INNOVATIONS IN LAND REGISTRY MANAGEMENT

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Land registries play a key role in protecting landholders against dispossession and promoting good governance and economic development. Effective land agencies provide efficient and accessible land registration services, transparent land information, and clear ownership records to prevent disputes. Accurate records of property rights provide a basis for delivering services such as water or electricity, levying property taxes, enforcing zoning and environmental laws, and are necessary (although not sufficient) for landholders to use their properties as collateral.

Establishing and maintaining an effective land registry is difficult, however. Registries are highly vulnerable to both petty and grand corruption. They also frequently suffer from administrative problems common across frontline service agencies: complex procedures that can be so time-consuming as to deter uptake, limited resources and training, difficulty sharing information and coordinating with other relevant agencies, and staff resistance to change.

To address these challenges, some countries have transformed themselves into semi-autonomous agencies, freed, in most instances, from standard civil service rules, with flexibility to adopt new practices and ability to draw on some of the fees they collect to finance their operations. Usually a supervisory board sets service targets, entering into a performance contract with the top agency administrators.

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Mirroring the governance and ethos of a private firm, this approach, sometimes termed New Public Management, does not work everywhere, but it can buffer registries from partisan influence while also helping them deliver services in more innovative, cost-effective ways that serve citizens better. This cross-cutting brief profiles five experiments with this kind of governance model—two in high-resource countries and three others in lower income settings.

THE COMMON GOAL

The capacity of a registry to perform its functions well depends on the quality of its record keeping and its efficiency, accessibility, transparency, and fairness. Land agencies face several tough challenges when they try to meet these standards, including:

- The need to streamline procedures and introduce new digital technologies that offer the possibility of stronger security and easier retrieval;
- In some countries, the ability to administer a variety of tenure systems;
- The requirement to coordinate with other relevant agencies, sometimes including separate sub-national or municipal registries;
- Vulnerability to petty and grand corruption, given the high value—monetary and social—that land usually carries;
- Physical inaccessibility to many rural households; and
- Lack of public awareness of the importance of having formal land records and conveying property through the registry instead of through informal sale or transfer.

Some countries, such as Indonesia, have struggled with this challenge but made some headway within a largely traditional governance structure. For example, Indonesia's National Land Agency (known by the abbreviation BPN, for Badan Pertanahan Nasional), which long managed records on land ownership and transactions, gradually found that corruption, high costs, and delays interfered with its operations. In the 1990s, on average it took 33 days, six visits to a local land office, and US$110 for landowners to register property transactions. In addition, the BPN held ownership records for only a third of the estimated 89 million land parcels on the thousands of islands in the sprawling archipelago.

In 1998, new laws reoriented its mission toward serving the public, and in 2004, the government of President Susilo Bambang Yudhoyono began to introduce reform. The BPN partnered with the World Bank to title unregistered land and rolled out a new land database that digitally stored all new transactions. It equipped vehicles to deliver mobile land registration services in rural areas, and worked with other ministries to design a

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comprehensive OneMap for the country. Although these reforms improved efficiency and sharply increased the pace of property registration, ten years after the effort began more steps remained to reach the goal of a well-functioning, comprehensive, and sustainable registry.[1]

Beginning in the 1980s, however, land administrators in a number of countries started to ask whether reconstituting their operations under the auspices of a semi-autonomous agency might enhance impact. The new approach offered a way to introduce new management practices, give users a say in assessing performance, remove the temptation of politicians to meddle, and reduce the need to compete for budgets with other parts of government. There were few models, however.

DELIVERY CHALLENGES

Although semi-autonomous or independent agencies have latitude to introduce new technologies and management practices, they are not the right organizational vehicle everywhere.

- They depend on a reasonably large and active formal property market to generate enough revenue to support their operations. The frequency of transactions depends in part on social norms and preferences, but also on the value of land—which must be high enough to make buying and selling attractive—as well as the availability of credit, which is often important in land transactions. Landowners' incomes also must be high enough to pay transaction fees.
- New Public Management-style land agencies also require a clear division of responsibility. Adding important but non-revenue-generating functions can threaten viability.
- In agencies that depend on the fees they levy and are therefore focused on developing the land market, conflicts of interest can arise if personnel are also responsible for limiting where land can be bought and sold—for example, to preserve the environment or limit hazards. Other parts of the government should be responsible for setting land-use policies, in consequence.
- It may take time for staff members to accustom themselves to new ways of working. Any bonuses or transfers from the government budget usually depend on meeting a high standard of performance, as a group. The managers have to identify appropriate and measurable individual performance targets and an internal bonus system that rewards high performance, but they must also help each person understand that everybody's performance matters in shaping the size of the bonus pool, or if bonuses are available at all. It takes time to set up these systems, train people to work within them, and set up regular group meetings so everyone can share information about operations. Further, in the quest for efficiency, semi-

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autonomous agencies usually streamline processes, create front and back offices, and automate some functions, all of which may require a period for individual adjustment.

FIVE STORIES AND TAKEAWAYS

Five recent examples of innovations in agency governance structure reveal impressive accomplishments as well as some lessons learned. The first two are from high income countries—Canada and Australia—that helped pioneer autonomous or semi-autonomous land agencies. The second three—Jamaica, Kyrgyzstan, and Rwanda — show issues and adaptations that have arisen in lower income contexts.

1. *Pioneering New Approaches in Ontario, Canada 1987 – 2010*

In 1987, Ontario's land registration system was overwhelmed. Budget constraints and a surge in property sales strained the Canadian province's paper-based system. After struggling to computerize its land records during the previous seven years, civil servants at the provincial Ministry of Consumer and Commercial Relations led a groundbreaking effort to form a public–private partnership to convert millions of property records—both from paper to digital and in some cases from a deeds system to titles—and create the world's first electronic land registration system. In most respects the Teranet collaboration functioned as an autonomous agency under contract with the government. As part of the deal, the government retained control over fee-setting and scrutinized performance. During the partnership's first 12 years, beginning in 1991, the provincial government and joint venture company Teranet worked to persuade sometimes skeptical politicians and real estate professionals of the value of their model and laid the groundwork for a lasting relationship even after the government sold its ownership stake in 2003. Despite early financial challenges and a slower-than-expected conversion process, Teranet and the Ontario government pioneered technology that became a model for the world, simplified transactions for the province's landowners, and built a relationship that continued to offer value for both partners in 2016, 25 years after the partnership began. Other Canadian provinces began to experiment with similar approaches, creating several types of semi-autonomous or private agencies. (For more detail see the ISS case study Breaking New Ground: Pioneering Electronic Land Registration in Ontario, 1987-2010.)

2. *Transforming Western Australia's Land Agency, 2007-2017*

In January 2007, Western Australia's land agency began a top-to-bottom overhaul of its structure, management, and service delivery. A booming property market, fueled by the state's extractive resources industry, had overwhelmed the public agency's aging technology, but budget constraints hindered its ability to upgrade the systems. To provide financial flexibility, the

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state government created a statutory authority called Landgate—a public institution with some private characteristics, though it continued to operate under civil service rules. Landgate could keep the revenue it generated from regulated services such as property registration and engage in for-profit commercial activities, which provided resources for investment in better services, as long as it sought legislative approval for changes in fee structure. But making the new model work was not easy. Landgate's management team had to win the trust of skeptical staff, reduce delay, and contend with a sharp drop in revenues only two years into its existence when the 2008 global financial crisis struck and the number of land transactions fell. To surmount the challenges, the agency created an innovation program, explored ways to commercialize its spatial data, restructured to speed up registration and cut costs, and after one failed attempt, developed an automated registration system. (Its first attempt, called iLand, crashed for several reasons, including insufficient attention to business process reviews and lack of buy-in from registry staff, but it eventually produced a highly effective automated system that it planned to sell in other jurisdictions. By 2017, Landgate had become financially stable, had drastically reduced processing times, and had won acclaim for its innovative products and management practices. (For more detail, see the ISS case study Embracing Disruption: Transforming Western Australia's Land Agency, 2007-2017.)

3. Developing Jamaica's National Land Agency, 2000-2016

In 2001, registering or transferring land in Jamaica was an uphill battle. Four separate departments handled different aspects of land administration, leading to weak coordination and delay. Even straightforward transactions dragged on for weeks, simply getting information was a struggle, and fraud was commonplace. In April of that year, Jamaica established the National Land Agency, charged with merging the four departments, speeding up services, and improving their quality. As the new agency's CEO, Elizabeth Stair led a team of managers that had to oversee the consolidation, design systems to prevent fraud, improve performance, and implement new procedures and technologies to increase speed and transparency. The CEO signed a performance contract with the minister and had to provide quarterly and annual progress reports, and if the agency failed to meet its targets, the CEO could be dismissed. Although the NLA did not directly manage Jamaica's land titling program until 2017, it collaborated on information sessions and mobile one-stop shops for registration. During its first decade and a half of operation, the National Land Agency significantly reduced processing times and won acclaim for its customer service and innovative use of technology. Despite these successes, there was still room to improve land tenure security. Stiff documentation requirements, high costs, and limited awareness of the process meant that registration and related services remained out of reach for many Jamaicans. Jamaica's approach drew

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explicitly on Ontario's example and was one of the first tests of the Ontario strategy in a lower income country. (For more detail, see the ISS case study From the Ground Up: Developing Jamaica's National Land Agency, 2000-2016.)

4. *Land Registration in Kyrgyzstan, 1999-2009*

In 1999, eight years after emerging from decades of Soviet domination, Kyrgyzstan began an ambitious effort to recognize private property ownership throughout the country and lay the groundwork for a vibrant real estate market. During five and a half decades of rule by the Soviet Union, citizens were not allowed to own land, and after Kyrgyzstani independence in 1991, the country began a nationwide program of privatization in a bid to stimulate economic development. The question was how to register and document property rights so that people could transact efficiently in a new land market. To meet the challenge, the government merged three existing programs to create a new autonomous land agency, known as Gosregister The team appointed to run the new agency set an exam for employees of the merged units, hired and re-trained those who passed, establish performance management and financial systems, improved efficiency by introducing new technologies, and took steps to ensure that its personnel did not engage in corruption. Its budget depended in large part on fee revenue, although the legislature or the ministry responsible for lands had to approve any fee increases. Despite political upheaval—including the overthrow of two governments in the space of five years—Gosregister steadily built its capacity and evolved into an effective land registry even before a supervising ministry or agency to ensure accountability was put in place in 2009. By 2012, the agency had registered 92% of the country's privately held parcels, and in 2017, the World Bank's Doing Business rankings recognized its services as among the best in the world. (For more detail, see the ISS case study Cementing the Right of Ownership: Land Registration in Kyrgyzstan, 1999-2009.)

5. *Experimenting with Organizational Forms to Improve Land Security in Rwanda, 2012-2017*

In June 2012, Rwanda's national land registry completed a nearly four-year project that mapped every one of the country's 10.4 million parcels and prepared title documents for 8 million landholders. It was an unprecedented accomplishment in a country in which lack of land titling had weighed on the economy and led to escalating conflict over access to land. During the titling project, the registry had been a special-purpose, stand-alone institution called the National Land Centre within the Ministry of Lands, Environment, Forestry, Water and Mines. In 2011, the government integrated the registry into the Rwanda Natural Resources Authority and the registry "became just like any other government agency" while senior officials decided whether to

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spin it off again or support it as a mainstream department. To be financially self-sustaining as a stand-alone, semi-autonomous agency, it was vital to persuade Rwandans to conduct land transactions through the new formal system, but few people had yet picked up their new titles or registered new transactions. To improve accessibility and awareness, the registry established a team of land managers at the sub-district level and created special Land Days to help process transactions quickly. It revised its business processes and built a new land management software system to improve efficiency and security. By December 2013, the teams had transferred all data to the new system, and connected all 30 district offices as well as ministries and the Rwanda Development Board. Banks and other external users could view the database in the process of issuing credit, but could not modify it in any way. The team then designed a similar tool for mobile phones that allowed any member of the public who used the MTN cell phone network to check the status of any plot in the country. The mobile system saved time and money because clients no longer had to travel to a physical office to check basic ownership details. Eventually, the agency hoped to use technology to reduce the need for sector managers, saving more money. Although over 7 million people had picked up their titles by mid-2017, it remained unclear whether the volume of transactions would be able to support the new agency, if fees were set at an affordable level. In the interim, the government would continue to support the budget, drawing on the taxes that the revenue authority could levy more efficiently given the land registry's hard work. In January 2017, the registry, renamed the Rwanda Land Use and Management Authority, became a wholly autonomous body and intensified its effort to innovate its way to sustainability. (For more detail, see the ISS case study Securing Land Rights: Making Land Titling Work in Rwanda, 2012-2017.)

LARGER LESSONS

In each case, institutional overhaul resulted in a largely autonomous, self-sustaining institutionin contrast to the traditional government agencies that all of them replaced. The NLA and Gosregister were exempt from government human resources rules, allowing for greater flexibility in compensation, hiring, and firing, and as a private company, Teranet had the same flexibility. The ability to offer more competitive compensation, fire nonperforming employees, and promote employees based on performance rather than seniority contributed significantly to the agencies' successes. (Note: For simplicity, "agencies" is used to describe the four institutions as a group, even though Teranet is a company rather than a government agency.)

The agencies also had to generate most or all of their operating budgets as they became more autonomous. Some had previously struggled because the government was broke, so the necessity of generating revenue autonomously presented an opportunity and freed managers from the need to negotiate with senior officials in other ministries for a share of any

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resources that remained. This change was a key motivating factor for their establishment, since the government would no longer have to finance the land agency's operations, but it also was a valuable management tool. Leaders had to make decisions with an eye to the bottom line, which prompted numerous procedural changes and forced them to pay attention to the costs and benefits associated with technological innovation. For other agencies, the ability to raise their own revenue opened up new routes for financing technological innovation.

The experiences offered several lessons for other countries contemplating similar innovations in land registry management.

Functions. Bringing together several of the major land administration into a single agency can improve efficiency and information-sharing and reduce the costs of support functions such as human resources and IT. Jamaica's NLA brought together all four functions: registration, valuation, cadastre, and government land management. Rwanda had moved toward a similar arrangement. Landgate had all but government land management, as did Gosregister. As a private company, Teranet had somewhat different responsibilities: it only converted records and managed the electronic registration system in Ontario, although in Manitoba, where it won a concession to manage the land registry in 2012, it also certified titles.

Accountability. Managing an NPM-style land agency effectively requires clear supervision and a well-designed monitoring process. All agencies focused heavily on meeting targets, and because they provided quantifiable services, they could set indicators such as transaction numbers or turnaround times and monitor progress at the individual, unit, and agency levels. Each of the agencies also reported to another part of government—often a minister responsible for setting land policy. This supervision and accountability is important, even when agencies have financial incentives to deliver high-quality and efficient services. In Jamaica, for example, the NLA's CEO signed a performance contract with the minister and had to provide quarterly and annual progress reports, and if the agency failed to meet its targets, the CEO could be dismissed. However, the level of ministry involvement varied across cases: Jamaica and Ontario, supervising ministries played an active role in monitoring the land agency's performance and setting policy, whereas in Kyrgyzstan and Western Australia, they tended to be fairly hands-off. In Rwanda, the relationship changed over time.

Although land agencies should have a voice in policymaking, given their expertise in land matters and the insights their data can provide, some separation is important.

- Having fees regulated and approved by another part of government with more electoral legitimacy helps ensure public acceptance and limits the likelihood that fees will be overly burdensome.
- Giving land agencies control over zoning and approval for changes in land use, for instance, risks conflicts of interest. If a land agency's

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financial incentives are to register as much privately owned land as possible, thereby maximizing transaction volumes, it could approve the sale of land that was rightfully public or allow private development on environmentally sensitive areas. Ethical leadership and transparency also play a role in preventing these problems, but separating policymaking and registration provides an institutional safeguard.

- By contrast, responsibility for titling programs can fit well within a land agency. In Kyrgyzstan, specially hired World Bank staff handled most on the ground registration, but they operated under the supervision of a project unit situated within Gosregister, and registry staff had to finalize the titles after people working for the World Bank project completed the adjudication and mapping. Close collaboration between Gosregister and the systematic registration program proved crucial to its success. Similarly, Rwanda's land agency, the RNRA, led the nationwide titling program with support from an external project unit.

Digital Technologies. Introducing digital registration systems proved valuable in all four of the cases, but technology was by no means a panacea. Across cases, successful design of a digital system required careful preparation. Managers in all the cases first undertook careful business process reviews, tracking each step a document went through for different transaction types and deciding whether steps could be simplified or eliminated. Computerizing an ineffective manual process would have wasted resources on coding unnecessary steps and resulted in a system that needed costly and time-consuming updates; in contrast, business process reviews not only improved the design of the system, but also streamlined processes that were not slated for computerization. Reviewing procedures also created an opportunity to solicit feedback from registry staff about functions they needed in a digital system or quirks of the law the system needs to reflect.

Investing large amounts of time and money in digital systems too early can be counterproductive. Focusing too heavily on developing new IT systems can divert resources away from more fundamental tasks of building capacity, titling unregistered land, and streamlining manual processes. In many contexts, those tasks are likely to provide efficiency gains faster and at a lower cost—while a computerization program that precedes them is likely to fail.

Finance. In all the cases, the registry depended on a reasonably large and active formal property market to generate enough revenue to support its operations. The frequency of transactions depends in part on market conditions and in part on social norms and preferences and the availability of credit to finance land purchases. Landowners' incomes also must be high enough to pay transaction fees. While agencies such as the NLA stressed that it was important to keep fees as low as possible to avoid deterring formal

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transactions, even the fees that they levied were prohibitive to Jamaica's poorest landholders, and this problem would grow in lower-income countries.

The NLA had to contend with a two-tier land market in Jamaica. Wealthier people and businesses, particularly those with valuable properties in major cities and coastal areas popular with tourists, participated in the formal system, while poorer rural residents transacted informally. Revenues generated by the approximately 60% of properties that were formally registered were enough to cover the required 75% of the NLA's expenses. In 2017, Rwanda was still experimenting to see whether it could induce citizens to convey land through its new agency and whether the volume—at fee-levels people could afford—would be sufficient to pay for operations or whether it would require a supplement from the national budget.

Data Sharing. Another key practice that emerges from the cases is a clear policy on data sharing among government agencies. Western Australia had a data sharing framework since the 1980s, which enabled Landgate to use information such as weather patterns gleaned from other government agencies and eased other agencies' access to Landgate's records. They used a common platform hosted by Landgate and funded by the state government to post and download data, and all of the data sets were freely available to any government agency. In addition, Landgate received funding from the state budget each year to provide services such as customized mapping to other agencies at cost. In Jamaica, on the other hand, the lack of a data sharing policy led to disputes between the NLA and other government agencies. By contrast, Rwanda moved quickly to permit data-sharing among ministries.

New Products. Managing multiple aspects of land administration enabled agencies to develop innovative new products that they could not have developed when these various services were siloed. For instance, Teranet used property information, sales histories, and streetscape imagery to create an application for real estate agents to compare properties. Especially in its early years, Landgate, which created its own business development unit, focused on creating products that combined its spatial data with other available information to things like tracking bushfires and monitoring pastures. (It found some of these ventures too expensive and gradually began to assess demand and cost-benefit ratios with care.) Jamaica created platforms for users to access various types of property information, drawing on data from across its divisions. Rwanda took steps to enable multiple ministries to draw upon the data in their work and planned to open up new information products for businesses and citizens.

Integrity. Tightening record security limited opportunities for fraud. The NLA improved its document storage protocols, keeping all titles in a locked room that required a key card to access, which restricted clients and most staff from contact with titles for properties not being transacted upon and

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established a record of who had been there in case any documents went missing. Rwanda implemented an electronic system that limited the numbers of people who could change entries. Gosregister adopted similar protocols, although storage facilities at some offices were a bit less sophisticated, using only a key instead of an access card that created a record. Creating a front office/back office system also helped prevent corruption because it kept clients out of processing areas. Further, both the NLA and Gosregister assigned transactions to processing staff randomly, making it difficult for a client—or even a corrupt customer service officer—to know which employee to bribe. Clearly communicating fees and improving service standards was valuable in itself, but also helped prevent bribery.

In addition to these changes in office management, electronic registration systems tracked each change made to a document and who had made it. The systems limited users' ability to access or edit documents depending on their role and would not accept a change that was not backed by supporting documentation.

Both Landgate and Ontario's titles office introduced tougher identity checks for property transactions, making it harder for scammers to successfully impersonate a property owner. They also enlisted lawyers to help verify their clients' identities. In Western Australia, lawyers had to sign a written statement attesting that the client had the authority to engage in the transaction. In Ontario, lawyers had to pay into a fund that provided compensation to victims of fraud, and those that allowed fraudulent transactions through could also lose their licenses or their access to Teranet's electronic transaction system.

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[1] For more detail, see the ISS Case Study A Work in Progress: Upgrading Indonesia's National Land Agency, 2004–2014.

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