‘this action constitutes a duty’), a positive norm description (e.g. ‘most people behave this way’), or even information about the potential penalties that could follow from no payment.

The evidence is mixed. In various studies, normative exhortations were not found to be effective at improving compliance, while threats of closer scrutiny or emphasis on penalties were effective (McGraw and Scholz, 1991; Blumenthal *et al.*, 2001; Fellner *et al.*, 2013; Castro and Scartascini, 2015). In one other study, however, appeals to the norm of payment and its public good consequences were effective (Hallsworth *et al.*, 2013).

More closely related to political behavior, Guan and Green (2006) conducted a canvassing experiment with Chinese students and showed that encouragement to vote emphasizing civic duty increases turnout by over 12 percentage points. Gerber and Rogers (2009) conducted a survey field experiment before two different elections (in New Jersey and California) in which they exposed registered voters to two different “positive norm descriptions,” one emphasizing that the vast majority of people do vote, and one emphasizing the opposite. They found this to have an effect on subsequent self-reports of intention to vote. Whether interventions appealing to descriptive social norms can affect actual turnout remains an open question.

Interventions that offer information may lead an actor to change behavior. , although the information may only be relevant to a temporary situation (e.g. a specific election) so the effect may be by definition short-lived. Interventions aimed at altering attitudes may also be short-lived even though the attitude change could in principle persist. An open question is the extent to which attitudinal changes are persistent depending on the type of intervention that is performed. One type of treatment that is thought to have long-lasting effects is school-based education, since this intense exposure presumably inculcates values that are internalized.

Education has been thought to be effective in shaping political attitudes, although rigorous evidence on this has been lacking. It has been proposed that education can be an instrument of government-led nation building (Alesina and Reich, 2015), and there is in fact evidence that US states differentially introduced compulsory education requirements when they were most in need of instilling civic values to the population in compositional flux due to immigration (Bandiera *et al.*, 2015). But can the content of education truly affect political attitudes? Cantoni *et al.* (2015) exploit the staggered introduction of a new curriculum in Chinese high schools to evaluate the effect of a change in school curriculum on political attitudes. They find that the curriculum change led to a higher appreciation of Chinese governance, of the value of local democracy, and a skepticism toward free markets. In particular, students exposed to the new curriculum have greater trust in government officials, view government officials as more civic-minded, and see bribery as less prevalent and effective. In addition, students exposed to the new curriculum see China as more democratic but are more skeptical of unconstrained democracy—which matches the message of the new textbooks. Finally, “treated” students convey more skeptical views of unconstrained free markets, which is also in line with the content of the new curriculum. Working off of official documents that convey the official intent behind the reform, the authors establish that the realized outcomes were broadly in line with the intended outcomes.

Beath *et al.* (2013) examine a development program that mandated women’s community participation. The community development program was part of a RCT in 500 villages in Afghanistan. As part of a community-driven development programme, the village had to establish a development council with equal participation of men and women in the election of the council and in the selection of development projects. While the study finds increased female participation in various activities, it found no effects on the division of intra-family decision-making or on attitudes toward the general role of women in society.

A way in which norms may affect the operation of the political system is by shaping attitudes toward, and preferences for, certain types of leaders. Interventions that can affect baseline expectations of and attitudes toward different types of leader could alter the patterns of

representation. Beaman *et al.* (2009) exploit random variation in mandated exposure to female leaders across village councils in the Indian state of West Bengal to investigate the extent to which such exposure reduces a bias against female leadership at the village level. One possibility is that exposure to female leaders may affect statistical discrimination, by showing males that females perform well. Another possibility is that it may affect deep-seated tastes. The authors use various measures of attitudes toward female leadership, including statements by subjects of perceived effectiveness and implicit association tests (IATs). The latter likely help capture changes in tastes as opposed to statistical discrimination. The evidence shows no changes in IAT-reflected tastes (except when it comes to occupational associations) but significant changes in the perception of female effectiveness. The authors conclude that while exposure to female leadership may not easily change deep-seated tastes, it may affect perceptions of female effectiveness. Thus, exposure to female leadership may still translate into shifted future support for female leaders.

An additional way in which ‘norms’ may play a role is by affecting the standards that voters use to evaluate government. Gottlieb (2016) evaluates a civics course intervention that educated voters on the capacity and responsibilities of government, as well as on the comparative performance of local politicians. A posterior survey experiment reflected a higher predisposition of treated citizens to sanction badly performing government and vote on performance. In addition, challenges to authority in town hall meetings become more likely. Ideally, future work will look to identify effects on actual behavior at the polls.

The extent to which temporary interventions may affect baseline tastes and attitudes remains an important question for future research, as is understanding the mechanisms by which changes take place. One basic distinction is between effects driven by changes in factual information that may affect judgement (including statistical discrimination), changes in expectations about the behavior of others that lead to adjustments in behavior, and changes in tastes. Identifying the separate mechanisms is not easy, but the creative use of measurement (as exemplified by the use of IATs) and experimental design can help. The experimental manipulation of treatment content can aid in either introducing or eliminating pure informational effects such as statistical discrimination; the variation in the share of treated subjects can help shift (or eliminate) effects that operate via expectations about the behavior of others. The latter approach has been exploited in laboratory studies that succeed in isolating both taste-driven and expectation-driven effects (e.g. Dal Bó and Dal Bó (2014) show that exposure to moral messages triggers taste-driven effects as well as expectation-driven effects; the latter give rise to a ‘moral social multiplier’ that amplifies the power of moral statements at sustaining cooperation). Progress has also been made using variation in observational data to identify the presence of a tax evasion social multiplier driven by audit congestion costs (Galbiati and Zanella, 2012).

Open research questions

- What are the drivers and consequence of government legitimacy?
- What are the main drivers of political attitudes leading to cleaner political practices and tighter political accountability?
- What mechanisms reduce or eliminate bias and stereotypes in political attitudes?

- When attempting to resolve collective action problems, how important is it to shift norms (understood as expectations about mutual behavior) relative to transforming preferences?
- How do political norms help to overcome political failures?
- What are the effects on political participation and accountability of specific cultural traits, such as trust, respect for others, and individualism versus collectivism?
- How do political norms interact with formal institutions? Do specific norms promote more political accountability?

State capacity

The state is a fundamental institution underlying the production of both order and prosperity. The state typically involves a complex organization manned by full-time, specialized personnel. In democratic countries, the state relies on two main types of personnel. One is politicians, who occupy elected positions and carry out the functions of government. Elected officials hold office with a term length that is typically in the few years, and have no default path of office progression. The other type of personnel is bureaucrats, who are appointed rather than elected and who can typically expect to develop a career progressing along clearly specified ranks. The bureaucracy supports the government but can in principle be quite free of government interference. Of course these characterizations depend at least in part on how well-functioning a state is. As it turns out, states function in very different ways across and within countries, and can display surprisingly disparate levels of effectiveness. Understanding what can help governments work better at all levels is a central part of a pro-growth, institutions-centered research agenda.

If one conceptualizes the state as operating a production function of public goods, the inputs can be divided into three: personnel, resources, and procedures. We cover work dealing with each of these in what follows. These themes align well with priority topics in other EDI research exercises, which include the bureaucracy and management practices in the state as priority areas (e.g. Mookherjee, forthcoming).

Personnel

Selection

The most basic aspect in personnel policy is selecting the individuals who will become public employees. Two fundamental questions in the area of selection of state personnel concern the type of individuals that should be selected into government, and what instruments can help with recruiting those types.⁵

It has long been debated in the field of public administration whether public sector employees have a different vocational profile compared to private sector employees. More specifically, are the motives of public employees different? Because the public sector involves public service, it is possible that individuals with high levels of prosocial motivation may be differentially attracted to public sector jobs. This argument has also been made in relation to other mission-driven organizations, such as NGOs. The literature on public

⁵ Some of the themes in this section are covered in the recent review by Finan *et al.* (forthcoming).

administration and economics tends to find support for this idea. One type of evidence stems from patterns in survey data. Using data from the World Values Survey for 52 countries, Cowley and Smith (2014) found that public sector workers on average display higher intrinsic motivation than workers in the private sector, even after controlling for differences in basic socioeconomic characteristics. Another approach is to perform lab-in-the-field interventions, having different types of employees play experimental games. Banuri and Keefer (2013) find that, compared to those in the private sector, employees from the public sector of Indonesia are much more prosocial in their playing of the dictator game. A third approach is to explore experimental variation among individuals and simultaneously explore their vocational inclination before they choose a career. Serra *et al.* (2011) rely on both survey and experimental data to show that prosocial inclination correlates with a preference for public sector jobs in Ethiopia. Kolstad and Lindkvist (2013) document a similar relationship in Tanzania.

Cowley and Smith (2014) find that, although public sector workers tend to be more intrinsically motivated than private sector workers on average, this difference depends on the corruption level of the country. In countries with high levels of corruption, intrinsically motivated individuals are not more likely to join the public sector. This suggests that the level of development in the country, and the level of integrity of government, may affect the preference of those self-selecting into careers. This is also a reminder that prosociality is of course only one characteristic out of many that could be relevant for public sector selection. Personal integrity may also vary across individuals and affect career choices.

Some studies have measured integrity through lab-experimental types of games. Hanna and Wang (2015) conducted an experimental study with students from a university in India. In the experiment, students played a series of games designed to measure various personality traits, including integrity (a propensity to refrain from cheating) and prosocial behaviour. The authors found that students who cheated in a dice game were more likely to express interest in a public sector job. Banerjee *et al.* (2015) examine embezzlement of resources in an experiment in which ‘supervisors’ evaluate the performance of ‘workers’, then claim a budget to compensate the workers, and finally hand out the compensation. Thus, there are two margins of corruption: over-reporting the worker’s performance to claim a larger budget, and then underpaying the worker. Both types of subjects are ‘corrupt’ in that they tend to over-claim resources and underpay workers. However, aspiring bureaucrats, they find, are more corrupt than aspiring private sector employees in the sense that they over-claim resources by a significantly larger amount, but do not underpay workers by a significantly larger amount.

Barfort *et al.* (2015) also conduct a cheating experiment, but among students in Denmark, one of the least corrupt countries in the world. They show that Danish students who plan to enter the public sector behave with more integrity in experimental games where it is possible to cheat. This is related to a lower concern for financial compensation. One interpretation of these findings is that the intensity of financial motivation may affect both integrity and self-selection, leading those who value financial compensation highly to self-select into the sector where that compensation is most prominent, be it legal (in the private sector) or illegal (in the public sector in more corrupt countries). Substantiating this exact interpretation is a matter for future research.

Workers differ not only in terms of their prosociality and preference for financial rewards but also in terms of their quality. In addition to the honest and intrinsically motivated, governments also value individuals of high quality; however, if higher-quality candidates demand more compensation, higher wages may be needed to attract these individuals. A problem with higher compensation is that it may attract individuals with higher valuation of financial rewards, who in light of the evidence above may also be less honest or prosocial. This danger is studied in a small theoretical literature in economics (e.g. Delfgaauw and Dur, 2007; Francois, 2000; Prendergast, 2007). This work explains how offering higher wages may create a cost by attracting individuals who are more corruptible or care less about the mission. Whether a trade-off between quality and motivation/integrity exists is ultimately an empirical question. Recently, some scholars have explored the extent to which financial incentives can affect a government's ability to recruit publicly motivated and high-quality individuals.

Dal Bó *et al.* (2013) implemented a field experiment as part of an official Mexican federal government programme called the Regional Development Program (RDP), which sought to enhance state presence in 167 of Mexico's most marginalised municipalities. As part of the recruitment drive to hire 350 development agents, two different wage offers were randomly assigned across 106 recruitment sites. In one set of recruitment sites, the programme offered MXN 5,000 per month while in the other sites the programme offered a wage of MXN 3,750. Based on this random variation, the study finds that higher wages do help attract a higher-quality candidate pool. In the places that announced a higher salary, the average applicant was smarter, had better personality traits, had higher earnings, and had a better occupational profile (e.g. more experience and white collar background). Moreover, contrary to theoretical concerns, these effects do not come at the cost of attracting less publicly motivated candidates, as measured by their performance in the Perry (1996) public service motivation inventory.

The power of wages is not limited to attracting a larger and better applicant pool. Higher wages also increase an organization's ability to fill vacancies. In the Dal Bó *et al.* (2013) study, the authors found that the Mexican government was 35.2% more likely to fill the vacancy when offering the higher wage, which corresponds to a short-run labour supply elasticity of 2.15.

Part of the reason why higher wages lead to higher recruitment rates is because they help to compensate for aspects of the job that a candidate dislikes. This mechanism was on clear display in Dal Bó *et al.* (2013). Although the applicants for the RDP position were all applying for the same job, the jobs were located in different municipalities throughout the country. At the time of the application, the candidates did not know where the job was located and were only told this information during the offer stage. As a result, jobs that were *ex ante* quite similar became quite different *ex post* depending on where the job was located and the characteristics of the municipality. The authors show that distance to the municipality (from their current residence) and attributes such as the level of drug violence and the lack of public goods in the municipality were all important hurdles to filling the vacancies. Fortunately, however, higher wages proved to be an effective instrument in clearing these hurdles.

A complementary approach to making public sector employment attractive can be to offer favorable career prospects. This can also have positive selection effects, as shown by

Ashraf *et al.* (2015). These authors partnered with the Government of Zambia to hire approximately 330 community health care workers, and introduced experimental variation in the way the position was advertised. In 24 of the 48 districts, potential candidates saw a job advert that highlighted the job's promotion prospects and the opportunity for career advancement. In the other districts, applicants saw an ad that emphasized the service dimension as well as the social importance of the job. In the districts where the job ads stressed career incentives, applicants were much more qualified (as measured by their high-school test scores and past performance in their natural science courses). These applicants also displayed a high degree of prosocial motivation, with levels that were similar to the applicants that applied under the social incentive treatment. While the applicants who applied under the career incentives treatment did place a higher weight on career benefits, the authors conclude that making career versus social incentives salient did not induce a trade-off between a higher-quality applicant pool and a prosocially motivated one.

In contrast to these two studies, Deserranno (2015) finds that stronger financial incentives can lead to an applicant pool that is less socially motivated. She conducted a field experiment in collaboration with the NGO BRAC in rural villages of Uganda. The experiment involved a recruitment drive for health promoters. Because the job was new to the villages, the experiment was able to introduce variation in how the financial aspects of the job were advertised. In one treatment, the job advertisement mentioned the minimum amount that a health promoter was expected to earn. In another treatment, the ads communicated the maximum amount a health promoter was expected to earn. A third treatment advertised the mean earnings that could be expected.

The study found that announcing the maximum amount attracted 30% more candidates relative to announcing the minimum amount, but those candidates had less experience as health volunteers and were much more likely to state 'earning money' as the most important feature of the job. In the context of a dictator game, candidates in the medium- and high-pay treatments were also 24 percentage points less likely to donate to a public health NGO. Despite detecting these large effects on measures of intrinsic motivation, the author did not find treatment effects on candidate quality, as measured by the applicant's education and income.

In sum, a scant experimental literature has studied the role of compensation and career prospects on the quality and motivation of employees that are attracted. The evidence is mixed both on the quality effects and on the possibility of a trade-off between quality and motivation. This is not that surprising. There are treatment and context differences across the studies; however, the existence of a trade-off between quality and motivation, for example, depends on how these personal traits are correlated within the broader population, as by Dal Bó *et al.* (2013) through a theoretical argument. These three studies, which were conducted in very different contexts, represent a step forward in the literature – but without more information on how personality traits vary across broader populations it is difficult to make general conclusions about the exact trade-offs that financial incentives induce.

We have reviewed evidence on how different recruitment instruments can have selection effects along two broad families of personal traits, namely quality and intrinsic motivation (typically related to vocational profile and prosociality). But do personal traits matter? It is conceivable that quality characteristics (typically associated with cognitive capacity and

education) affect performance. But whether intrinsic motivation (typically related to vocational profile and prosociality) should matter is less clear.

One argument as to why motivation should matter is that it affects match quality between employer and employee. If employers and employees have shared objectives, then the tension between organizational goals and the provision of incentives is relaxed (Besley and Ghatak, 2005). For governments, who are responsible for providing public goods that are difficult to price in the market, the ability to recruit public service motivated individuals might be especially beneficial. If individuals have high levels of intrinsic motivation then they are less likely to shirk in an environment where incentives are low-powered and/or when there are important non-contractible elements in the provision of a service (Francois, 2000).

A large empirical literature in public administration has explored correlations that are in line with these theoretical arguments. It has been shown that intrinsic motivation – and specifically public service motivation – is associated with higher levels of performance in government (Perry and Hondeghem, 2008). Naff and Crum (1999), in turn, explore a large sample of over 8,000 US federal employees and find that public sector motivation correlates with individuals' last performance evaluations. Using data from 22 federal agencies in the US, Park and Rainey (2008) find that public service motivation is positively correlated with self-reported measures of job productivity and quality of work. Similar results are found using government data from Switzerland (Ritz, 2009) and the Netherlands (Steijn, 2008). These patterns are confirmed by a meta-study indicating that public service motivation is positively correlated with job performance in the public sector, broadly defined (Petrovsky, 2009).

Economics is making a slow entry into this literature through RCTs. For example, as part of an experiment monitoring health clinics in the district of Punjab, Callen *et al.* (2015) examined the job performance of clinic doctors. They found that doctors who scored higher on the Perry public service motivation index were less likely to shirk and falsify health reports. Deserranno (2015), who as discussed earlier investigates the case of Ugandan health promoters, found that prosocial motivation strongly predicts job performance. Specifically, those health promoters who had donated a greater share of their endowment to a local NGO visited a larger number of households and provided more prenatal checks. In the context of an audit study on bednet distribution programmes, Dizon-Ross *et al.* (2015) conduct a survey on nurses at antenatal care centres in Uganda, Ghana and Kenya. They find that nurses tend to exhibit high levels of prosocial motivation, and that this level is predictive of job performance.

The mounting evidence connecting public service motivation and performance on the job is highly indicative, but remains short of proving a causal link. Even in the context of experiments, it remains difficult to manipulate motivation to generate exogenous variation in it. However, some indirect approaches have been tried recently that induce variation in the characteristics of applicants to a given position while holding some important factors constant, like potential incentive effects. Both the studies by Ashraf *et al.* (2015) and Deserranno (2015) are examples of this approach. Ashraf *et al.* (2015) used their two different recruitment strategies (one career-oriented, one socially oriented) to create variation in the type of health promoters that were recruited. After recruitment, all the health workers were given the same responsibilities and placed under the same incentives. Based on this design, they find health workers attracted by career incentives to be much more effective at delivering health services. For example, they carried out 29% more household

visits over an 18-month period, and trigger higher use of health facilities and tracking of children's health care. The treatment group included candidates who scored better during training (so are more able) but did not score differently in terms of prosocial motivation. The impact of these health workers appears to owe much to unobservable characteristics, although those who prioritise career advancement over social impact tend to perform worse. This indicates that it is quite possible that prosocial inclinations play a positive role in performance.

The study by Deserranno (2015) provides stronger evidence in support of the relationship between prosociality and job performance. She finds that agents recruited under the low-pay condition, who were measured to be more prosocial, perform better during the first year of work than those who were recruited under the high-pay condition: they visited more households and provided more pre- and post-natal checks. She also finds that they were more likely to target the most vulnerable households.

These studies support the view that there are important 'selection' effects that affect job performance. But it remains to be investigated further what might be involved in such effects. As was argued at the start of this section, prosocial motivation is frequently found to be correlated with job performance, and some of the experimental studies have found that wage and career prospects can affect the prosocial inclination of candidates. However, prosocial motivation correlates with other personal traits, including psychological characteristics such as the 'big five'.⁶ Short of randomly offering jobs to individuals based on a specific personal trait, it is difficult to separate the effects of intrinsic motivation from other positive personality traits. Even that approach would encounter the hurdle that there may be unobservable personality correlates that drive performance.

An alternative way of investigating the role of personality traits is to examine the heterogeneous treatment effects of some interventions along those traits. A good illustration of such an approach is the study by Callen *et al.* (2015). The intervention they studied aimed at curbing absenteeism by doctors and staff in clinics in Punjab. One reason why absenteeism was high is that controls were lax, and if inspections took place then the doctors and inspectors would collude. The authors collaborated with officials of the Department of Health to introduce a new monitoring programme in 18 of the 35 districts constituting the experimental sample. The intervention involved replacing the traditional paper-based monitoring system for clinic utilization and worker absence with a smartphone application. The new system allowed health system inspectors to upload the results of their assigned visit to a central dashboard that instantly updated reports at different levels of aggregation. The data, which included geo-tagged, time-stamped facility staff photos, made it difficult for inspectors to collude and falsify their reports. The study did find that the monitoring technology increased the number of inspections, but interestingly there was significant heterogeneity in the treatment effects depending on the personality characteristics of the inspector. Higher-quality inspectors responded much more positively to the treatment. A one standard deviation increase in the Big Five index measure of a healthcare professional is associated with a differential 35 percentage point treatment effect in terms of health inspections.

⁶ The 'big five' personality traits originated in a psychology model put forward by Ernest Tupes and Raymond Christal in 1961; they have been defined as: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism,

The overall takeaway of these studies is that individual traits – be they about competence or about personality traits and motivation – matter for both job performance and for the way workers respond to interventions. A corollary is that the development of state capacity may require well thought-out recruitment drives in order to shape the labor supply facing the state, as well as screening policies in order to pick well among available candidates. However, the particular way in which governments may want to adjust recruitment and screening may depend on country characteristics. This is suggested by the contrasting link between honesty and preference for the public sector across countries, and by the fact that the trade-off between competence and public service motivation may often not be present. Understanding what are the key correlates that would indicate how best to recruit and screen appears then to be an important direction for future research.

Once the state's personnel are in place, two more aspects of the employment relationship become key: incentives and monitoring. We tackle these in the two subsections that follow.

Incentives

The study of incentives has been one of the most active areas of research in economics in the last few decades, both theoretically and empirically. But the intersection of the sphere of incentive studies with that of empirical and experimental work is less well populated. Nonetheless, some interesting studies provide valuable findings and a review can offer directions for future research.

There are three important questions surrounding incentive schemes in the state administration. The first is whether incentive schemes such as pay for performance can improve performance along the intended dimension. The second is whether using more high-powered incentive schemes triggers distortions along dimensions that are not incentivized. The third is whether principals tend to design schemes optimally given the trade-offs facing them when attempting to provide incentives. A fourth question is whether extrinsic incentives crowd out intrinsic incentives. As will be seen, there is some experimental evidence on the first and second questions, while the third and fourth remain open.

Some of the initial investigations of pay for performance took place in the context of front-line service delivery. Olken *et al.* (2014) conducted a field experiment in Indonesia in which villages were given a block grant each year to use for any purpose related to health or education. In treatment villages, 20% of the total amount set aside for block grants in a subdistrict was allocated based on performance on the targeted health and education indicators; in control villages, the block grant was allocated based only on population. The incentive was offered to the whole community and was generally not passed on to service providers but was instead used for carrying out program-related activities (e.g., nutritional supplements, subsidies for childbirth, etc.). The authors found that the incentivized areas performed better on the targeted health indicators (on average, the eight targeted health indicators were about 0.04 standard deviations higher in the incentivized than non-incentivized villages). There were no detectable differences between incentivized and non-incentivized areas on educational outcomes.

Most of the studies investigating pay for performance, however, have focused on programs where incentives are directly given to providers. For example, in the context of healthcare,

Banerjee *et al.* (2008) studied financial incentives for nurses' attendance in India. In that experiment, the nurses who were recorded absent more than half of the days in a month would get their pay reduced by the number of days they were recorded absent, and nurses who were absent more than half of the days in two consecutive months would be suspended from government service. Nurses used a protected time/date stamp machine to verify attendance. The authors detected a substantial treatment effect in the short run, but the effect diminished over time and was zero by the end of their study. Although they do not have the data to confirm this, anecdotal evidence suggests the decline was due to nurses learning how to exploit loopholes in the systems and recording more exempt absences over time.

Basinga *et al.* (2011) (see also Gertler and Vermeersch, 2012) studied a pay-for-performance intervention in Rwanda that provided incentives to primary care facilities equal to a 38% increase in total compensation for facility personnel. The incentives were based on the quantity of visits to the facility, as well as the content of services provided during the visits. The authors found that the incentives led to a substantial increase in productivity (around 20%), which translated into increases in pre- and post-natal services, as well as improved infant health. Circling back to the previous emphasis on individual characteristics, an important complementarity was detected between treatment and provider skill at baseline.

Combining a healthcare focus in an education environment, Miller *et al.* (2012) conducted a field experiment in 72 Chinese primary schools in which school principals were incentivized to reduce anaemia among their students. Principals were paid RMB 150 per student who changed from anaemic to non-anaemic over the course of the intervention. A 50% reduction in anaemia resulted in a two-month salary increase for principals. Control groups did not receive financial incentives, but did receive the same information and subsidies as the treatment group. The incentives reduced anaemia by about 5 percentage points (23%) compared to the control group.

Schools are another front-line service delivery area where incentive studies have been performed. Duflo *et al.* (2012) report on an experiment designed to improve teacher attendance in 60 treated schools in India (out of 120), by relying on cameras and a payment scheme that rewarded attendance. Teachers were paid a base wage for 20 days of work, penalized for showing up less, and rewarded with a bonus for showing up more than 20 days. The effect of the treatment was a reduction in absenteeism of 21 percentage points. The authors then estimated a structural model that permits counterfactual simulations indicating that a cost-minimising policy should have considered a higher threshold and larger bonus.

Front-line service delivery by the state must be funded with fiscal revenue. Thus, a natural question is whether incentives can help the state obtain the resources it needs to finance public goods. Khan *et al.* (2014) conducted a large-scale field experiment in Punjab, Pakistan, where they allocated 482 property tax units into either one of three performance-related pay schemes or a control. Two years later, incentivized units had revenues that were higher than the control units by 9.3 log points, which implied a 46% higher growth rate. The scheme that rewarded tax collectors purely on revenue did best, increasing revenue by 12.8 log points (62% higher growth rate), with little penalty for customer satisfaction and assessment accuracy compared to the two other schemes that explicitly also rewarded

these dimensions. The study offers evidence compatible with the idea that one consequence of higher-powered incentives was an increase in the size of bribes that were exchanged, whenever collusion took place, with lower frequency of corruption. This is consistent with many simple models of bribery, which predict a negative correlation between bribe levels and frequency of corruption.

While less frequent corruption should be a desirable outcome, a higher volume of bribes may still be seen as problematic. There are other types of undesirable outcome predicted by theory when high-powered incentives are introduced, for example multi-tasking distortions. These occur when rewarding performance along one specific activity leads to reductions in performance along other, unincentivized activities. An illustration of this type of effect is offered by Baicker and Jacobson (2007), who documented that, when allowed to keep the revenue from assets seized in drug arrests, police agencies in the US increased drug arrests but simultaneously reduced enforcement on other crimes, like burglary. The police thus displayed a revenue-seeking attitude, in that arrests go up more strongly in connection with drugs like cocaine and heroin that yield more lucrative seizures than marijuana.

Besides policing, other areas where multi-tasking effects are expected are education and health. In education, the typical concern is that incentivizing teachers to improve student test scores on a few subjects may lead to underinvestment in other areas. Muralidharan and Sundararaman (2011) evaluated a large-scale teacher incentive program in the state of Andhra Pradesh in India. They studied a school-level randomized trial in which based on test scores, public school teachers were paid incentives both at the group and individual level. The incentives at play were calibrated to be around 3 percent of a typical teacher's annual salary. The researchers found that the incentives promoted learning. Two years later, students in incentivized schools had test scores 0.27 standard deviations higher in maths and 0.17 standard deviations higher in language. Despite these sizeable effects, they found no evidence of multi-tasking: students also did better in subjects (like social studies and science) that were not placed under the incentive scheme. These effects also increased over time: after five years, students in treatment schools had test scores 0.54 standard deviations higher in maths and 0.35 standard deviations higher in language, and still had higher test scores in non-incentivized subjects (Muralidharan, 2012).

Glewwe *et al.* (2010) evaluate a randomized trial of teacher incentives in Kenya, where an NGO provided in-kind prizes to teachers in Kenyan public schools on the basis of school-level performance on district exams. In contrast to the previous study, they find that while incentivized schools performed better on the government exam used to compute the incentives, there was no evidence of improved scores on an exam covering unincentivized areas, suggesting that in their context multi-tasking was a real issue. Teachers may have responded to incentives by devoting more effort to developing test-taking skills than to general instruction. In sum, incentives led to improvement in the incentivized areas in both studies, but while in India there were positive spillovers to non-incentivized ones, this did not take place in Kenya.

In the Miller *et al.* (2012) study reported earlier, they document that incentivized school principals were more likely to use subsidies for iron-focused supplements, whereas non-incentivized school principals used subsidies for supplements that could affect both iron *and* overall calorie intake. To the extent that both types of supplementation are considered valuable health policy objectives, this result would reflect a multi-tasking distortion.

One important issue is understanding why certain interventions have long-lasting effects and others do not. The schools in the Duflo *et al.* (2012) study were run by an NGO, which may have had more independence in enforcing the incentives than the government sometimes does. It remains to be established which of these effects is more likely to generalise: the positive long-run effects found in Duflo *et al.* (2012) or the rapid decline in effectiveness found in Banerjee *et al.* (2008)?

Monitoring

A key question in governmental organizations, where a pay-for-performance approach is often impractical, is whether the adoption of new monitoring approaches can induce higher employee effort and more successful public service delivery.

One way in which accountability may be enhanced is by involving the community in the monitoring of public service delivery. Olken (2007) studied the random assignment of top-down monitoring of public works projects as well as an approach relying on community involvement. He showed that audits significantly reduce corruption (i.e. a discrepancy between official costs and an independent assessment of cost) while community involvement in monitoring has little impact.

Björkman and Svensson (2009) evaluated an intervention that involved mobilizing community-based monitoring, as well as providing report cards on the performance of the local health clinic compared to those in other places and against the national standard for primary health care provision. The community-based aspect relied on having citizens and health workers meet to discuss the state of health services and elaborate a plan to monitor and improve those services. The authors found that the intervention caused a significant improvement in the performance of health workers. One impact of that improvement was a reduction in child mortality. The interpretation of the authors is that the intervention helped people resolve the collective action problem, thereby holding providers accountable. In subsequent work, Björkman *et al.* (2014) tried to disentangle the effects of information provision from the effects of collective mobilization through community participation in meetings. To this effect, the new intervention, while still involving information provision, did not include comparison information vis-a-vis other health clinics. The evidence suggests that, without information on relative performance, participation in community meetings had little impact on outcomes. Two lingering questions are whether the results obtained with the provision of benchmarking information could have been obtained in the absence of the mobilization component, and whether similar interventions have been tried in other services.

Answers to these questions are suggested by Banerjee *et al.* (2010), who studied an initiative aimed at improving the education services through citizen participation in village education committees (VECs). The VECs in India, while existent at baseline, were not active, and most members of the community did not know about their existence. Subsequently, an NGO-led intervention was rolled out in order to raise awareness about the VECs. This can be equated to an 'information only' intervention. The result was that the VECs continued not to function, which was not due to circumstances that would have precluded any intervention from having an effect. Alternative interventions that included training did trigger improvements in educational outcomes.

While valuable, monitoring by the community must overcome important collective action problems. Interventions based on information may have even stronger effects when some lower-level agent can be active in monitoring upper levels. Reinikka and Svensson (2005) evaluated a newspaper campaign in Uganda that helped parents and head teachers in schools reduce the amount of leakage affecting the resources schools were supposed to get. According to their evidence, head teachers that were geographically closer to a newspaper outlet had better knowledge about the program that made funds available, and as a result managed to capture a substantially larger share of the resources intended for them.

A potentially important complement to community involvement in the monitoring of public service delivery is technology. In fact, as e-governance becomes more widespread, countries have increased their investment in, and use of, e-monitoring systems. Several studies described in our discussion of incentives based on provider attendance utilize such systems. The Duflo *et al.* (2012) study reviewed earlier based incentives on information obtained via time-stamped photographs. However, as highlighted by Banerjee *et al.* (2008), the robustness of such monitoring systems is sensitive to how tamper-proof the overall monitoring mechanism is. If nurses can get away with disabling the monitoring system, then to the extent that they act as self-motivated, rational agents they will do so. Perhaps even more important, the existence of loopholes in the monitoring regime, or a lack of capacity in utilizing its data, may render virtually useless the extra information created by the monitoring system.

Two recent studies by Dhaliwal and Hanna (2014) and Callen *et al.* (2015) expand our understanding about the potential of technological innovations to assist monitoring and hence the administration of service provision. Dhaliwal and Hanna (2014) studied the roll-out of biometric devices used to monitor staff (nurses and pharmacists) and doctors at primary health centers in southern India. In centers with the new monitoring technology worker attendance increased by 14.7%, an effect that was driven by staff rather than by doctors. Improved monitoring impacted health. Underweight births decreased by 26% and births attended by a doctor increased by 16%. One (perhaps obvious) aspect of improved monitoring is that it holds workers more accountable and can reduce their rents. This could lead to lower job satisfaction. In line with this, the authors detect lower satisfaction among members of staff as well as attempts to circumvent the system. Overall, these results indicate that improved monitoring can enhance service delivery but can also affect personnel rents in a way that generates a backlash against the newly deployed technology. This suggests that a larger capacity than that minimally required to deploy the technology might be needed, namely the capacity to deal with the personnel resistance that the technology may trigger. This study also highlights the importance of measuring impact. Without the measured improvements in health outcomes, the evidence on staff resistance could have led to the monitoring system being judged a failure.

We discussed earlier the importance of personality traits and how they may affect the response to interventions. If monitoring gets in the way of shirking and more generally rent extraction, and these activities hold different value to individuals with different types of motivation, then we may expect the impacts of monitoring to vary with the personality of the service provider. As discussed above, Callen *et al.* (2015) reported on a monitoring experiment wherein the traditional paper-based monitoring system for absenteeism, resource availability and clinic utilization was replaced by a smartphone application. A

mobile data connection transmitted the data generated by health inspectors to a central data center in real time. The data were then aggregated and processed to generate decision-relevant charts and summary statistics. Callen *et al.* (2015) found that senior health inspectors who score higher on the Big Five personality inventory are more likely to respond to a report of an underperforming facility by compelling better subsequent staff attendance. They also find that inspectors who score higher on personality tests are more likely to reduce absenteeism when dashboards summarizing decision-relevant data are implemented. In short, this paper offers evidence in support of the idea that individual personality characteristics explain heterogeneity in responses to improved monitoring.

Callen and Long (2015) introduced monitoring into the electoral machine, by randomly announcing the presence of a photo quick count – photography of preliminary vote counts at the station level – before electoral results were aggregated at higher levels. Announcing this to election officials reduces fraud, both in terms of distortions in the aggregation of votes as well as in terms of the theft of election materials. The treatment also reduced votes for politically powerful candidates and candidates connected to election officials.

Overall, some basic aspects of principal–agent theories are borne out by the evidence, namely that agents respond to incentives and monitoring, and that selecting agents carefully pays off. One issue that remains open is to what extent principals optimize contracts or other arrangements depending on the nature, incentives and means available to lower-level officials. Baicker and Jacobson (2007) showed that counties offset nearly 80% of each dollar seized by police forces during arrests by reducing budgets. Another aspect that remains understudied is the relative power of intrinsic motivation versus extrinsic incentives, and whether the latter may crowd out the former.

Open research questions

- What types of personality traits affect job performance in the public sector?
- What are the effects of non-financial incentives on job performance?
- What are the conditions under which performance-related pay can lead to multi-tasking concerns?
- Can citizen feedback platforms promote political accountability and improve service delivery?
- What are the costs and benefits of rotation schemes with the public sector?
- Do principals optimize contracts or organizational arrangements given the trade-offs present in incentivizing personnel?
- Do extrinsic incentives crowd out intrinsic motivation?

Financial resources

The resources available to the state may come from two broad sources: taxes and rents. The first are typically raised from income, trade and assets owned by economic agents. The second come from resources exploited by the state. Natural resources are an important source.

Whether states rely more on one source or another may matter, since it is conceivable that institutions affect the way states obtain their revenue, and that the way states obtain their revenue may further affect economic and even institutional outcomes.

Social scientists have long been concerned with the potential negative effects of natural resource wealth, due to its likely leading to less growth and bureaucratic quality (Sachs and Warner, 1995), more rent-seeking (Lane and Tornell, 1996), and slacker political accountability when existing institutions are weak (Robinson *et al.*, 2006). It has also been feared that dependence on natural resources may be inimical to democracy (Ross, 2001; but see Downing, 1992 for a contrasting historical view). Although a more comprehensive data panel analysis across several countries does not seem to confirm these fears (Haber and Menaldo, 2011; Caselli and Tesei, 2015), there are some indications that windfalls may weaken accountability and the extent to which resources are channelled into public goods (Brollo *et al.*, 2013; Caselli and Michaels, 2013). In contrast, it has been hypothesized that taxation pressure goes hand in hand with increased oversight and tighter accountability. This of course could comprise causal effects going both ways.

One possibility is that taxation creates a demand for accountability. Paler (2013) conducted a lab-in-the field experiment exposing subjects to different frames in terms of whether a decision-maker would extract rents from a windfall budget versus a tax-originated budget, and measured the stated willingness of subjects to demand further information or make a complaint against government by sending a postcard. The taxation frame increased the demand for information and the use of the postcard complaint, offering some support for the idea that taxation enhances taxpayer scrutiny. If taxation begets a demand for control, this might be enhanced when having clearer information about behavior conditional on poor performance. However, an interaction of the taxation frame with the provision of actual information did not enhance complaints, although this study did not control for citizen priors, making it unclear what the information treatment effect should be hypothesized to be. Further work on the link between tax pressure and the demand for accountability is sorely needed.

The other direction of causation is that stronger institutions and capabilities allow the government to raise revenue. This point is prominently made by North and Weingast (1989) in relation to government debt. In their interpretation, stronger ability to commit helps the government issue debt. Another way in which stronger institutions may help the government is through enhanced legitimacy and tax compliance. Tax compliance may also increase due to governmental capabilities to detect taxable activity.

A very specific form of institutional advantage is a judicious choice of tax instruments. It is widely believed that adopting a form of VAT increases tax compliance due to the paper trail it generates. Pomeranz (2015) examines this notion through a randomized trial on a large sample of Chilean firms. Letters were mailed to those in the treatment group to increase the salience of the threat of an audit. If the paper trail already had a deterrent effect, the letters should have a smaller effect on transactions subject to a paper trail, and this is what Pomeranz finds. She also shows that increased tax compliance spills over to firms' trading partners. Linkages between taxpayers may be exploited to improve compliance. One of them is who reports income. Kleven *et al.* (2011) conducted a large tax enforcement field experiment in Denmark, and showed that tax evasion is near zero for third-party reported income but considerable for self-reported income. This suggests that governments with

weak enforcement capabilities may want to ‘max out’ their use of mechanisms that involve as much self-enforcement as possible.

Tax compliance may depend on various other aspects of the tax regime. Of course, given institutions and tax instruments, tax levels are also relevant for compliance. Kleven *et al.* (2011) showed that higher marginal tax rates lead to more evasion but even more (legal) avoidance. However, in addition to tax levels, the salience of tax penalties and the likelihood of audits may also be relevant. A significant literature has utilized randomized interventions based on messages to taxpayers to investigate what type of communication can improve tax compliance. We reviewed several of these when commenting on the role of norms and the potential use of exhortative messages; the literature tends to find support for using messages that increased the salience of audits and penalties (McGraw and Scholz, 1991; Blumenthal *et al.*, 2001; Fellner *et al.*, 2013; Castro and Scartascini, 2015). Kleven *et al.* (2011) demonstrated in the context of their experiment in Denmark that audits and letters threatening audits affect self-reported income but not third-party reported income.

An additional resource is to manipulate the shame felt by those who do not comply. Perez-Truglia and Troiano (2016) conducted an experiment in the US showing that receiving letters increasing the salience of financial penalties and shaming among neighbors increased compliance (the shaming condition involved appearing on a list of tax delinquents mailed to the neighborhood).

Open research questions

- Is third-party reporting effective in the context of weak legal institutions?
- When do financial windfalls strengthen political accountability and public sector productivity?
- What are the effects of fiscal audits on public service delivery?
- When is it convenient to decentralize tax collection, given political and capacity constraints at the local level?
- What areas of tax collection are most affected by corruption?

Procedures

Management practices encompass a broad category of the procedures used in government. Informed by the survey and interview methods employed by Bloom and Van Reenen (2007; 2010), Rasul and Rogger (2015) evaluated the management practices employed by bureaucrats in Nigeria across different ministerial units. The authors studied how management practices relate to the quantity and quality of public services, measured for instance through the completion rate of projects. They find that bureaucratic autonomy is positively associated with delivery of public services and that incentive schemes actually decrease public project completion rates. They conjecture that this decrease occurs because ‘bureaucrats are engaged in complex tasks, the relationship between bureaucratic inputs to outputs is uncertain, and there is considerable ambiguity in the design and implementation process for many public projects’. They suggest, then, that incentive schemes might create an excessive regulatory burden or encourage perverse behaviours to manipulate the system. One might also imagine a standard multi-tasking model in which some behaviors are observable while others are not. The incentive scheme could result in an inefficient

allocation away from unobservable tasks that nevertheless are important to the delivery of public services (as theorized by Holmstrom and Milgrom 1991). The findings by Rasul and Rogger highlight the need for RCTs to validate their observational results. The area of management practices and bureaucratic procedures is generally in great need of further study.

An additional relevant aspect to government procedures involves legal requirements and rules to govern dispute resolution, the protection of property rights, and the regulation of economic activity. We briefly cover these issues in Section 4 on legal institutions.

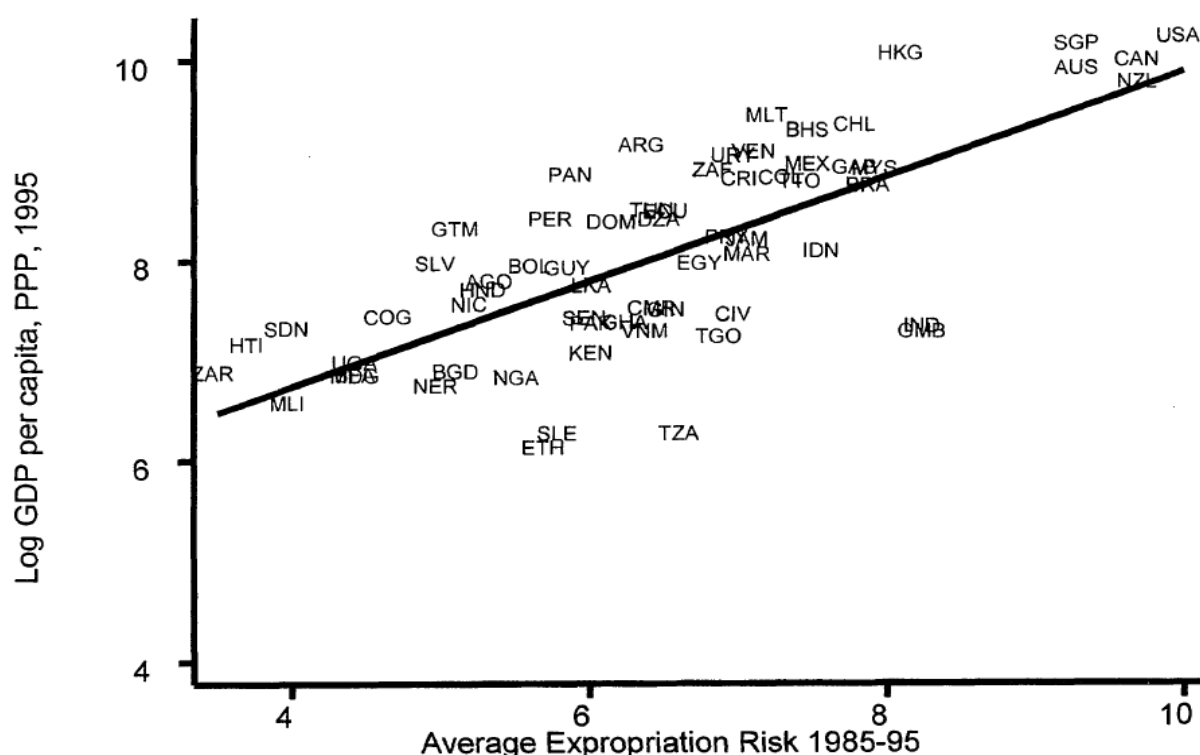
Open research questions

- To what extent do changes in managerial practices affect public goods provision?
- What are the effects of decentralization on public service delivery and accountability?
- What are the factors that affect a government's decision to outsource public goods?
- Are privately provided goods produced at lower cost? Is there a quality trade-off?
- What are the benefits and costs of public–private partnerships?

4 Legal institutions

Personal security and the security of claims to property are thought to be a basic driver of investment and development (see, for example, Haggard *et al.*, 2008). Reviewing the theoretical and empirical literature on the rule of law and economic development, Haggard *et al.* point to substantial evidence that rule-of-law indicators correlate with growth. For instance, it is well known that indices that capture the degree of protection of property rights correlate with income *per capita*, as shown in the following figure:

Figure 3: OLS relationship between expropriation risk and income



Source: Acemoglu *et al.* (2001)

The protection of property rights and the rule of law can be seen as a function of legal institutions, broadly understood. Therefore, attention to legal institutions is warranted, given their potential role in fostering economic growth. In order to make progress in reviewing pertinent work, it is beneficial to unbundle legal institutions and specify their main components. The easiest way to perform such decomposition is to ask what it takes to have a legal right to bind. First, it must be legally sanctioned. Second, its beneficiaries/holders must be aware of their entitlement, and be able to access the means to have their rights upheld. Third, there must be an enforcement machinery available to uphold those rights, comprising, for example, courts. Fourth, conditions must exist so that court rulings can be enforced. This simple description yields the following elements as relevant to the functioning of legal institutions:

1. A legally sanctioned right (such as personal identity, a title of property, etc.);
2. Awareness and access:

- a. Awareness of legal rights;
- b. Access to legal advice and representation;
- c. Access to dispute resolution mechanisms;
3. Courts; and
4. Enforcement.

These factors are likely to have multiple effects. As emphasized by Besley and Ghatak (2010) and Ghatak (2016, RA4), insecure property rights create a risk of expropriation that depresses incentives to invest and promotes protective measures that are socially wasteful, as well as prevent the realization of gains from trade. In addition, the factors listed above are likely to be strongly complementary. In this section of the paper, we examine studies analyzing the effects of changes in one of these factors, and highlight the need for work in most of these areas.

The performance of a legal system – and therefore its impact on the economy – depends on the elements just highlighted being both present and functional. But performance may also respond to aspects of legal conception and design. We take these up in the last subsection.

Legally sanctioned rights: property titles

The starting point of a regime that protects property rights in any shape or form is the legal sanctioning of those rights, be it at the individual or collective level.

A basic right is that of the individual as a legal person, but even this basic right can be challenged in the developing world. Beqiraj and McNamara (2014) point out that birth registrations are difficult for the poor in many parts of the world. While some countries place impediments to registration, others have had success with inducements. Herbert (2015) observes that lack of legal identity can interfere with individuals' ability to obtain many vital public services, including access to the justice system. In fact, some institutional variation has been used to show that whether certain groups can benefit by the recognition of a property right can have effects on the distribution of resources. Nagarajan *et al.* (2010) use a natural experiment in India to show that changing inheritance laws increased women's likelihood of inheriting property. The age of women at marriage increased, and there was a positive effect on women's educational attainment.⁷ Indeed, an important instrument in the economic performance of a person is that of property rights over assets. In this connection, a legally sanctioned property right over land and other assets can be important, for instance in the collateralization of loans (De Soto, 2000). But what is the pattern of evidence about the effects of sanctioning formal legal rights?

Some authors have relied on observational data to study the effects of the formalization of property rights, including urban and rural land titling. Cox (2008) reviews some of this early literature. The overall picture is mixed. Some of these studies find a positive impact on investment and land value (Alston *et al.*, 1996) and positive effects on output and crop choices reflecting a longer-term orientation (World Bank, 2004). However, other studies

⁷ Guirkingner and Platteau (forthcoming) survey further evidence on the impact of inheritance laws and discuss how legal reforms that interact with household processes can have different effects depending on norms and customs.

report non-existent or even negative effects. Several of these were done in the context of African nations (see Davis and Trebilcock, 1999). One paradoxical aspect of the sanctioning of formal property rights is that while it reduces the uncertainty of some groups, it may increase that of others, who relied on custom-based rights that are then deniable under the new regime. In addition, the sanctioning of formal property rights introduces a new set of interactions that may be more prone to elite manipulation (Platteau, 1995).

These studies, while valuable, tend to focus on fairly complex processes that are quite distant from a clean experiment. Closer to the experimental ideal, Galiani and Schargrotsky (2010) used a natural experiment in Buenos Aires to identify the effect of land titling on investment, household size and education. The variation of interest originated in a law from 1984 that expropriated a piece of land from its owners to formally entitle the squatters that had occupied the land. While some owners accepted a government settlement, others fought in court, significantly delaying titling of some squatters. Surveys conducted in 2003 and 2007 demonstrate that families who received early titles showed increased housing investment, decreased household size and better-educated children. The authors show that these effects are likely due to increased investment, since titling did not improve access to credit. A paradoxical aspect of this study is that the expropriation of owners led to entitling squatters but de-entitling original owners. This may have had effects on the incentives of those and other owners – presumably in a different direction, since they had been expropriated. The question that lingers, then, is what may have been the net overall effects of an intervention that, rather than creating property rights, redistributed them. To explore this, one would want to examine cases where there is an unambiguous creation of property rights.

Field (2005) offers an example of such a study, examining the effects of titling on investment in Peru. The program under study significantly reduced the cost and bureaucratic hurdles involved in obtaining a title. She relies on a difference-in-differences design, and compares the change in investment before and after implementation of titling to the change operated in households not yet reached by the program (alternatively, she also compares against households that already held titles). Titling appears to have economically large and statistically significant effects: housing renovations increase by two-thirds and are largely financed without credit, implying that tenure security rather than access to credit tends to drive the effects.⁸

Ali *et al.* (2014) rely on quasi-experimental methods (a geographic regression discontinuity) to evaluate a land tenure regularization program in Rwanda. This program had the objective of clarifying land ownership and reducing disputes in the post-genocide era. An evaluation of a pilot of the program showed improved land access for married women, less gender bias in the recording of inheritance rights, and, importantly for the preservation of the productive potential of land, a doubling of investments in soil conservation. No effects on relaxation of credit constraints were detected (although this is perhaps due to the short-term span of the evaluation).

The literature to date seems to provide little support for the notion that titling relaxes credit constraints, leaving open the question of whether De Soto's hypothesis on the value of

⁸ Bardhan (forthcoming) reviews work on the topic land tenure systems, which tends to confirm the idea that security of tenure leads to investment and productivity gains.

mobilizing the poor's savings as collateral can really alter the development picture. Constraints other than credit may be binding and arrest the economic development potential of the poor. The evidence on the credit-relaxing effects of titling appears even more modest than that on the effects of microcredit, as assessed by Banerjee *et al.* (2015) and Beck (2016, RA1): while a consistent pattern of modest positive effects has been documented, the effects are far from transformative. Clearly, more experimental-grade research is needed to map out the effects of titling on various outcomes, as well as the interaction of formal property rights with custom-based arrangements. This leads us straight into the topic of the links between formality and informality.

Formality vs. informality

The existence of a large informal sector is seen as both a symptom and a contributing factor to underdevelopment. La Porta and Shleifer (2008) view informality as a result and not a cause of low economic productivity, and they suggest that the tax implications of formalization could simply bankrupt previously informal businesses. Others, like Besley and Persson (2011), highlight informality as limiting the ability of government to raise taxes and provide public goods. That tension can be cast in terms of what the drivers and the consequences of formality are.

Drivers of formality

The key question is whether interventions can affect the choice of existing firms to go formal or encourage the formation of new formal firms. In what follows we review literature that is pertinent to that question, and do so following our two cross-cutting analytic categories – incentives (mainly in relation to the costs of formalizing or the threat of inspections) and information.

de Andrade *et al.* (2013) conducted a field experiment in Brazil to evaluate the effectiveness of incentives and inducements for firms to formalize. Firms were randomized into one of five groups; the first was a control, the second received information about how to formalize, the third received this information as well as free registration costs and the services of an accountant for a year, the fourth received an enforcement visit from an inspector, and the fifth had a neighboring firm receive an enforcement visit. Results suggest that only inspections have positive effects and that the effect increases the likelihood of formalization by about 24%. The authors conclude that many informal firms will not formalize unless coerced, implying that formalization might offer them little benefit. However, increased tax revenues more than offset the cost of increasing inspections, implying a benefit to state capacity.

One of the hurdles in formalizing business may be the costs related to the of formalizing. Some studies have manipulated those costs in order to determine whether and to what extent costs matter. Bruhn (2011) examined the effect of 'one-stop-shop' business registration in urban areas of Mexico. This reform allowed businesses to satisfy municipal, state and federal registrations all at once in a single process. Gaining identification from the staggered implementation of the program, Bruhn shows that the number of registered businesses increased by 5% and that this was due to former wage earners starting new businesses. However, the reform did not make existing businesses more likely to register.

Also, wage employment increased by 2.2% and the income of incumbent businesses declined by 3%.

de Mel *et al.* (2013) performed a field experiment in Sri Lanka that attempted to induce registration by providing information, reimbursing direct costs, and paying large one-time sums. Information and reimbursement had no effect, while a payment of one-half to one month's worth of median profits induced one-fifth of firms to register. A payment of two months' worth of profits induced half of firms. The authors note that the most common reason for not registering is that firms often operate under informal land arrangements and cannot prove their tenancy of the land on which they operate. With respect to the effects of formalization, they find increased advertising and use of receipt books but no increase in government contracts, use of bank loans or accounts, or participation in government programs.

Mullainathan and Schnabl (2010) studied the effect of a municipal licensing reform in Lima, Peru, which decreased the cost and time in obtaining a licence. Using a pre-post design, they find that the number of provisional licences issued to informal firms increased sharply. Still, many businesses failed to renew these licences after one year; as the authors explain, 'many business owners think there is a high probability that the business will not survive for more than one year'.

Bruhn and Loeprick (2014) examined the effect of preferential tax regimes for 'micro' and small businesses in Georgia. 'Micro' businesses (falling under a certain revenue threshold) were exempted from taxation entirely, while small businesses (falling under a higher threshold) were given the option of being taxed on revenue instead of profits (which decreases compliance costs). The authors use a regression discontinuity design to show that the new tax regime increased micro business registration propensity by a large amount, but only in the first year following the reform. There was no such effect on small businesses. Finally, they find reduced tax compliance around the micro threshold in the first year but not subsequently.

Branstetter *et al.* (2014) evaluated the effects of a reform in Portugal that reduced the cost of firm entry. The authors show that firm formation and employment increased but mainly among 'marginal' firms that were low-technology, small, operated by poorly educated owners and less likely to survive after two years.

De Giorgi and Rahman (2013) distributed brochures in Bangladesh offering information on the procedures and benefits of registration. Although this treatment increased the knowledge available to those making decisions at firms, it had no impact on registration. The authors conjecture that low benefits, such as access to markets, and high indirect costs, such as taxation and regulations, could serve as barriers to formality.

To sum up, the emerging picture on the drivers of formalization is mixed. Only a subset of interventions that incentivized formalization have yielded positive effects. Moreover, the studies that offered information that could encourage formality have shown little to no effect.

Consequences of formalization

One of the promises of formalization, as with titling more generally, is a potential effect on credit, and ultimately on firm performance to the extent that the relaxed credit constraint makes available better productive strategies to the firm. A review of the literature on this relationship tends to yield some positive results although the positive picture is far from uniform.

McKenzie and Woodruff (2008) performed an RCT that provided cash and grants to small, informal retail firms in Mexico. In that way, they relaxed credit constraints. The intervention led to strongly positive effects. The authors estimate a monthly return to capital of about 20 to 33%, which as they note is three to five times higher than market interest rates.

McKenzie and Sakho (2010) use proximity to the local tax office as an instrument for formalization in Bolivia, demonstrating that it significantly increases profits. On the other hand, they detect heterogeneous treatment effects: the gains are concentrated among mid-size firms and marginal small or large firms see a decrease in profits. They also find that owners of large informal firms are of higher ability than large formal firm owners, which contrasts with the usual result among smaller firms that informal firm owners are of lower ability. However, they find no effect overall on the use of trade credit, the receipt of working capital from suppliers or customers and the likelihood of having a bank loan.

The study by de Mel *et al.* (2013) that we reviewed earlier shows that formalization had no effect on the use of bank loans or accounts.

Assessment

Overall, interventions to foster business formalization have met with little success in terms of increased formalization, and the consequences for the firms that formalize are heterogeneous. While not yet conclusive, at the broadest level this evidence challenges the view that informal firms are deep reservoirs of economic potential. According to La Porta and Shleifer (2014), growth is driven by higher-quality firms that tend to be formal, and as countries grow in tandem with their formal firms the relative and absolute weight of informality tends to decrease. In this view, it makes sense for informal firms to remain informal simply because they do not have the quality level to survive in the formal economy.

While formalization of existing firms may do little to drive national growth, nor directly help growth in modern industrial sectors, the regularization of titles and property rights could potentially have non-trivial effects on local economies, for example when it interacts with traditional systems of management of land property and tenure. In addition, an informal sector that absorbs employment, by contributing to social peace, may paradoxically help the social environment in which the modern formal sector operates. That said, whether this positive externality exists and if so outweighs any negative externalities is still far from clear.

Open research questions

- Are there instances where formal property rights relax credit constraints?
- What are the effects of land titling on access to credit and investment in local economies?

- With much of the existing literature on the informality of small-scale enterprises focused on registration and tax regulations, what is the importance of other regulatory barriers for firm growth, such as land titling and zoning?
- What are the social costs of formalizing informal firms?
- Is the informal economy a complement or a hindrance for its formal counterpart?

Access and awareness

In keeping with the central role of information in this review, we will cover work that attempts to make individuals aware of their rights and the means at their disposal to have their rights respected. However, it is important to recall that actual access can be expanded by increasing the supply of services and by connecting people to services that exist but had not traditionally been available to certain groups. We cover work affecting either of those margins in this section.

Some natural ways of expanding legal access are through *pro bono* representation and through the deployment of legal clinics. Frankel *et al.* (2001) randomly assigned low-income tenants to receive free legal representation at the housing court in New York. Only 22% of represented tenants had final judgements against them, in comparison to 51% of the control group. Furthermore, represented tenants were less likely to face eviction and their landlords were more likely to face an order to abate the rent or provide repairs.

Another margin for intervention is the extent of legal assistance, as investigated by Greiner *et al.* (2012). In their study, individuals facing cases in the housing court of Massachusetts were randomly assigned to receive either full legal assistance (in accordance with the traditional attorney–client relationship) or only limited ‘lawyer-for-the-day’ assistance. The study found no significant effect of full versus limited assistance on any legal outcomes. The authors alternately conjecture that this implies either the high quality of limited service or the low quality of the full assistance provided in this specific experiment. In a very similar study, Pattanayak *et al.* (2013) performed an experiment with individuals facing eviction at the Massachusetts District Court rather than the housing court. The authors found that two-thirds of participants receiving full representation retained possession of their housing unit following the proceeding, while only one-third of the limited assistance group did. Furthermore, the treatment group was mandated to pay less rent compared to the control group (about 7.5 months’ worth of rent).

In the final study of legal assistance in the US that we will highlight, Greiner and Pattanayak (2012) randomized the offer of legal assistance in administrative appeals of unemployment benefit eligibility decisions. The authors find that representation had no statistically significant effect on the outcome of the case but that it delayed proceedings by two weeks on average.

Thus, on the whole, there are ambiguous results from studies providing free legal assistance in the US. There seems to be little evidence of the type we have just reviewed in developing countries, where legal institutions tend to be weaker. However, using experimental or quasi-experimental methods, three studies examine the provision of legal assistance by trained community members.

Sandefur and Siddiqi (2013) conducted an RCT of a legal empowerment intervention in Liberia. The experiment involved the provision of *pro bono* mediation and advocacy services through community paralegals trained in the formal law. The authors found strong and robust impacts on justice outcomes and significant downstream welfare benefits, including increases in household and child food security of 0.24 and 0.38 standard deviations, respectively. They found no impact on attitudes or behavior, but strong impacts associated with taking a case to the paralegals, suggesting that at least in the short term paralegals provide a directly redistributive role.

Barendrecht *et al.* (2013) evaluated the staggered (not randomized) roll-out of the *Facilitadores Judiciales* (Judicial Facilitators) program in Nicaragua. In this program, communities nominated facilitators to receive treatment to provide fellow community members with legal assistance. The authors find fewer reports of legal problems, decreased costs of justice, and higher social cohesion in treated regions following treatment. One issue with the study findings, unfortunately, is that the data make it clear that treated and control regions differ systematically.

Mueller *et al.* (2015) evaluated a similar program in Tanzania that did rely on experimental variation in the presence of paralegals in different villages that were part of a program of community-based legal aid with a focus on gender. They find small-to-moderate effects of paralegal presence on the propensity of women to attend legal seminars and on their resulting knowledge about the rights of women to own land.

An important aspect of legal institutions concerns dispute resolution. Blattman *et al.* (2014) studied the short-term effects of a mass education campaign to promote alternative dispute resolution (ADR) in Liberia. Eighty-six out of 246 municipalities were randomly assigned to receive ADR training, which ultimately reached 15% of adults in the treated municipalities. After one year, the authors observed higher rates of resolution of land disputes, lower rates of violence, spillovers to untreated residents, more extrajudicial punishment, and weakly more non-violent disagreements. The authors conclude that ‘mass education can change high-stakes behaviors, and improving informal bargaining and enforcement behavior can promote order in weak states’.

Promoting order in weakly institutionalized environments represents a large challenge. Blattman and Annan (2016) evaluate a program that randomly offered assistance in the form of agricultural training and capital to ex-fighters in Liberia. While the treatment in this intervention was not legal in nature, it had a concern with legal outcomes, namely involvement in illicit activities. Fourteen months later, treated individuals had more intensively substituted farming activities for illicit ones, and displayed less propensity to engage in mercenary activity. Esteban and Ray (2016, RA1) reviewed theories and evidence on common perceptions surrounding the logic of conflict. Their analysis of the literature, and the paucity of work in this White Paper reporting on institutional innovations that can lower the likelihood of conflict, both suggest that further experimental work on institutions and conflict is sorely needed.

Open research questions

- What are the effects on conflict resolution of legal assistance in weakly institutionalized polities? How do these effects interact with traditional norms and customs?

- How does access to legal assistance affect economic performance?
- What institutions can promote law and order and diminish the likelihood of conflict?

Courts

There are several important aspects to the functioning of courts. Two aspects that have received attention in the literature are two of the ones we have emphasized in other sections, namely incentives and selection. In keeping with that emphasis, we quickly review work on those themes as they pertain to the judiciary. Although experimental evidence is scant, a handful of scholars have used observational data and formal models to examine the incentives and selection effects of judges.

The (perhaps somewhat naïve) benchmark for evaluating the behavior of judges is that of neutrality, and independence from pressures, be those pressures originating in interested parties, or in the judges' own interests. In the context of political institutions, we earlier asked whether institutions that shape accountability and the career prospects of politicians affect their behavior. Here we ask the same question regarding judges. Berdejó and Yuchtman (2013) examined political cycles in the behavior of Washington State judges. The authors analyze observational data on the electoral timeline and sentencing decisions, showing that judges hand out sentences that are on average 10% higher near the end of their electoral cycles, and that a sharp increase in discretionary deviations beyond the sentencing guidelines largely account for this effect. Based on this evidence, the authors argue that judges respond to political pressure by seeking to appear tough, and that a system based on appointment rather than election would produce more moderate sentencing patterns.

The implicit idea in the paper by Berdejó and Yuchtman is that sentencing is visible to constituents. The natural way in which sentencing may become visible is through the media. Lim *et al.* (2015) examine the behavior of state trial court judges in the US between 1986 and 2006 to investigate whether information provided by the media affects sentencing. These judges attain office in various ways: some are appointed by the governor, some are elected in partisan elections following nomination by political parties, and the largest share are elected in non-partisan elections. The authors take advantage of the varying overlap of judicial districts and media markets to investigate the effect of media coverage on sentence length by judges. The effects of coverage are positive on judges elected in non-partisan elections and not for the others. The authors interpret this as reflecting the fact that judges elected through partisan elections are already known quantities for the electorate, and those who were appointed do not face an accountability pressure. The emerging picture is one where the media makes for harsher sentencing, although the institutional details regarding judicial nominations and appointments are crucial in modulating that effect.

Lim (2015) investigated the level of damages awarded in civil adjudication cases in US state courts. She shows that in areas in which the news media frequently covers court decisions, liberal and conservative courts grant similar damage awards. In contrast, liberal courts tend to award larger damages than conservative courts in areas that see little such coverage. Lim concludes that 'the presence of active media coverage may enhance consistency in the civil justice system'.

Lim and Snyder (2015) examined judicial elections across 39 US states. They show that candidate quality (as reflected in bar association ratings) affects election outcomes in non-partisan elections but does not in partisan ones. The authors conclude that 'to the extent that partisan voting behavior crowds out the influence of candidate quality on voting outcomes, the desirability of the partisan election system should be carefully assessed'. While the literature on political behavior has highlighted the information-economizing role of parties, it is conceivable that in some settings partisanship could have negative effects. Understanding when and where partisanship works to improve selection is an open question.

Selection effects in the judiciary are important, and constituency preferences may play a role even for appointed judges. Lim (2013) specified and estimated a dynamic structural model that she applied to the data on judicial districts in Kansas. The evidence indicates that while elected judges face the discipline of re-election incentives, this does not mean that a system of appointments will eliminate a link between constituency preferences and judge performance. Under an appointment system, voter preferences are expressed at the time of judge selection.

The idea that judge selection is important has been substantiated outside of the US as well. Grossman *et al.* (2016) analyze rulings in Israeli courts and showed that the verdicts on Arab defendants vary significantly depending on whether there is at least one Arab member in the panel of judges.

Iaryczower *et al.* (2013) developed a structural estimation approach by which to examine state supreme courts' decisions in criminal cases in the US. They showed that justices who do not face voters have better information, are more likely to change their preconceived opinions on a case, and are more effective.

We have considered whether electoral pressure and media coverage affect judicial rulings. Iaryczower and Shum (2013) extend attention to the role of campaign contributions. They showed evidence compatible with the idea that the voting of individual judges in various state supreme courts in the US is affected by campaign contributions, although the effects move different individuals in opposing directions and ultimately tend to cancel out.

The papers reviewed in this section provide evidence that incentives and selection forces are important in determining the functioning of the judiciary. But the judiciary involves other type of personnel, including staff, as well as organizational choices on how to deal with the, sometimes heavy, burden of caseload. It would be valuable to have evidence on whether, and to what extent, improvements on these alternative margins can help enhance the effectiveness of the judiciary.

Open research questions

- Can improvements in the efficiency of courts reduce crime and fraud and encourage investment?
- How do career concerns affect judges' sentencing decisions?
- What is the extent of judicial corruption and how does it impact economic development?

The quality of enforcement

What are the causes and consequences of quality of enforcement? The quality of enforcement is tightly related to the functioning of the police, judiciary, inspector and auditor cadres, as well as regulatory authorities. Some of the differences in the performance of a legal system may be related to matters of legal design, which we take up in the last subsection; in this subsection, we focus on the role of incentives and accountability, selection, monitoring and information.

Banerjee *et al.* (2014) report on two RCTs designed to study the determinants of police performance in Rajasthan, India. They focused on the role of various levers affecting incentives and monitoring, such as limitation of arbitrary transfers, rotation of duty assignments and days off, increased community involvement, training, decoy visits, and incentives tied to station performance. The authors found robust effects for the last three interventions. A noteworthy point is that the reforms that do not work fail due to poor implementation, and this might be tied to the fact that they reduce middle management-level authority. The outcomes were registering cases brought up through decoy visits, satisfaction with police service, public perceptions and performance in terms of testing for driver sobriety.

García *et al.* (2013) examined the randomly staggered roll-out of a police patrolling program in Colombia that encouraged community involvement and introduced incentives tied to the crime levels in officers' assigned districts. The authors found a significant reduction in brawls and homicides, arguing that the interventions may have strengthened motivation and a sense of accountability. One possibility, however, is that the lower crime statistics may have arisen as a result of manipulation of reporting rates.

Duflo *et al.* (2013) performed an RCT in the Indian state of Gujarat to evaluate how auditors of pollutant firms report differently depending on whether they are selected and paid by the firms themselves or the regulator. The authors report three main results: first, the existing system of firms hiring auditors was rife with corruption, with auditors misrepresenting actual emissions as often just below the limit. Second, regulator-hired auditors were more truthful and sharply reduced the share of plants reported to be in compliance. Third, the treatment induced monitored plants to reduce emissions. The authors conclude that 'reformed incentives for third-party auditors can improve their reporting and make regulation more effective'.

In another study involving inspections and regulatory oversight, Duflo *et al.* (2014) used an RCT to study an increase in the frequency of plant inspections by environmental regulators in India. Although treated plants were more likely to be inspected and cited for pollution violations, they only marginally reduced emissions. Furthermore, the regulators were not more likely to identify the worst violators, defined by emissions of five times the standard or more. The authors observe that, while treatment inspections were assigned randomly, discretionary inspections often specifically target those plants likely to be extreme polluters.

While there are RCTs varying either the monitoring or incentives of private agents like firms and those of law enforcers, we do not have studies (that we have identified in this review) varying monitoring or incentives on both sets of agents at the same time, to determine whether they are complements or substitutes.

Most of the studies reviewed focus on determinants of enforcement. Some of them (e.g. Duflo *et al.*, 2014 on pollution) also study effects on the type of behavior that the enforced regulation seeks to curb. But most studies do not do this and an open area of inquiry is how improved enforcement can be brought about and how it may affect outcomes. There are many open questions in this area.

Open research questions

- What are the political and administrative determinants of regulatory independence and effectiveness?
- To what extent do improvements in enforcement cause net social gains as opposed to displacement? For example, increased pollution monitoring on some firms could lead them to having higher costs, but their losing market share would displace activity to other firms who pollute more. In long-run equilibrium, the impact of inspections on pollution could be smaller unless all firms are treated.
- Does increased monitoring, through ICT, reduce police corruption and police brutality?
- Do third-party verification schemes help to reduce collusion between regulators and can pay-for-performance schemes improve the quality of policing?
- What are the determinants of the independence of regulatory authorities?

Legal design: Its role and regulatory effects

Legal systems differ by design, both in terms of regulatory implications (e.g. in determining the rights of minority shareholders or of labor organizations) and in terms of pure legal procedure. In connection with the latter, legal systems differ, for example, in terms of the role they assign to judges, the standards used for collecting and admitting evidence to be used in court, the role played by trials, and the procedures involved in litigation. These design ‘details’ may affect outcomes directly even when holding constant the incentives, selection, information and monitoring issues analysed earlier (and perhaps also indirectly by affecting these very issues as well).

Djankov *et al.* (2003) argue that procedural formalism is a relevant metric that encompasses many of those legal ‘details’, and show that metric to be strongly associated – in a detrimental way – with legal outcomes, such as the ability to evict a tenant for failure to pay rent or to collect a bounced check. The degree of procedural formalism by the year 2000 is strongly affected in turn by the legal origin of a country’s legal system, e.g. whether it is civil law or common law. One view could be that legal procedures are on trend toward convergence and that given enough time all legal systems will approximate some optimum. However, in newer work, Balas *et al.* (2009) showed that procedural formalism across countries with different legal origins has if anything diverged since 1950, suggesting important forces prevent convergence even if procedural formalism is associated with worse outcomes.

Several legal differences across countries have regulatory implications, because they affect the way economic activity is organized. One example of this is the extent to which legal rules and procedures affect the ease with which new business can be authorized to operate. As shown by Djankov *et al.* (2002), the time and cost involved in starting a new business varies

widely across countries and is associated with economic outcomes such as the size of the informal economy. In addition, and compatible with the idea that legal and regulatory regimes are endogenous to political institutions, the burden of regulatory entry is positively associated with deviations from democracy and limited government. The potential role of political institutions driving legal variation that impacts regulatory outcomes is also present in the case of labor relations –dominance by political parties is associated across countries with more generous social security, but also with more stringent labor regulation (Botero *et al.*, 2004). Heavier regulation tends to correlate with lower labor force participation and youth unemployment.

Another way in which legal aspects can affect economic activity is through the regulation of conflicts of interest in economic organizations. One example is the degree to which controlling interests in a firm can exploit their power to the detriment of other interests (e.g. minority shareholders, creditors, etc.). To measure that degree, Djankov *et al.* (2008) compile an index of ‘self-dealing’ for over 70 countries, which reflects aspects such as the need for approval of business decisions made by controlling interests and the scope for litigation to seek redress. The authors show that this index is associated with important measures, such as stock market capitalization as a share of GDP, ownership concentration and the number of firms over GDP ratio.

An important challenge in concluding that countries should actively reduce procedural formalism or other type of legal design aspects in order to improve legal performance is the possibility that the choice of legal procedure could be endogenous to other perceived distortions that those procedures are supposed to mitigate or guard against. We are not aware of empirical work at the micro level that relies on exogenous variation to investigate the effect of reductions in procedural formalism or regulatory burden. The experiments that have been performed on the costs of business formalization are one way of addressing issues of regulatory burden, but do not operate through deep changes in legal aspects. Work that can illuminate deeper legal and regulatory changes would be valuable. One possible avenue for progress is to focus on legal and regulatory institutions that can be affected at the local level, be it geographic, or project-based. There are many institutional complexities in the design of regulation – e.g. as it pertains to the development and maintenance of infrastructure – that await evaluation with stronger empirical methods. This is evident from Estache’s (forthcoming) detailed review of theoretical and empirical contributions in the area of infrastructure regulation.

Open research questions

- How does the enforcement of bankruptcy laws affect firm behavior?
- How does the deregulation of labor laws impact labor relations?
- Do reductions in procedural formalism increase judicial performance and does this translate into changes in the incentives and behavior of economic agents?

5 Conclusions

Legal and political institutions are fundamental drivers of economic development. In this review, we highlight the need for rigorous research to better understand the causes and consequences of these institutions for the developing world. While this call for research stands upon a large extant empirical literature, from which several important lessons have emerged, few studies have been able to overcome the endogeneity concerns associated with institutions. As a result, our understanding of the causal pathways by which these institutions operate remains incomplete.

RCTs offer a powerful methodology with which to push this research agenda forward. In contrast with other approaches, RCTs can assure us that the factors that determine the adoption of a particular set of institutions are not biasing our comparison of places that have adopted to those that have not. Institutions can also affect outcomes through various channels. Well-designed RCTs will often allow researchers to separately identify the possible mechanisms.

While RCTs offer many benefits over alternative methodologies, they are not without limitations. The main concern that often arises is whether the results of a study can be generalized either to other settings (i.e. *external validity*) or at a different scale (i.e. *scalability*). Although issues of external validity are not unique to RCTs, the opportunities to conduct experiments can often be limited to specific settings or with special implementation partners. Issues of scalability arise because randomized evaluations compare the difference between treatment and comparison populations in a given area. If the effects of the treatment depend on the scale of the intervention (e.g. due to general equilibrium effects, or even in who implements the broader program) then the effects of the treatment can be quite different if it were to be adopted more broadly.

Generalizability is a serious challenge, but some substantial progress can be made through linked RCTs. By conducting RCTs in different countries that are linked in the sense that they investigate similar mechanisms (e.g. a particular type of disseminating information on corruption) that are expected to lead to institutional change, we can overcome the issues of external validity. A good analogy is provided by the recent multi-country RCT study by Banerjee *et al.* (2015). In this study, the authors describe results from a set of pilot projects in Ethiopia, Ghana, Honduras, India, Pakistan and Peru encompassing 11,000 households. Each project provided short-term aid and longer-term support to help participants graduate to a sustainable level of existence. In each country, the program was adjusted to suit different contexts and cultures, while staying true to the same overall principles. This multi-pronged approach is relatively expensive, but the theory of change is that the combination of these activities is necessary and sufficient to obtain a persistent impact. At the end of the intervention, they found statistically significant impacts on all 10 key outcomes or indices. One year after the end of the intervention, 36 months after the productive asset transfer, eight out of 10 indices still showed statistically significant gains, and there was very little or no decline in the impact of the program on the key variables (consumption, household assets and food security).

Another approach to resolving issues of external validity and scalability is to allow for multi-arm treatments and to conduct the experiment at scale. With multi-armed treatments,

experimenters can separate out the mechanisms by which institutional changes may take place. Thus, the point is not only to show that some specific intervention produces a particular change but also to understand how this change takes place, what other interventions could have the same effect and to what extent the interventions can be scaled up. The study by Gertler *et al.* (2015) is an illustration of such an approach. It investigates the effects and mechanisms (behavioral change versus investment) of health promotion campaigns designed to eliminate open defecation in at-scale randomized field experiments from four countries: India, Indonesia, Mali and Tanzania. The field experiments are at-scale in the sense that the interventions were designed and implemented by governments as part of their national environmental health strategies, and randomly rolled out geographically over time. The combination of at-scale cluster randomized field experiments with common measurement of outcomes in four countries provides not only strong internal validity but also a degree of external validity not seen in most studies.

A third approach to create more robust knowledge is to accumulate findings that are strongly complementary and connected through the measures that are used. For example, we reviewed work showing that financial incentives attract workers with better individual characteristics such as intelligence and personality traits (Dal Bó *et al.*, 2013). However, it would be natural to wonder whether other inducements could have similar effects and whether those individual characteristics matter for performance. Studies by Ashraf *et al.* (2015) and Callen *et al.* (2015) answered just these questions; we therefore have a body of work showing that a specific set of individual characteristics matters for performance and there are multiple ways of recruiting personnel with those features. While these research complementarities can arise spontaneously, work attempting to incorporate them by design would be valuable.

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