# The Lack of Public Goods in Emergent Economies: A Call for Research and a Case Study of Innovative Organisational Designs

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## ABSTRACT

As an input into a wide range of productive processes, public goods such as transportation, utilities and other basic infrastructure are sources of broad value creation and appropriation. But with population growth, climate change and urbanization, gaps in these public goods are growing fast in emergent economies, threatening the global order. Tackling this grand challenge requires assembling vast actor-networks with capacity to navigate many institutional voids: inefficient markets, ill-defined property rights, poor regulation and weak judiciary and contract-enforcement mechanisms. Drawing on organisation design literature, I call for research on the interdependency between designing systems to build capital-intensive public goods and navigating institutional voids. I ground this call on a duality rooted in the two main concomitant efforts of our time to tackle this challenge: the inclusive, market-oriented forms of organising as favoured by western development agencies; and the centralised, state-led forms of organising espoused by Chinese agencies. Stuck between the struggle of the former to act quickly and the uncertainty on the impact of the latter, this problem offers a topical context for management scholarship. I lay out a research agenda around the idea of ambidextrous systems with two broad questions: Can more effective systems be designed by manipulating organisation boundaries? And can more effective systems be achieved by manipulating the interplay between the formal and informal organisations? I illustrate these points with evidence of an innovative organisational design to tackle urban informality in Cairo, the world’s fastest-growing city. The innovation lies in supplementing contractual governance to acquire formal resources with collective-action governance to acquire informal resources and economise on transaction costs. Considerations on data access are made so as to put this agenda into action.

## INTRODUCTION

Grand challenges relate to socio-economic problems that are so complex, uncertain and difficult to resolve so as to seem intractable, like ending global hunger or eradicating extreme poverty (Colquitt and George 2011, Ferraro, Etzion and Gehman 2015, Grodal and O´Mahony 2017). The grand challenge motivating this call for research is the lack of public goods in emergent economies – environments lacking efficient markets, well-defined property rights, contract-enforcing mechanisms, basic infrastructure and the codified, enacted and enforced rule of law (Khanna and Palepu 1997, George, McGahan and Prabhu 2012). To navigate these ‘institutional voids’, organisations use intermediaries; agents that broker relationships, bringing about activities between two or more parties that could not readily happen otherwise (McDermott, Corredoira and Kruse 2009, Mair, Marti and Ventresca 2012). Institutional intermediaries are those agents that help to create and develop institutions, thus helping create the prescriptions people use to organize all forms of interaction (Ostrom1990; North 1990).

The focus of management scholarship has been on how multinational firms and entrepreneurs use institutional intermediaries like business incubators, science parks and development agencies to enter in emergent markets. This literature shows that intermediaries help firms access public resources, and acquire capabilities, certification and informal resources. Some intermediaries act as closed-system agents, only seeking to create benefits for the restricted set of system participants; others act as open-system agents, seeking to create benefits for parties beyond the participants and to improve the general institutional environment (Dutt et al. 2016). This body of literature is instructive, but neglects how institutional intermediaries can help the state itself develop public goods and thus fill institutional voids. And yet, there is a vast group of institutional intermediaries ready to help struggling governments access much needed finance, human capital and other resources to produce public goods: multilateral organisations and development banks, charitable donors and development agencies owned by both advanced economies and emerging economies. This development assistance, though, comes with strings attached that constrain the architecture of the inter-organisational systems that are formed to produce public goods. Meaning, the institutional intermediaries act as organisational designers by influencing choice on the system components, on their relationships to each other and the environment, and on the principles and widely-held shared rules by which the organisational system evolves and complementary resources are orchestrated (Simon 1962, Fjeldstad et al. 2012).

The role of institutional intermediaries as organisational designers is particularly salient in the organisational systems formed to develop capital-intensive public goods like utilities, transportation and other basic infrastructure, e.g.,,, hospitals, schools and affordable housing. These infrastructures are a prerequisite to economic growth and sustainable development, yet a conflation of factors, including population growth, climate change and rapid urbanization, is exacerbating the infrastructure gap in emergent economies. The challenge is colossal: with 90% of urban growth occurring in the developing world, the number of slum dwellers is projected to reach 2 billion by 2023 – about a fourth of the world’s population (UN – Habitat 2008). In Africa alone, whose population is expected to reach *forty percent* of the world’s population in this century, less than half of the people have access to electricity; water scarcity and lack of infrastructure to deal with extreme weather, such as the Cape Town drought, present other pressing problems (UN 2017, 2018, IEA 2016).

Strikingly, the institutional intermediaries presently assisting the emergent economies build basic infrastructure differ sharply in their approach to navigating institutional voids. These differences are rooted in the newly emerging global order, as China rises to become the world’s biggest economy and the share of the global economy of the advanced economies, hobbled by fiscal pressures and populism, shrinks. Development assistance disbursed by traditional intermediaries occurs mostly in the form of grants and loans conditional on western principles of good governance – transparency, stakeholder engagement, accountability, equity and rule of law (Burnside and Dollar 2000, Hermes and Lensink 2001). As a result, the actor-networks enabled by traditional intermediaries struggle to grow until they first help build managerial capacity in the public agencies, and legal and policy frameworks for budgeting and public expenditure management. In other words, filling institutional voids is as much a part of the system goal as is building basic infrastructure.

In marked contrast, Chinese development finance comes with limited conditionality. Rather than ‘aid’, Chinese finance provided by, for example, the Exim Bank of China or the China Development Bank are basically export credits more akin to syndicated loans from European commercial banks or US export credits. Accordingly, the Chinese intermediaries take the institutional environment as a given. Their focus is to build the infrastructure first and develop institutions second. Furthermore, Chinese finance is tied to purchasing and importing from China as much technology and services as possible, a model pioneered by Japan decades earlier (Brautigam2009, 2011). To create opportunities for Chinese firms to work abroad quickly, these networks exploit institutional voids or artfully manoeuvre around them. These differences notwithstanding, both forms of organising to build public goods merit research as they complement one another. In Africa, for example, Chinese finance is about to exceed finance from the World Bank, and already dwarfs finance from the western development agencies; from 2000 to 2015, $63 billion was disbursed by the Export-Import Bank of China against $1.7 billion by the USA Eximbank (Eom et al. 2017).

Gil et al. (2018) argue that there is a fundamental organisational duality rooted in these two alternative forms of intermediation. Design dualities exist when organisations wish to pursue two jointly desirable objectives, but struggle to reconcile the two because the attributes underlying one pole of the duality tend to be incompatible with those of the other pole, e.g., to exploit or explore; to integrate or differentiate (Lawrence and Lorsch 1967, Evans and Doz. 1989). Faced with these difficulties to design and pursue dualities, the organisation architects choose instead to focus on one of the poles of the duality, as opposed to doing both; they choose “gains from focus” in detriment of “gains from ambidexterity” (Birkinshaw and Gibson 2004, Smith and Tushman 2005). In the grand challenge that is building emergent economies’ basic infrastructure, a duality arises because the objectives of getting things done quickly *and* developing the surrounding context are both desirable. Failure to build robust institutions and local capabilities compromises the long-term sustainability of the outcomes. But failure is also not to build basic infrastructure *quickly*. Still, designing organisations that reconcile both objectives is hard because they tend to have incompatible attributes, which raises the question if more ambidextrous systems cannot be designed to improve performance – the core question underlying this research call.

The remainder of this call for research is organized as follows. I first draw on organisational design literature to formulate a research agenda informed by the challenge of developing the emergent economies’ infrastructure. I then illustrate opportunities for management scholarship with evidence from an innovative organisational design set up to tackle the informal settlements in Cairo, the world´s fastest-growing city[[1]](#footnote-1). I conclude with considerations on opportunities and challenges inputting this research agenda into action.

## Building Public Goods in Emerging Economies: An Organisational Design Research Agenda

China’s economic rise has given governments of emerging economies agency to choose between two very different approaches to develop basic infrastructure. This phenomenon has exacerbated a duality in designing organisations to build capital-intensive public goods. Unsurprisingly, this duality is the subject of an unresolved debate in the development literature, which is summarised below, before laying out a research agenda for management scholarship. To put this debate in perspective, it is worth noting that China has pledged $1 trillion over the coming decades to build the emergent economies’ infrastructure through the Belt and Road Initiative – China’s cooperative development strategy launched in 2013, whose scope ranges from building a new capital city for Egypt to railways, hospitals and dams in sub-Saharan Africa, ports and power stations in Asia, and gas pipelines in Eurasia.

On one side of the debate is the idea that western finance is dogmatic and inflexible, that good governance principles increase transaction costs too much and that the impact of western aid on growth has been negligible (Hirschman 1984, Moyo 2009, Tan-Mullins, Mohan and Power 2010). Accordingly, China is seen as providing much needed investment in basic infrastructure; bringing technical and commercial know-how and widening market access; and getting infrastructure done quickly without tiresome “strings” attached (Henderson 2008 and Hernandez 2017). Yet other scholars claim Chinese finance is nothing more than ‘rogue aid’, serving an opaque clique of interests dominated by informal and personal relationships (Naim2007). They also claim China is allowing profligate states to build up unsustainable levels of debt, retain weak financial, economic, and political governance, and occasionally infringe human and civil rights (Dreher and Fuchs 2011).

As the allure of the Chinese centralised, state-led approach grows and hope wanes on more inclusive, market-oriented approaches, more research is needed to understand what exactly is going on here. I contend that one cognitive lens relevant to illuminate this phenomenon is organisation design, a research stream at the heart of management literature. We know that organisation design is contingent on the institutional environment to which the organisation must relate (Lawrence and Lorsch 1967; Thompson 1967; Scott 1981). We also know that institutions are more than just background conditions­­­ – they directly influence strategic choices available to an organisation, and organisations are known to achieve and sustain competitive advantage through strategies that overcome, shape and capitalize on the nature of their institutional environments (Khanna and Palepu 1997, 2010; Henisz 2002; Khanna and Rivkin 2001). Furthermore, the actor-networks enabled by development finance are but instantiations of ‘meta-organisations’, that is, networks of autonomous actors unified by an identifiable system-level goal (Gulati, Puranam and Tushman 2012). So, a choice between intermediaries espousing differing principles to navigate institutional voids is a choice between different forms of (meta) - organising. And this raises the question as to how the designed structures and processes across the two forms of (meta) - organising enable the participants and environmental actors to create and appropriate value.

Importantly, we should not necessarily expect to find in the Chinese-enabled forms of organising highly innovative structures and processes to resolve the problems of collaboration and coordination – the two fundamental problems central to integrating effort in any form of organising (Puranam, Alexy and Reitzig 2014). On the contrary, numerous accounts suggest that Chinese-enabled systems tend to centralise decision-making authority in the hands of a tight-knit coalition restricted to the Chinese actors (lender, main contractor) and the recipient state (Gil et al. 2018). This coalition is governed by contracts, but does not operate under pressures for accountability, stakeholder engagement, and transparency. Hence, the deals between core actors are opaque, key stakeholders are excluded from the decision-making process and suppliers are not selected through competitive markets. To resolve coordination problems, this form of organising relies on authoritarian political leaders and top bureaucrats with power to mandate subordinates to provide the necessary information – a design suggestive of Demsetz’s (1988) idea of coordination by “direction”. At odds with calls for cooperative forms of organising, these closed and stratified networks may not rule out the use of coercion to acquire private resources that lie outside the system, for example, to acquire private land; rumours, often corroborated by evidence, are rife on the use of informal inducements in the form of bribes, kickbacks and other illegal activity to facilitate cooperation. And as characteristic of highly hierarchical systems, there is tight control over the right of the participants to speak on behalf of the actor-network (Zuckerman 2010).

 And yet, conflicting evidence on the performance of this closed, stratified and opaque organisational design makes it merit further research. On the one hand, empirical evidence points to remarkable achievements, such as the rapid developments of Addis Ababa’s light rail transit, the first in Sub-Saharan Africa, and the railway connecting Kenya’s capital city to the port city of Mombasa – two infrastructures with potential for broad value creation. Then, on the other hand, there are accounts of organisational failures due to underestimation of the strength of the institutions protecting property rights, often a legacy of the colonial period, and customary rights; the case, for example, of Chinese railway investments in Nigeria (Gil et al. 2018). This conflicting evidence raises interesting questions:

* Is the effectiveness of this organisational design contingent on particular attributes of the institutional environment?
* Is the use of informal inducements a pre-requisite for this organisation design to work?
* Do its chances of success rely on particular attributes of the focal problem?
* And what does success mean?

This last question is particularly hard to address, when not only information flows on costs and benefits are covert, but also the outcomes are long-lived and so data on value creation takes decades to assemble. This is the case, for example, of the Tazara railway, a route for bulk trade from Zambia’s copper belt to the Tanzanian port of Dar es Salaam, built in the 1970s with Chinese finance. This railway has struggled to create value since its opening, but the option is still open. Relatedly, recent accounts suggest the design of Chinese-enabled systems to build infrastructure is itself evolving. For example, the Belt and Road Initiative is creating opportunities for Western companies to work with Chinese partners[[2]](#footnote-2). And a China-IMF capacity development centre was established in 2018 to train Chinese officials to work abroad – collaborations with potential to catalyse innovative forms of organising.

Interesting and relevant as these research questions might be, gaining access to the inner workings of networks enabled by Chinese finance is not easy, due to their own approach to navigating institutional voids. But this difficulty is a useful backdrop for thinking about questions to ask on the networks to build public goods enabled by traditional intermediaries. Specifically, two broad questions can be formulated. The first revolves around setting boundaries under good governance constraints. These constraints are rooted in decades of western scholarship on the contribution of strong institutions and a shared belief in the rule of law to economic growth. This body of work posits the value of separating policy from the personal interests of the elites; of the rules governing economic exchange, and governing how these rules are enforced and may be changed, and of the capacity of the state to commit credibly to upholding property rights (North and Weingast 1989; North, Wallis and Weingast 2009).

To meet these good governance constraints, the organisational leaders are expected to share decision rights with key stakeholders, e.g., environmental agencies and local governments. They are also expected to“co-opt” (Lawrence and Lorch 1967) other stakeholders, trading access to their resources for a loss of decision-making autonomy. Any decision to locate decision rights is an organisational design choice (Aghion and Tirole 1997). Hence good governance constraints are about setting boundaries. This does not mean that a system enabled by traditional intermediaries is prohibited from making unilateral decisions. It can; but these systems must follow the rule of law and respect property rights to attend to distributional concerns on value creation. These systems are also expected to help develop the institutions and capabilities in the context, e.g., legislation for budgeting and managing public expenditure; structures to arbitrate disputes; and management capacity of public agencies. These constraints exacerbate the interdependency of the system with an institutionally underdeveloped context – a source of uncertainty that threatens their survival.

Importantly, good governance constraints do not advocate flat systems with equal members. They also do not advocate that the systems need to be open to any actor wanting to join in. On the contrary, organisational designs enabled by traditional intermediaries remain stratified and closed, with the lender and the state sharing the “gatekeeper” role (Rothaermel and Boeker 2008). But transaction costs increase with efforts to build consensus with key stakeholders, engagement with other stakeholders, designing contracts to govern resource exchanges and developing surrounding institutions. Changing institutional regimes is particularly time-consuming and costly because of information asymmetries, incompatible interests and equity concerns (Libecap 1989). This raises the question of how, under the shadow of good governance constraints, organisational boundaries can be manipulated to *simultaneously* economise on transaction costs, encourage cooperation and accelerate growth.

A second broad research question, triggered by the loss of allure in networks enabled by traditional intermediaries, relates to the role of the informal organisation. Organisational design choices matter because they mandate interactions for exchanging and mobilizing resources in pursuit of collective goals (Gulati and Puranam 2009). In other words, designed structures and processes are what both constrains and enables collective action. But researching connections between organisational design and social networks is also critical to further our understanding of organisational performance (Van de Ven et al. 2013). We know that dispute resolution ultimately hinges on the interplay between formal and informal mechanisms. And we also know that informal mechanisms can compensate for the formal organisation by encouraging individuals to behave in certain ways that can add value, even if the formal organisation does not reward or emphasize those behaviours (Gulati and Puranam 2009). Furthermore, in institutionally underdeveloped and resource-constrained settings, organisations are more effective if they have capacity to mobilise informal resources like local know-how, networks of trust and traditional technologies (George et al. 2016).

The idea that inconsistencies between the formal and informal organisation can be leveraged to create ambidextrous organisations seems particular relevant to tackle the grand challenge motivating this call for research. Perrow’s (1986) study of complex systems shows that management by direct controls is “expensive and reactive”. Perrow went further, stating that “the vast proportion of the activity in organisations goes on without personal directives and supervision – and even without written rules.” Our focal challenge suggests a duality in organisational design: we need quick action *and* change institutions. Yet empirical evidence shows the two objectives are hard to reconcile. For instance, for more than a decade the World Bank has worked with the government of Kampala, Uganda’s capital, to upgrade its network of colonial-era roads. The Bank claims that Kampala is a “city in transformation”. But the achievements on the ground have been outpaced by the rapid growth of Kampala’s population. This sense of frustration is even greater in Lagos, Nigeria, which will soon become Africa’s largest city by population: 15 years after the World Bank helped set up a transportation agency, Lagos still lacks basic public transportation (Gil et al. 2018).

So it is worth exploring ways by which the informal organisation can compensate for the slowness of the formal organisation enabled by traditional intermediaries. Evidence from systems enabled by Chinese finance suggests their rapid achievements can be traced in part to cooperation facilitated by informal private gains. The role of a powerful informal organisation is also documented in accounts of the nineteenth-century US infrastructure boom (Chandler 1977, Levy2014). But of course, the idea of a compensatory fit by which the informal organisation pushes in a direction away from good governance is unsettling; turning a blind eye to bribery, corruption and other illegal activities goes against the principle of accountability that pressures organisations to credibly commit to follow promised and/or reasonable procedures (Freeland and Sivan 2018). It is more reassuring to think of complementarities in terms of supplementary fit, in which the informal and formal organisations push in the same direction (Kogut and Zander 1996, Milgrom and Roberts 1990, Siggelkow 2002). But Perrow (1986) argues it is not unusual for activity in complex organisations to go on “in permitted violation of the rules”. And even if we accept that there might be value in complementarities in terms of a compensatory fit, practical problems and lack of understanding of boundary conditions suggest an opportunity to build new theory.

Crucially, empirical evidence suggests that traditional intermediaries are trying to improve the effectiveness of development finance through innovative organisational designs. The merits of researching these efforts are better evaluated by considering the evidence from the following case of an innovative system to upgrade the informal settlements of Cairo.

# Innovative Organising to Upgrade Cairo’s Garbage Cities

Cairo, the world’s fastest-growing city is a suitable setting to research new forms of organising to navigate institutional voids for three reasons. First, about two thirds of its over 22 million people are already trapped in slums and informal settlements with alarming life conditions: limited access to basic infrastructure, no property rights, ramshackle houses and threat of forced evictions (Sims 2010). Second, as a gateway for migratory flows into Europe, Cairo has been at the forefront of western donor efforts to improve informal settlements. Under pressure from the international community, the Egyptian state has recognised informal areas are not totally clandestine, but rather outcomes of policies of negligence and laissez faire (Khalifa 2015); the state has also set up a public agency, the Informal Settlement Development Facility, to tackle the problem. And third, the very same authoritarian state has, for decades, attempted to tackle this problem through centralised initiatives. Efforts to evict the poor from inner-city areas and relocate them in new satellite cities in the desert have nonetheless failed because the poor cannot afford to live far away from the city (Sims 2015). But now, illustrating the duality at the core of this grand challenge, the Egyptian state is in advanced talks with Chinese actors to build, in five to seven years, New Cairo. This scheme to build a £30bn purpose-built capital in the desert is seen as a massive gamble by urban planners[[3]](#footnote-3). Accessing data on New Cairo is virtually impossible, which shifts our focus to the efforts of the western agencies; central to their work is the participatory development policy.

## The Participatory Development Policy

Participatory approaches are a response of western actors to a widely-felt need for a power reversal between the development agencies and the beneficiaries (Chambers 1983). The basic idea is to see the poor as development partners, or as Chambers (1983) says, “to put the last first”. So a participatory approach allows the poor to directly influence decisions on capital allocation. This idea has been institutionalised as follows:

The empowerment of the people to effectively involve themselves in creating the structures and, in designing policies and programmes that serve the interests of all, as well as to effectively contribute to the development process and share equitably in its benefits.[[4]](#footnote-4)

A participatory approach assumes that the risks of organisational failure are higher if the poor are left out of a formal, deliberative decision-making process. By bringing the poor into the organisational boundaries, a participatory approach seeks to encourage the poor to cooperate and voluntarily contribute resources under their direct control, e.g., know-how, networks of trust, time, labour, and even cash. But a participatory approach does not seek to use contracts to formalize the resource exchanges. Instead, the idea is to build a temporary informal organisation not dissimilar to informal organisations formed in emergent situations (Majchrzak, Jarvenpaa and Hollingshead 2007). This informality can belie its goal to resolve ill-defined property rights and formalize informal economic activity. But a participatory approach recognizes that building a formal temporary organisation would lead to unaffordable transaction costs, such as the costs of bargaining, delays, information measurement, supervision, enforcement and political action (Williamson 1979).

Numerous accounts suggest that a participatory approach works better than a top-down approach at encouraging voluntary resource contributions from the poor; it also works better at attracting good maintenance for the outcomes (Baiocchi 2003, Osmani 2008). Other accounts, though, show that implementing a participatory approach is not easy to implement, because the poor tend to mistrust the authorities, lack the skills to collaborate and may not see how the benefits outweigh the costs (Osmani 2008). Other issues are the risks of local elites capturing the participatory activities to solidify previous inequalities and of the poor feeling incentivised to distort information (Rigon 2014, Platteau and Abraham 2002). There is also a risk that a participatory approach becomes merely a rhetorical discourse in order to masquerade a consultation process (Cooke and Kothari 2001, Kumar and Corbridge 2002).

The idea of supplementing a group of organisations governed by contracts with an informal organisation resonates with Williamson´s (1979) idea of combining simple contracts with complex governance structures reserved for complex relations. Still, the idea of sharing decision rights with actors with ill-defined property rights remains underexplored. We turn now to illustrate how this idea was put into action to upgrade Cairo´s garbage cities.

## Upgrading Cairo’s Garbage Cities

The case focuses on a project that won an award for urban innovation[[5]](#footnote-5) to upgrade the Zabbaleen (‘garbage people' in Arabic) cities of Cairo. It is an ‘extreme case’ for inductive research (Siggelkow 2007) in that the project succeeded in quickly building much-needed infrastructure whilst changing surrounding institutions. The Zabbaleen are a community of 60-70,000 families who live in informal settlements and handle about a third of the waste generated daily in Greater Cairo[[6]](#footnote-6). The men collect garbage manually and transport it using donkey and motorised carts; the women and children sort and recycle waste manually for their families, or against a low daily wage for others in makeshift workshops and households, separating paper, plastic, glass and food in bags ready to be sold for recycling.

Informal waste pickers – the ‘poorest of the poor‘– represent considerable savings for developing economies, both for picking up the waste left uncollected by the public and private sectors, and for recycling substantially more waste, thus reducing the need for landfills. But waste pickers, estimated to be about 10% of the inhabitants in slums around the world (Wilson, Velis and Cheeseman 2006), live surrounded by potentially infectious, disease-ridden garbage. In Cairo, a centralised attempt by the Egyptian state to address the solid waste management problem by privatising waste collection in the early 2000s had failed. Due to lack of local know-how, the contractors overlooked the difficulties of serving Cairo’s narrow streets and alleys with their modern trucks; they also struggled to recruit staff because of the social stigma of being a garbage collector. Complicating matters, the cash-strapped Municipalities[[7]](#footnote-7) struggled to pay the contractors and meet their contractual obligations to provide basic infrastructure for the contractors to handle the waste. This made it hard for the contractors to meet their own performance targets, which triggered fees that the contractors refused to pay (Scheinberg et al. 2010). The residents themselves continued to prefer paying the Zabbaleen to collect their garbage unofficially from their door, as opposed to taking the garbage out and putting it into the contractors’ large bins. And the residents were also frustrated that they had to pay a ‘cleaning’ fee for the contractors’ services. Attempts by the contractors to hire the Zabbaleen fell flat, since most Zabbaleen found it more lucrative to stay in the informal sector. Occasionally, the Zabbaleen sought to sabotage the private contractors’ work by collecting waste before the contractors could come to collect.

When the Egyptian state asked the World Bank and the UN for help in 2010, both multilaterals advised the state to integrate the Zabbaleen in a new solid waste management policy; such an inclusive approach would also tackle the inhumane and undignified conditions in these garbage cities. Because upgrades of informal settlements rarely generate revenues, they are suitable for charitable aid. But foreign donors cannot offer grant unless the recipient of the funds agrees to be aided. Facilitating resource exchanges between donors and the host state are the implementation agencies in a role akin to the institutional intermediaries of private enterprises. Seeing opportunity for funding, GIZ, an implementation agency fully owned by Germany, proposed to the Egyptian state a pilot project as part of its Participatory Development Program – a bilateral collaboration to attract foreign funds. I turn now to examine how a participatory approach led to an ambidextrous organisational system.

## Developing a ’nexus’ of contracts

A ’nexus’ of contracts was at the core of the architecture of the inter-organisational system designed by GIZ to upgrade the garbage cities. First, there was the 2004 agreement of bilateral cooperation by which the Egyptian state allowed GIZ to engage with local authorities, civil society actors, and the Cairenes. As part of this agreement, GIZ co-located an operational team in the Ministry of Planning facilities, and committed to a schedule of monthly meetings and reports of its plans and activities. One level down, GIZ entered into a contract with the Qalyubera Governorate, an administrative entity overseeing over 5 million people with delegated authority from the state to implement the national solid waste policy in the 11 towns under its jurisdiction. This authority was further delegated to the Municipalities (town governments), which were mandated to monitor the activities of the waste contractors and the Zabbaleen, pay the waste contractors and levy and collect fees. In exchange for cost-free investment and capability-building, the Governorate committed to contribute land to build solid waste management facilities and authorised GIZ to work with two Municipalities, each one hosting a garbage city.

Agreements with the authorities notwithstanding, GIZ lacked funds to finance the upgrades of the two Zabaleen cities and was constrained by good governance requirements that required using costly international tenders to select suppliers. A solution for the financial bottleneck emerged when the Bill and Melinda Gates Foundation announced plans to fund projects to fight urban poverty. This donor was interested to find out if there was a ‘silver bullet…something that could be transformative’, as one consultant noted. In full alignment with the goal of GIZ, the Gates Foundation wanted to support solutions that would enable engagement “with the poor...turn them from being beneficiaries into partners”, as Melinda Gates said[[8]](#footnote-8). The reputation of the GIZ PDP program in Egypt, the oldest GIZ development programme worldwide, reassured the donor that their money would be put to good use. In turn, GIZ welcomed aid from the Gates Foundation, since it was unclear when aid from the EU would arrive. The $5million grant from the Gates Foundation came with a commitment to a participatory approach, a fixed budget and timescale, and reporting and monitoring requirements.

This nexus of contracts between GIZ, the state, the local authorities and the donor, enabled the assembly of an actor-network to address the solid waste problem by integrating the Zabbaleen – the unifying system goal. The resource exchanges between these participants were not difficult to decompose into contractible transactions because the resources were measurable, and did not involve high degrees of reciprocal interdependence (Baldwin 2007). Instead, it was more about pooling resources (work permits and finance) in the hands of GIZ to enable the agency to get on with the job. Even so, these contracts left this organisational system constrained by sub-goals, targets, and a commitment to a participatory approach. We turn now to examine how this last commitment translated into adding a collective-action arena.

## Collective Action under the Shadow of Contractual Governance

A participatory approach allows the poor to directly influence the decisions that affect their lives in exchange for their collaboration. Still, bringing the Zabbaleen into the organisational boundaries was a risky choice because of conflicting interests and a lack of mutual trust between the poor and the local authorities. In other words, the GIZ expected significant rivalry in the choices that would need to be made to allocate the capital resources. But after the Zabbaleen were granted decision rights, the shadow of contractual governance made it costly for the contracting partners to renege on this pledge and violate the terms of the bargain. So, in other words, by sharing decision rights with the poor, the GIZ created a collective-action structure where development choices and corresponding capital allocation choices became common resources, conflating high rivalry with low excludability (Ostrom 1990).

 To implement their participatory approach, the GIZ planned one year of regular face-to-face meetings. The emphasis was to get the Zabbaleen groups representing the interests of women, the young and businesses, as well as the Municipalities and local popular councils elected by the town residents, to search for common ground on shared problems and potential solutions. The risk of failure was high because at any point one party could choose to free ride and make demands disproportional to what that party was willing to contribute to an equitable solution. Another risk was that participants might refuse to share private information. The Zabbaleen worried about the authorities coming to evict them, and sell the land of the garbage cities to real-estate projects; wary of more fines, the Zabbaleen were also reluctant to reveal their revenues; the places where they were picking up, recycling, and dumping waste, and their collection routes; the local councils of residents, too, were concerned about being punished by the authorities if they complained too much. In turn, the authorities did not want to disclose the budget for solid waste management as they were concerned that the Zabbaleen could exploit this information if they were to bid for contracts; and the Municipalities did not want to reveal how much money was being officially collected in fines on the waste pickers and the contractors, as there could be bribes involved, and were pushing instead for stricter regulation of the Zabbaleen activity.

To encourage the parties to share private information, the GIZ presented itself as a facilitator without private interest – “There wasn’t a sense that GIZ was leading, they were supporting, but never branding it as a western donor pushing their agenda”, said one respondent. For each planning workshop, which could last several hours, the Zabbaleen were free to choose the venue, time, and who would represent them. In total, around 1,000 Zabbaleen participated in the workshops; GIZ also met weekly with seven committees of 10-12 residents to discuss the problems, solutions and get feedback. In addition, if one party was reluctant to share information in a multilateral meeting, the GIZ would meet first just with that party to allay their fears that by sharing information their interests could be harmed:

We’ve procedures to get to consensus: When we say to community groups, ‘you’ve to pay more’ that is a financial loss for them. But if they don’t pay more they don’t get proper waste management; the same for the informal sector. If you formalise, you’ve more scrutiny, pay taxes, but also get a contract, more security. For the Municipality, if you improve waste management you get less anger even if in the short-term you´ve to pay a bit more.

Overtime, a sense of trust emerged between the Zabbaleen, the residents, and the authorities that enabled open discussion of alternative solutions. The core set of contracts gave the GIZ the authority and the money to offer inducements for the poor and others to cooperate in the implementation of whatever solution all the parties agreed upon. But the GIZ was not in a position to force upon the participants a solution; the solution needed to emerge by consensus to avoid one of the parties from choosing to defect from the collective-action arena.

## The performance of this ambidextrous form of organising

To examine the performance of this inter-organisational system we investigated the extent to which the two objectives of the duality facing these systems were met: building infrastructure quickly whilst changing the institutions. The empirical findings suggest that in about three years, a quick achievement in the development aid sector, the project succeeded both in building basic infrastructure that dignified the living and working conditions of the Zabbaleen and in building institutions to create a sustainable solid waste management system.

The solution agreed upon involved compromise and reciprocation. First, the Governorate received a cost-free $1.5 million investment on a waste recovery centre and a transfer station in exchange for making public land available to build the facilities; the location of the facilities was agreed by consensus after the Zabbaleen complained the initial plans made it too costly for them to travel to sort and unload the waste that lacked value. Second, the Zabaleen received motorised carts and saw their workshops upgraded in terms of health and safety conditions at no cost to them. The Municipalities were also equipped, at no cost to them, with technology to monitor the Zabbaleen and improve waste collection routes. In exchange, the activities of 200 waste pickers were formalised into four legal entities; these entities were awarded contracts from the Municipalities through competitive tendering for 80% of the waste produced daily. The Zabbaleen women were also organised in a legal entity. They were trained to separate waste which was highly combustible and not recycled, and awarded a contract with Lafarge, a cement manufacturer, who committed to buy that solid waste to use as additional fuel.[[9]](#footnote-9) Importantly, the nexus of contracts proved flexible enough to cope with the costs of collective action. For example, the GIZ was allowed to re-tender the waste transfer centre domestically after bids from an international tender turned out to be unaffordable; the donor allowed money reallocations to avoid no-cost extensions; and the bilateral agreement of cooperation with the Egyptian state proved resilient to cope with a shift of the Egyptian state towards further centralisation of power.

More challenging was to leverage the local outcomes to impact national policy. The initial reaction of the government was good, and a test run started to create more Zabbaleen-run companies in Cairo[[10]](#footnote-10). In addition, the government set up an inter-ministerial unit of participatory development, and even invited the Zabaleen to discuss a new national solid waste management policy. This warm reaction was linked to the arrival to government of Daila Lakander, a civil society actor passionate about helping the Zabaleen – “I´ve no fear for the Zabaleen. They are unbeatable”, said Daila. But as the Egyptian state increasingly centralised, Daila left, and without a political sponsor, an application to the World Bank for a loan to integrate more Zabbaleen communities was dropped[[11]](#footnote-11). In sum, this ambidextrous form of organising built infrastructure quickly whilst changing the institutions. But shifts at the field level have, for now at least, constrained the diffusion of this innovation within Egypt.

## Discussion

This case illuminates exciting opportunities for management scholarship through looking at public goods provision in emergent economies. The findings suggest an inclusive form of (meta) - organising that is hardly explored in the literature. The basic idea is to supplement a nexus of contracts with an informal collective-action arena in order to orchestrate all the complementary resources needed to achieve the system goal in an institutionally underdeveloped context. The main attribute of this organisational ’contraption´ is the way in which it combines contractual governance (Williamson 1979) with collective-action governance (Hardin 1968, Ostrom 1990 and Libecap 1989) to navigate institutional voids.

Underlying this organisational design choice is a fundamental trade-off: incur the costs of consensus building and the risk of a tragedy of the commons (Hardin 1968) to economize on the transaction costs that would otherwise be incurred to acquire resources that exist in a regime of ill-defined property-rights and inefficient markets. So, where the resources are measurable and there is no high degree of reciprocal interdependency, this form of organising uses contracts to govern resource exchanges. Where the resources are hard to measure, there is high degree of reciprocal interdependency, the markets are inefficient and property rights are ill-defined, a collective-action structure is instead employed to encourage cooperation and voluntary contributions of informal resources (know-how, networks of trust).[[12]](#footnote-12) The way by which the nexus of contracts allows for informal resource exchanges with the poor creates an ambidextrous system to navigate the institutional voids. This choice may seem unnecessarily complicated and inefficient, as with any man-made ´contraption’, but the findings suggest this form of organising can be a useful social artefact.

Of course, as a stand-alone governance structure, collective action has long been a subject of attention by theorists (Olson 1965, Hardin 1968 and Ostrom 1990). The high transaction costs of transforming collective action into contractual governance, i.e., the costs of contracting *for* property rights (Libecap 1989), have also been extensively theorised. But, the idea of combining contractual and collective-action governance, i.e., contracting ‘for’ collective action, is underexplored. Nonetheless, our findings suggest that there is value in so doing. The nexus of contracts is in agreement with the idea that when the transaction costs are negligible, the organisations lack incentives to bring activities in-house (Williamson 1979, 1985). Furthermore, resource exchanges that do not involve high levels of reciprocal interdependency are not difficult to decompose into contractible transactions (Baldwin 2007). The choice to build a nexus of contracts does not assume the contracting process needs to be complete. But assumes that through political negotiations, with reasonable costs, the parties can reach sufficient alignment of interests ex-ante of the contract agreement, and that safeguards can also be devised to deter opportunistic behaviour ex-post (Macneil 1978, Williamson 1985). Thus the nexus of contracts leverages the advantages of a legal framework in a context with a shortfall of institutions to build a shared inter-organisational identity.

But this nexus of contracts is insufficient to ensure that the inter-organisational system can be effective and survive. The crux of the problem is its reciprocal interdependency with the poor, and the weak institutions in which they are enmeshed. This interdependency creates uncertainty around what can be done and how, and the extent to which the outcomes are legitimate and sustainable. Forging a contract with the poor ex-ante would also be very costly and time-consuming. The Zabbaleen may live in a regime of ill-defined property rights that is unsuitable to prevent common losses (Libecap 1989). But as the failure to privatize solid waste management shows, attempts to change institutional regimes are costly, especially if the number of participants is high, information asymmetries are sharp, the interests are competing and redistribution of economic benefits is involved (Libecap 1989).To overcome this problem, the organisational designers make a judgment that it can be more advantageous to share decision rights with the poor than leave them outside the organisational boundaries.

By giving the poor direct influence on some capital allocation decisions, competitive preferences emerge on the exact problems and how to solve them. Rivalry yields conflict, but once decision rights are granted to the poor, it is not easy for the contracting parties to exclude them. First because a participatory approach is a contractual commitment that restricts the ability of the contracting parties to renege on their promise. In other words, the shadow of contractual governance makes it costly not to maintain the bargain. And second, excluding the poor could cause the whole system to fail: if the poor see no legitimacy in the system, they would lack incentives to share know-how, without which the system would struggle to succeed. Turning the poor against the system could also incentivize them to try to sabotage it – as the Zabbaleen did, when they were excluded from the privatization decision. Hence, a participatory approach effectively transforms some – but not all –development decisions and corresponding budgets into Ostrom’s (1990) common-pool resources, this is resources that are rivalrous in consumption by many actors, all of which are costly to exclude (Gil, Biesek and Freeman 2015, Gil and Pinto 2018). In so doing, the organisational designers incur the risk of underutilization of shared resources and concomitant failure to provide a public good (Hardin 1968, Olson 1965 and Libecap 1989). This risk of failure is especially high in collective-action arenas of the type created by a participatory approach where a few actors control most of the resources – if the poor do not perceive any threat by the resourceful actors to defect to be credible, they may try to exploit the resourceful claimants (Olson 1965).

And yet on balance, our findings show the organisational designers judge that it is better to bring collective-action and concomitant social dilemmas inside the organisational boundaries than to incur transaction costs to resolve the ill-defined property rights ex-ante. This judgment is informed first by the hope that intrinsic motivation to identify and solve shared problems will encourage the poor to join the collective-action arena – in the same way that strangers join informal organisations formed to tackle emergent situations (Majchrzak et al. 2007), and second, that face-to-face interaction and rewards to cooperate can encourage mutual trust and a shared identity to emerge – albeit with the lack of a centralized authority to control voice rights (Freeland and Zuckerman 2018). This organisational choice creates a complex form of organising. But what makes this ‘contraption’ attractive is the opportunity it creates to orchestrate complementary resources whilst navigating the institutional voids. And another advantage that should not be overlooked is a greater sense of ownership and responsibility for the sustainability of the co-produced solutions.

# Conclusion

A recurring pattern that explains the complexity and uncertainty of the task structure for tackling grand challenges is the need to form vast actor-networks to assemble complementary resources, which are controlled by independent actors. In other words, grand challenges require both a high degree of differentiation among the network participants to attend to the different facets of the task structure, and a high degree of integration to achieve desirable outcomes (Knudsen and Srikanth 2014). Organising to tackle grand challenges thus requires coordinated and sustained effort from many independent actors towards a unifying goal – in ways likely to challenge boundary conditions in management scholarship (George et al.2012).

In agreement with these ideas, this chapter calls for more management research on the actor-networks formed to produce public goods in emergent economies. I ground this call on a great challenge of our times – the increasing infrastructure gap observed in the developing world. Drawing from organisation design theory, I propose a research agenda focused on a duality of objectives that are difficult to reconcile: do things quickly whilst changing institutions to create sustainable outcomes – a duality that gains more significance as the Chinese economy continues to rise while doubts grow in the advanced economies on their own models of democracy, individual freedom and market economy.

Admittedly, it is difficult to negotiate access to inter-organisational systems enabled by Chinese finance. But this should not deter us from investigating this grand challenge. Rather, we should see in this difficulty a source of ideas to interrogate the organisational designs constrained by western requirements. Two areas to create more ambidextrous forms of organising seem promising: the manipulation of organisational boundaries and the interplay between the formal and informal organisation. To this point, I offer evidence of innovative systems that allow for collective action under the shadow of contractual governance. This insight suggests exciting opportunities for building management theory, and influencing existing theory for those who venture to research this grand challenge.

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1. For this account, I build on a detailed account of this case presented in Gil and Macaulay (2018) [↑](#footnote-ref-1)
2. Hancock, T 2017. China encircles the world with One Belt, One Road strategy. Financial Times, 4 May. [↑](#footnote-ref-2)
3. Kingsley, P. 2015. A New New Cairo: Egypt plans £30bn purpose-built capital in desert. The Guardian, Mon 16 March [↑](#footnote-ref-3)
4. African Charter on Popular Participation in Development and Transformation [↑](#footnote-ref-4)
5. 2016 Guangzhou International Award for Urban Innovation [↑](#footnote-ref-5)
6. NSWMP. 2011. National Solid Waste Management Programme Egypt - Main Report. Egypt; NSWMP 2014.National Strategic Directives for Solid Waste Management in Egypt. National Solid Waste Management Programme, November, Ministry of the Environment [↑](#footnote-ref-6)
7. Greater Cairo was administratively organized in three Governorates (Giza, Cairo, and Qalyubera) which collectively oversaw 35 Municipalities or town governments [↑](#footnote-ref-7)
8. Walker, M, 2012. “Voices of Change”: A Trip Through Dharavi. January Impatient Optimists. Bill & Melinda Gates Foundation. [↑](#footnote-ref-8)
9. Perilli, D. 2015. Lafarge tackles hurdles to refuse-derived fuels production in Egypt. Global Cement, 3 June [↑](#footnote-ref-9)
10. El Wardany, S. 2015. Why Cairo Recycles Better Than NYC in Waste-Picking Tale: Cities. Bloomberg, 20January [↑](#footnote-ref-10)
11. World Bank 2014. Cairo Municipal Solid Waste Management Project (P152961). Project Information Document. Concept Stage. The World Bank [↑](#footnote-ref-11)
12. Informal resources are difficult to acquire through market transactions, and thus it is better to transfer them within organisational boundaries (Kogut and Zander 1996). Our findings do not contradict this idea, but our boundaries are the boundaries of the inter-organisational system, not the boundaries of a single organisation [↑](#footnote-ref-12)